Alliqua BioMedical, Inc.
Form DEFM14A
January 24, 2019
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 14A
Proxy Statement Pursuant to Section 14(a) of the Securities
Exchange Act of 1934

Filed by the Registrant:
Filed by a Party other than the Registrant:
Check the appropriate box:

Preliminary Proxy Statement

Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))

Definitive Proxy Statement

Definitive Additional Materials

Soliciting Material Pursuant to Section 240.14a-12

Alliqua BioMedical, Inc.
(Name of Registrant as Specified In Its Charter)

N/A
(Name of Person(s) Filing Proxy Statement, if other than the Registrant)
Payment of Filing Fee (Check the appropriate box):

No fee required.

Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

(1)
Title of each class of securities to which transaction applies:

Common Stock and Preferred Stock of Adynxx, Inc. par value $0.001

(2)
Aggregate number of securities to which transaction applies:

30,070,361 shares of common stock of Alliqua BioMedical, Inc. ("Alliqua") to be issued or issuable pursuant to that certain Agreement and Plan of Merger and Reorganization, dated as of October 11, 2018, by and among Alliqua, Embark Merger Sub Inc., a wholly owned subsidiary of Alliqua, and Adynxx, Inc. ("Adynxx"), assuming the Exchange Ratio determined based on information as to equity ownership as of November 7, 2018 and other assumptions discussed in this proxy statement, including the assumption that Adynxx stockholders will own approximately 86% of the combined company and that Alliqua stockholders will own approximately 14% of the combined company.

(3)
Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (Set forth the amount on which the filing fee is calculated and state how it was determined):

The maximum aggregate value was determined based upon 30,070,361 shares of Alliqua common stock being issued in the transaction to Adynxx stockholders, multiplied by $1.64, which is the average of the high and low trading prices as reported on The Nasdaq Capital Market within five business days prior to November 26, 2018. The filing fee was determined by multiplying $0.0001212 by the maximum aggregate value of the transaction as determined in accordance with the preceding sentence.

(4)
Proposed maximum aggregate value of transaction:

$49,315,392.04

(5)
Total fee paid:

$5,977.03

Fee paid previously with preliminary materials.

Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

(1)
Amount previously paid:

(2)
Form, Schedule or Registration Statement No.:

(3)
Filing Party:

(4)

Date Filed:

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Alliqua BioMedical, Inc.
2150 Cabot Blvd., West
Suite B
Langhorne, PA 19047
Telephone: (215) 702-8550

January 24, 2019

Dear Stockholder:

You are cordially invited to attend a special meeting of stockholders (the "Special Meeting"), of Alliqua BioMedical, Inc. ("Alliqua"), which will be held on March 8, 2019, at 9:00 A.M. Eastern Time, at 2150 Cabot Blvd., West, Suite B, Langhorne, PA 19047, unless postponed or adjourned to a later date. This is an important Special Meeting that affects your investment in Alliqua.

As previously announced, on October 11, 2018, Alliqua, Embark Merger Sub Inc., ("Merger Sub"), and Adynxx, Inc. ("Adynxx"), entered into an Agreement and Plan of Merger and Reorganization, as thereafter amended or supplemented (the "Merger Agreement"), pursuant to which Merger Sub, a wholly owned subsidiary of Alliqua, will merge with and into Adynxx, with Adynxx surviving as a wholly owned subsidiary of Alliqua. Following the acquisition of Adynxx by Alliqua (the "Merger"), Alliqua will change its name to "Adynxx, Inc." ("New Adynxx" or the "combined company"). Under the terms of the Merger Agreement, the number of shares of the Alliqua's common stock to be issued to Adynxx stockholders will be based on an Exchange Ratio (as defined herein), which is subject to adjustment taking into consideration Alliqua's and Adynxx's equity capitalization immediately prior to the Effective Time as well as the Financing (as defined below). Pursuant to the Exchange Ratio, immediately following the Effective Time (as defined herein) of the Merger, Adynxx's equityholders are expected to own approximately 86% of the combined company, and Alliqua's equityholders are expected to own approximately 14% of the combined company. For a complete description of how the ownership percentages and Exchange Ratio will be determined at the Effective Time of the Merger, please see the section entitled "The Merger Agreement — Exchange Ratio" beginning on page 79 of this proxy statement.

Alliqua is holding a Special Meeting of its stockholders in order to obtain the stockholder approvals necessary to complete the Merger. Pursuant to rules of The Nasdaq Stock Market LLC ("Nasdaq"), the issuance of Alliqua's common stock requires Alliqua's stockholders' approval because it exceeds 20% of the number of shares of Alliqua common stock outstanding prior to the issuance and does not constitute a "public offering" as defined under Nasdaq's rules. Furthermore, the issuance of the shares requires Alliqua's approval under Nasdaq's rules because it will result in a "change of control" of Alliqua. At the Special Meeting of stockholders, you will be asked to consider and vote upon:

1. A proposal to approve the Merger, the Merger Agreement, the issuance of Alliqua's common stock pursuant to the Merger Agreement and transactions contemplated by the Merger, as well as the resulting "change of control" of Alliqua under Nasdaq rules (the "Merger Proposal");
2. A proposal to amend Alliqua's amended and restated certificate of incorporation to effect a reverse stock split of Alliqua's common stock, (the "Reverse Stock Split Proposal"); and
3. A proposal to adjourn or postpone the Special Meeting, if necessary or appropriate, for the purpose of soliciting additional votes for the approval of the Merger Proposal and the Reverse Stock Split Proposal, (the "Adjournment Proposal").

After careful consideration, Alliqua's board of directors has unanimously determined that the Merger Agreement and the transactions contemplated thereby, including the Merger, are advisable, fair to and in the best interests of Alliqua and its stockholders and recommends that you vote "FOR" the Merger Proposal (Proposal 1); "FOR" the Reverse Stock Split Proposal (Proposal 2); and "FOR" the Adjournment Proposal (Proposal 3) if necessary to solicit additional proxies if there are not sufficient votes to approve the Merger Proposal or the Reverse Stock Split Proposal.

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The accompanying proxy statement contains important information concerning the Special Meeting, the transactions contemplated by the Merger Agreement and related matters, including information as to how to cast your vote. We encourage you to read the accompanying proxy statement and the Merger Agreement and other annexes to the proxy statement carefully and in their entirety. IN PARTICULAR, YOU SHOULD CAREFULLY CONSIDER THE MATTERS DISCUSSED UNDER "RISK FACTORS" BEGINNING ON PAGE 18.

Your vote is very important, regardless of the number of shares of our voting securities that you own. I encourage you to vote by telephone, over the Internet, or if you requested to receive printed proxy materials, by marking, signing, dating and returning your proxy card so that your shares will be represented and voted at the Special Meeting, whether or not you plan to attend. If you attend the Special Meeting, you will, of course, have the right to revoke the proxy and vote your shares in person.

If your shares are held in the name of a broker, bank or other nominee, and you receive notice of the Special Meeting through your broker, bank or other nominee, please vote or return the materials in accordance with the instructions provided to you by such broker, bank or other nominee or contact your broker, bank or other nominee directly in order to obtain a proxy issued to you by your nominee holder to attend the meeting and vote in person. Failure to do so may result in your shares not being eligible to be voted by proxy at the meeting.

On behalf of Alliqua's board of directors, I urge you to submit your proxy as soon as possible, even if you currently plan to attend the meeting in person.

Thank you for your support of our company. I look forward to seeing you at the Special Meeting.

Sincerely,

/s/ David I. Johnson
David I. Johnson
President, Chief Executive Officer and Director

Neither the Securities and Exchange Commission nor any state securities regulatory agency has approved or disapproved of the Merger described in this proxy statement or the Alliqua common stock to be issued in connection with the Merger or determined if this proxy statement is accurate or adequate. Any representation to the contrary is a criminal offence.

IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE STOCKHOLDER MEETING TO BE HELD ON :

Our official Notice of Special Meeting of Stockholders and Proxy Statement are available at:
www.proxyvote.com

The accompanying proxy statement is dated January 24, 2019, and is first being mailed to stockholders on or about January 24, 2019.

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Alliqua BioMedical, Inc.
2150 Cabot Blvd., West
Suite B
Langhorne, PA 19047

Telephone: (215) 702-8550

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

To be held on March 8, 2019

To the Stockholders of Alliqua BioMedical, Inc.:

A Special Meeting of stockholders of Alliqua, will be held at 9:00 A.M. Eastern Time, on March 8, 2019, at 2150 Cabot Blvd., West, Suite B, Langhorne, PA 19047, to consider and act upon the following matters:

1. To approve the Merger, the Merger Agreement, the issuance of Alliqua's common stock pursuant to the Merger Agreement and transactions contemplated by the Merger, as well as the resulting "change of control" of Alliqua under Nasdaq rules;
2. To approve an amendment to Alliqua's amended and restated certificate of incorporation to effect a reverse stock split of Alliqua's common stock; and
3. To consider and vote upon an adjournment or postponement of the Special Meeting, if necessary or appropriate, for the purpose of soliciting additional votes for the approval of Proposals 1 and 2.

Stockholders also will consider and act on any other matters as may properly come before the Special Meeting or any adjournment or postponement thereof, including any procedural matters incident to the conduct of the Special Meeting.

Alliqua's common stock is the only type of security entitled to vote at the Special Meeting. The board of directors has fixed January 22, 2019 as the record date for the determination of stockholders entitled to notice of, and to vote at, the Special Meeting and any adjournment or postponement thereof. Only holders of record of shares of Alliqua's common stock at the close of business on the record date are entitled to notice of, and to vote at, the Special Meeting. At the close of business on the record date, Alliqua expects to have 5,005,210 shares of common stock outstanding and entitled to vote at the Special Meeting. Each holder of record of shares of common stock on the record date will be entitled to one vote for each share held on all matters to be voted upon at the Special Meeting.

Your vote is important. The affirmative vote of the majority of votes cast affirmatively or negatively is required for approval of Proposals 1 and 3. The affirmative vote of holders of a majority of the outstanding shares of Alliqua's common stock entitled to vote at the Special Meeting is required for approval of Proposal 2.

Whether or not you plan to attend the Special Meeting in person, please submit your proxy promptly by telephone or via the internet in accordance with the instructions on the enclosed proxy card or complete, date, sign and promptly return the accompanying proxy card in the enclosed postage paid envelope to ensure that your shares will be represented and voted at the Special Meeting. If you date, sign and return your proxy card without indicating how you wish to vote, your proxy will be counted as a vote in favor of Proposals 1 through 3. If you fail either to return your proxy card or to vote in person at the Special Meeting, your shares will not be counted for purposes of determining whether a quorum is present at the Special Meeting and will have the same effect as a vote against Proposal 2, but assuming a quorum is present at the Special Meeting, will have no effect on the outcome of Proposal 1 or Proposal 3.

If you attend the Special Meeting, you may, upon your written request, withdraw your proxy and vote in person. You may revoke your proxy at any time before the polls close at the Special Meeting by sending a written notice to the Corporate Secretary of Alliqua, by providing a duly executed proxy card bearing a later date than the proxy being revoked, by submitting a proxy on a later date by telephone or via the internet (only your last telephone or internet proxy will be counted) before 11:59 P.M. Eastern Time on March 7, 2019 or by attending the Special Meeting and voting in person.

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If your shares are registered in your name, even if you plan to attend the Special Meeting or any postponement or adjournment of the Special Meeting in person, we request that you vote by telephone, over the Internet, or complete, sign and mail your proxy card to ensure that your shares will be represented at the Special Meeting.

If your shares are held in the name of a broker, bank or other nominee, and you receive notice of the Special Meeting through your broker, bank or other nominee, please vote or complete and return the materials in accordance with the instructions provided to you by such broker, bank or other nominee or contact your broker, bank or other nominee directly in order to obtain a proxy issued to you by your nominee holder to attend the Special Meeting and vote in person. Failure to do so may result in your shares not being eligible to be voted by proxy at the Special Meeting.

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REFERENCES TO ADDITIONAL INFORMATION

This proxy statement under Section 14(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the rules thereunder, contains a notice of meeting with respect to the Special Meeting of stockholders at which Alliqua's stockholders will consider and vote on the Merger Proposal, the Reverse Stock Split Proposal and the Adjournment Proposal.

Additional business and financial information about Alliqua can be found in documents previously filed by Alliqua with the U.S. Securities and Exchange Commission (the "SEC"). This information is available to you without charge on the SEC's website. Alliqua stockholders will also be able to obtain the proxy statement, free of charge, from Alliqua by requesting copies in writing using the following contact information:

ALLIQUA BIOMEDICAL, INC.
Attn: Corporate Secretary
2150 Cabot Blvd., West
Suite B
Langhorne, PA 19047

Tel: (215) 702-8550

You may also request additional copies from Alliqua's proxy solicitor, D.F. King, using the following contact information:

Banks and brokers may call D.F. King at (212) 269-5550.
Stockholders may call D.F. King toll-free at (800) 884-5101.

See "Where You Can Find More Information" beginning on page 176.

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SUMMARY

This summary highlights information contained elsewhere in this proxy statement and may not contain all the information that is important to you with respect to the Merger, Merger Agreement, the issuance of Alliqua's common stock pursuant to the Merger Agreement and transactions contemplated by the Merger and the other matters being considered at the Special Meeting of the Alliqua's stockholders to which this proxy statement relates. We urge you to read carefully the remainder of this proxy statement, including the attached annexes, and the other documents to which we have referred you. For additional information on the Alliqua, see the section entitled "Where You Can Find More Information" beginning on page 176. We have included page references in this summary to direct you to a more complete description of the topics presented below.

All references in this proxy statement to:

- "Alliqua," the "Company," "we," "us," or "our" refer to Alliqua BioMedical, Inc.,
- "Adynxx" refer to Adynxx, Inc.,
- "Effective Time" refer to the effective time of the Merger,
- "Merger Sub" refer to Embark Merger Sub Inc.,
- the "Merger Agreement" refer to the Agreement and Plan of Merger and Reorganization, dated as of October 11, 2018, by and between Alliqua, Merger Sub and Adynxx,
- "Nasdaq" refer to The Nasdaq Capital Market, as applicable, and
- "New Adynxx" or the "combined company" refer to Adynxx, Inc. as the combined company immediately following the Effective Time.

The Companies

Alliqua BioMedical, Inc.
2150 Cabot Blvd., West
Suite B
Langhorne, PA 19047

(215) 702-8550

Alliqua is a Delaware corporation that was originally formed in 1997 under the name Zeta Corporation. On April 17, 2003, Alliqua changed its name to Hepalife Technologies, Inc. and, on December 20, 2010, Alliqua changed its name to Alliqua, Inc. On June 6, 2014, pursuant to an agreement and plan of Merger between us and our wholly owned Delaware subsidiary, Alliqua BioMedical, Inc., Alliqua merged with and into Alliqua BioMedical, Inc. for the purposes of changing our name to Alliqua BioMedical, Inc. and state of domicile from Florida to Delaware. Alliqua manufactures high water content, electron beam cross-linked, aqueous polymer hydrogels, or gels, used for wound care, medical diagnostics, transdermal drug delivery and cosmetics. Alliqua believes that it is one of the leading manufacturers of high performance gels in the United States. Alliqua specializes in custom gels by capitalizing on proprietary manufacturing technologies. Alliqua has, historically, served as a contract manufacturer, supplying its gels to third parties who incorporate them into their own products.

Our common stock is traded on Nasdaq under the symbol “ALQA.”
Embark Merger Sub Inc.
2150 Cabot Blvd., West
Suite B
Langhorne, PA 19047

(215) 702-8550
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Merger Sub is a wholly owned subsidiary of Alliqua that was recently incorporated in Delaware for the purpose of the Merger. It does not conduct any business and has no material assets.

Adynxx, Inc.
100 Pine St., Suite 500
San Francisco, CA 94111

(415) 512-7740

Adynxx is a clinical stage biopharmaceutical company focused on bringing to market novel, disease-modifying products for the treatment of pain and inflammatory diseases. Since its founding in 2007, Adynxx has worked to discover and develop transcription factor decoys to modify the course of pain. Adynxx's resulting pipeline includes brivoligide injection ("brivoligide"), a Phase 2 drug candidate intended to address postoperative pain in a readily-identified group of patients with a greater risk of experiencing increased pain and elevated opioid use following surgery, and AYX2, a pre-clinical candidate intended to resolve chronic syndromes of pain, including both inflammatory and neuropathic pain. Both programs were discovered by Adynxx as part of the AYX decoy technology platform. In December 2018, Adynxx received Notice of Award from the National Institute on Drug Abuse ("NIDA"), part of the National Institutes of Health ("NIH"), for an award to support the clinical development of Adynxx's lead product candidate, brivoligide. The grant award will provide Adynxx with $5.7 million over the first two-year phase with the potential for an additional award of up to $9 million available in the second three-year phase following successful completion of certain milestones. Adynxx plans to continue development of brivoligide and AYX2, plans to collaborate with twoXAR, Inc. ("twoXAR") to use twoXAR's artificial intelligence-driven drug discovery platform to identify endometriosis treatments, and also seeks to identify potential in-licensing opportunities to build a pipeline of complementary product candidates in pain and inflammation.

The Combined Company

Immediately following the Effective Time of the Merger, the current equityholders of Alliqua and current equityholders of Adynxx are expected to own approximately 14% and 86% of the combined company, respectively, which is subject to adjustment based on how much Adynxx is able to raise as part of a permitted financing (the "Permitted Financing"), as discussed in "The Merger Agreement — Exchange Ratio." The principal executive office of the combined company is expected to be located in San Francisco, California.

Summary of the Merger

Upon the terms and subject to the conditions of the Merger Agreement, Merger Sub, a wholly owned subsidiary of Alliqua formed by Alliqua in connection with the Merger, will merge with and into Adynxx. The Merger Agreement provides that upon the consummation of the Merger the separate existence of Merger Sub shall cease. Adynxx will continue as the surviving corporation and will be a wholly owned subsidiary of Alliqua. Immediately following the Effective Time of the Merger, Adynxx's equityholders will own approximately 86% of the combined company and Alliqua's equityholders will own approximately 14% of the combined company. Following the Merger, Alliqua will change its name to "Adynxx, Inc."

Reasons for the Merger (see page 67)

The board of directors of Alliqua considered various reasons for the Merger, as described herein.

Opinion of Alliqua's Financial Advisor (see page 69 and Annex H)

At a meeting held on October 5, 2018, Alliqua's financial advisor, H.C. Wainwright & Co. ("Wainwright"), rendered its oral opinion to our board of directors (which was subsequently confirmed in writing by delivery of Wainwright's written opinion dated the same date) (the "Opinion") to the effect that based upon and subject to the assumptions, factors, qualifications and limitations set forth in the written opinion described herein, as of October 5, 2018, the Exchange Ratio was fair, from a financial point of view, to Alliqua.

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Wainwright's opinion was prepared solely for the information of the board of directors of Alliqua and only addressed the fairness, from a financial point of view, to Alliqua of the Exchange Ratio in the Merger Agreement. Wainwright was not requested to opine as to, and Wainwright's opinion does not address, the relative merits of the Merger or any alternatives to the Merger, Alliqua's underlying decision to proceed with or effect the Merger, or any other aspect of the Merger. Wainwright's opinion does not address the fairness of the Merger to the holders of any class of securities, creditors or other constituencies of Alliqua and is not a valuation of Alliqua or Adynxx or their respective assets or any class of their securities. Wainwright did not express an opinion about the fairness of the amount or nature of any compensation payable or to be paid to any of the officers, directors or employees, of Adynxx, whether or not relative to the Merger.

The summary of Wainwright's opinion in this proxy statement is qualified in its entirety by reference to the full text of its written opinion, which is included as Annex H to this proxy statement and sets forth the procedures followed, assumptions made, qualifications and limitations on the review undertaken and other matters considered by Wainwright in preparing its opinion. Wainwright's opinion was prepared solely for the information of the board of directors of Alliqua for its use in connection with its consideration of the Merger. Neither Wainwright's written opinion nor the summary of its opinion and the related analyses set forth in this proxy statement are intended to be, and they do not constitute, advice or a recommendation to any stockholder as to how such stockholder should act or vote with respect to any matter relating to the Merger or any other matter.

Overview of the Merger Agreement

Merger Consideration (see page 79)

At the closing of the Merger:

- any shares of Adynxx ordinary shares or preferred shares held as treasury stock or held or owned by Adynxx or any of its subsidiaries or Merger Sub shall be cancelled and retired and cease to exist and no consideration shall be delivered in exchange therefor;

- each share of Adynxx preferred stock outstanding shall be converted to Adynxx common stock, which shall have the right to receive a number of Alliqua common stock equal to the Exchange Ratio, and each share of Adynxx common stock outstanding shall be converted solely into the right to receive a number of shares of Alliqua common stock equal to such Exchange Ratio; and

- each outstanding Adynxx stock option, whether vested or unvested, and warrant that has not previously been exercised prior to the time of which the Merger becomes effective will be converted into a stock option or warrant, as the case may be, to purchase shares of Alliqua common stock at the Exchange Ratio.

No fractional shares of Alliqua common stock will be issuable pursuant to the Merger to Adynxx stockholders. Instead, each Adynxx stockholder who would otherwise be entitled to receive a fraction of a share of Alliqua common stock will be aggregated and then, if a fraction of a share of Alliqua common stock results from that aggregation, be rounded up to the nearest whole share of Alliqua common stock.

Under the Exchange Ratio formula in the Merger Agreement, as of immediately following the Merger, but excluding the effect of certain financings (as further described in the Merger Agreement), Adynxx equityholders are expected to own approximately 86% of the aggregate number of shares of the combined company and Alliqua equityholders are expected to own approximately 14% of the combined company. The Exchange Ratio will be fixed immediately prior to the Effective Time to reflect Alliqua's and Adynxx's equity capitalization as of immediately prior to such time. In addition, to the extent Adynxx consummates a Permitted Financing (as further described in the Merger Agreement and elsewhere in this proxy statement), in excess of $10 million dollars prior to the Effective Time, the Exchange Ratio may be further adjusted in a manner that would reduce the percentage of the combined company held by Alliqua stockholders as of immediately prior to the Merger. See "The Merger Agreement — Exchange Ratio" for more information.

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Stock Options (see page 80)

The number of shares of Alliqua common stock underlying such options and the exercise prices for unexpired and unexercised option to purchase shares of Alliqua common stock will be appropriately adjusted to reflect Alliqua's proposed reverse stock split, if consummated. The terms governing options to purchase shares of Alliqua common stock will otherwise remain in full force and effect following the closing of the merger.

At the Effective Time of the Merger, each stock option to acquire shares of Adynxx stock, whether vested or unvested, that has not previously been exercised will be assumed by Alliqua and converted into an option to purchase, on the same terms and conditions, a number of shares of Alliqua common stock equal to the product of (a) the number of shares of Adynxx common stock subject to such option, multiplied by (b) the Exchange Ratio, at an exercise price per share of Alliqua common stock equal to the quotient of (i) the exercise price per share of Adynxx common stock subject to such option divided by (ii) the Exchange Ratio.

Warrants (see page 81)

At the Effective Time of the Merger, each Adynxx warrant that is outstanding and unexercised immediately prior to the Effective Time will be converted into and become a warrant to purchase Alliqua's common stock. All rights with respect to Adynxx's common stock under Adynxx warrants assumed by Alliqua will thereupon be converted into rights with respect to Alliqua common stock. The replacement warrant shall be exercisable for a number of shares of common stock of the combined company equal to (a) the number of shares of Series A Preferred Stock of Adynxx that the existing warrant is exercisable for multiplied by (b) the Exchange Ratio, at a per share price equal to (i) the exercise price per share of Series A Preferred Stock of Adynxx under the existing warrant divided by (ii) the Exchange Ratio.

Conditions to the Closing of the Merger (see page 81)

Consummation of the Merger is subject to the satisfaction or waiver of a number of conditions (subject to certain exceptions in the Merger Agreement), including, among others, the following:

- there shall not have been issued any temporary restraining order, preliminary or permanent injunction or other order preventing the closing of the Merger by any court of competent jurisdiction or other governmental entity of competent jurisdiction, and no law, statute, resolution, ordinance, code, rule, regulation, requirement, ruling or decree shall be in effect which has the effect of making the closing of the Merger illegal;

- (a) the holders of a majority of the shares of outstanding Adynxx common stock and outstanding Adynxx preferred stock, voting as a single class on an as converted to Adynxx common stock basis and (b) the holders of a majority of the shares of outstanding Adynxx preferred stock, voting as a separate class on an as converted to Adynxx common stock basis, shall have adopted and approved the Merger Agreement, the Merger and the transactions contemplated by the Merger Agreement, and the holders of a majority of the outstanding shares of Alliqua common stock entitled to vote at the Special Meeting shall have approved the reverse stock split and the affirmative vote of the majority of votes cast affirmatively or negatively at the Special Meeting shall have approved the issuance of shares of Alliqua common stock in the merger;

- all waiting periods applicable to any filing under the Hart-Scott-Rodino Antitrust Improvements Act by Alliqua, Adynxx or any Adynxx stockholder shall have expired or been terminated; and

- the shares of Alliqua's common stock to be issued in the Merger shall have been approved for listing on the Nasdaq, subject to official notice of issuance.

In addition, the obligation of Alliqua and Merger Sub to complete the Merger is further subject to the satisfaction or waiver of certain additional conditions, including the following:

-

certain fundamental representations and warranties of Adynxx shall have been true and correct in all respects on the date of the Merger Agreement and shall be true and correct on the closing date

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of the Merger with the same force and effect as if made on and as of the date on which the Merger is to be completed or, if such representations and warranties address matters as of a particular date, then such fundamental representations and warranties shall be true and correct as of that particular date;

- all other representations and warranties of Adynxx in the Merger Agreement shall have been true and correct as of the date of the Merger Agreement and shall be true and correct on the closing date of the Merger with the same force and effect as if made on the date on which the Merger is to be completed or, if such representations and warranties address matters as of a particular date, then such representations and warranties shall be true and correct as of that particular date, except where the failure of these representations and warranties to be true and correct, individually or in the aggregate, would not reasonably be expected to have a material adverse effect on the other party;

- Adynxx must have complied with and performed each of the covenants and obligations in the Merger Agreement that Adynxx is required to comply with or to perform at or prior to the closing;

- there shall have been no effect, change, event, circumstance, or development that is or could reasonably be expected to be materially adverse to, or has or could reasonably be expected to have or result in a material adverse effect on the business, financial condition, assets or operations of Adynxx and its subsidiaries taken as a whole; or the ability of Adynxx to consummate the Merger or any of the other contemplated transactions or to perform any of its covenants or obligations under the Merger Agreement in all material respects, each referred to as a material adverse effect as it relates to Adynxx; and

- such other conditions set forth on page 86 of this proxy statement.

In addition, the obligation of Adynxx to complete the Merger is further subject to the satisfaction or waiver of the following conditions:

- certain fundamental representations and warranties of Alliqua shall have been true and correct in all respects on the date of the Merger Agreement and shall be true and correct on the closing date of the Merger with the same force and effect as if made on and as of the date on which the Merger is to be completed or, if such representations and warranties address matters as of a particular date, then such fundamental representations and warranties shall be true and correct as of that particular date;

- all other representations and warranties of Alliqua in the Merger Agreement shall have been true and correct as of the date of the Merger Agreement and shall be true and correct on the closing date of the Merger with the same force and effect as if made on the date on which the Merger is to be completed or, if such representations and warranties address matters as of a particular date, then such representations and warranties shall be true and correct as of that particular date, except where the failure of these representations and warranties to be true and correct, individually or in the aggregate, would not reasonably be expected to have a material adverse effect on the other party;

- Alliqua and Merger Sub shall have performed or complied with in all material respects all of its covenants and agreements in the Merger Agreement required to be performed or complied with by it on or before the closing of the Merger; and

- such other conditions set forth on page 90.

No Solicitation (see page 85)
Each of Alliqua and Adynxx agreed that, subject to certain exceptions, Alliqua and Adynxx and any of their respective subsidiaries will not, and each party will use its reasonable best efforts to cause each of its officers, directors, employees, investment bankers, attorneys, accountants, representatives, consultants or other agents retained by it or any of its subsidiaries not to, directly or indirectly:
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- solicit, initiate, knowingly encourage, induce or knowingly facilitate the communication, making, submission or announcement of, any "acquisition proposal" as defined in the Merger Agreement, or take any action that could reasonably be expected to lead to an acquisition proposal or an acquisition inquiry;

- furnish any non-public information with respect to it to any person in connection with or in response to an acquisition proposal or an acquisition inquiry;

- engage in discussions or negotiations with any person with respect to any acquisition proposal or acquisition inquiry;

- subject to certain exceptions for Alliqua, approve, endorse or recommend an acquisition proposal;

- execute or enter into any letter of intent or similar document or any contract contemplating or otherwise relating to an "acquisition transaction," as defined in the Merger Agreement; or

- publicly propose to do any of the foregoing.

Covenants (see page 86)

Alliqua has agreed that, except as permitted by the Merger Agreement, as required by law, or unless Adynxx shall have provided written consent, during the period commencing on the date of the Merger Agreement and continuing until the earlier to occur of the closing of the Merger and the termination of the Merger Agreement, Alliqua will conduct its business and operations in the ordinary course consistent with past practices and in compliance with all applicable laws, regulations and certain contracts (other than the Spin-off). Alliqua has also agreed that, subject to certain limited exceptions, without the consent of Adynxx, it will not take certain actions described in the Merger Agreement, during the period commencing on the date of the Merger Agreement and continuing until the earlier to occur of the closing of the Merger and the termination of the Merger Agreement.

Termination of the Merger Agreement (see page 93)

Either Alliqua or Adynxx can terminate the Merger Agreement under specified circumstances, which would prevent the Merger from being consummated.

Termination Fee (see page 94)

The Merger Agreement provides for the payment of a termination fee of $249,000 by each of Alliqua and Adynxx to the other party upon termination of the Merger Agreement under specified circumstances.

Nasdaq Listing (see page 97)

Pursuant to the Merger Agreement, Alliqua agreed to use its reasonable best efforts to cause the shares of Alliqua common stock being issued in the Merger to be approved for listing on Nasdaq at or prior to the Effective Time of the Merger.

Voting Agreements (see page 95)

Concurrently with the execution of the Merger Agreement, certain Alliqua stockholders, owning in the aggregate approximately 10% of Alliqua's fully-diluted common stock (including common stock which may be issued upon exercise of options and vesting of restricted stock units or settlement of vested restricted stock units), and certain Adynxx stockholders, owning in the aggregate approximately 35% of Adynxx's outstanding capital stock (on an as-converted to Adynxx common stock basis), entered into voting agreements with Alliqua and Adynxx. The voting agreements provide, among other things, that the parties to the voting agreements will vote the shares of Alliqua capital stock and Adynxx capital stock held by them in favor of the transactions contemplated by the Merger Agreement and against any actions that could adversely affect the consummation of the Merger and grant a proxy to

vote such shares in favor of the transactions. In addition, the voting agreements place restrictions on the transfer of the shares of Alliqua capital stock and Adynxx capital stock held by the respective signatory stockholders.

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In addition, pursuant to the conditions of the Merger Agreement, holders of the number of shares of Adynxx capital stock required to approve the Merger have already approved the Merger via written consent.

Lock-up Agreements (see page 95)

Concurrently with the execution of the Merger Agreement, certain Alliqua stockholders owning in the aggregate approximately 10% of Alliqua's fully-diluted common stock (including common stock which may be issued upon exercise of options and vesting of restricted stock units or settlement of vested restricted stock units) and certain Adynxx stockholders, owning in the aggregate approximately 35% of Adynxx's outstanding capital stock (on an as-converted to Adynxx common stock basis), entered into lock-up agreements, pursuant to which such parties have agreed not to, except in limited circumstances, sell or transfer, or engage in swap or similar transactions with respect to, shares of Alliqua's common stock, including, as applicable, shares received in the Merger and issuable upon exercise of certain warrants and options, from the closing of the Merger until 180 days from the closing date of the Merger.

Management Following the Merger (see page 150)

At the Effective Time of the Merger, the executive management team of the combined company is expected to include the following individuals:

| Name | Position with the Combined Company | Current Position |
|---|---|---|
| Rick Orr | Chief Executive Officer | Chief Executive Officer |
| Donald Manning, M.D., Ph.D. | Chief Medical Officer | Chief Medical Officer |
| Julien Mamet, Ph.D. | Chief Scientific Officer | Chief Scientific Officer |

The Board of Directors Following the Merger (see page 150)

At the Effective Time of the Merger, the combined company will initially have a eight-member board of directors, comprised of Dennis Podlesak as Chairperson, David Johnson, Eckard Weber, Stan Abel, Rick Orr, Julien Mamet, Joseph Leone and Jeffrey Sklar. Alliqua has the right to designate one member to the board of directors, initially David Johnson.

Interests of Alliqua's Directors and Executive Officers in the Merger (see page 77)

Alliqua's directors and executive officers have economic interests in the Merger that are different from, or in addition to, those of Alliqua's stockholders generally. These interests include:

- Alliqua's executive officers are parties to employment agreements or offer letters that may provide for severance benefits in the event of certain qualifying terminations of employment following the Merger; and

- Alliqua's directors and executive officers are entitled to continued indemnification and insurance coverage under indemnification agreements and the Merger Agreement.

These interests are discussed in more detail in the section entitled "The Merger — Interests of Alliqua's Directors and Executive Officers in the Merger" beginning on page 77. The Alliqua board of directors was aware of and considered these interests, among other matters, in reaching its decision to approve and declare advisable the Merger Agreement, the Merger and the other transactions contemplated by the Merger Agreement.

Federal Securities Law Consequences; Resale Restrictions (see page 77)

The issuance of Alliqua's common stock in the Merger to Adynxx stockholders will be effected by means of a private placement, which is exempt from registration under the Securities Act of 1933, as amended (the "Securities Act"), in

reliance on Section 4(a)(2) of the Securities Act and Rule 506 of Regulation D or Regulation S promulgated thereunder and such shares will be “restricted securities.” The

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shares issued in connection with the Merger will not be registered under the Securities Act upon issuance and will not be freely transferable. Holders of such shares may not sell their respective shares unless the shares are registered under the Securities Act or an exemption is available under the Securities Act.

Material U.S. Federal Income Tax Consequences of the Merger (see page 77)

The Merger has been structured to qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended (the "Code"). Alliqua stockholders will not sell, exchange or dispose of any shares of Alliqua common stock as a result of the Merger. Thus, there should be no material U.S. federal income tax consequences to Alliqua or its stockholders as a result of the Merger.

Risk Factors (see page 18)

The Merger, including the possibility that the Merger may not be consummated, poses a number of risks to Alliqua and its stockholders. In addition, both Alliqua and Adynxx are subject to various risks associated with their businesses and their industries, and the combined business will also be subject to those and other risks.

Regulatory Approvals (see page 10)

Neither Alliqua nor Adynxx is required to make any filings or to obtain approvals or clearances from any antitrust regulatory authorities in the United States or other countries to consummate the Merger. In the United States, Alliqua must comply with applicable federal and state securities laws and Nasdaq rules and regulations in connection with the issuance of shares of Alliqua's common stock in the Merger and the private placement, including the filing with the SEC of this proxy statement.

Anticipated Accounting Treatment (see page 78)

The Merger will be treated by Alliqua as a reverse merger and recapitalization effected by a share exchange for financial accounting and reporting purposes since substantially all of Alliqua's operations will be disposed of immediately prior to the consummation of the merger. Since Alliqua had no operations upon the merger taking place, Alliqua is not considered to be a business for accounting purposes. Accordingly, no goodwill or intangible assets will be recorded as a result of the merger.

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## QUESTIONS AND ANSWERS ABOUT THE SPECIAL MEETING AND THE MERGER

Except as specifically indicated, the following information and all other information contained in this proxy statement does not give effect to the reverse stock split described in Proposal 2.

The following questions and answers are intended to briefly address commonly asked questions as they pertain to the Special Meeting, the Merger Agreement, the issuance of Alliqua's common stock pursuant to the Merger and the reverse stock split. These questions and answers may not address all questions that may be important to you as a stockholder. Please refer to the "Summary" beginning on page 1 and the more detailed information contained elsewhere in this proxy statement and the annexes to this proxy statement, each of which you should read carefully.

Q:
What is the Merger?

A.:
Alliqua, Embark Merger Sub Inc. and Adynxx have entered into the Merger Agreement that contains the terms and conditions of the proposed business combination of Alliqua and Adynxx. Under the Merger Agreement, the Merger Sub, will merge with and into Adynxx, with Adynxx surviving as a wholly owned subsidiary of Alliqua. Immediately following the Effective Time of the Merger, Adynxx equityholders will own approximately 86% of the combined company and Alliqua equityholders will own approximately 14% of the combined company, subject to adjustment of the Exchange Ratio as described elsewhere in this proxy statement.

For a more complete description of the Merger, please see the section entitled "The Merger Agreement" beginning on page 79 of this proxy statement.

Q:
What will happen to Alliqua if, for any reason, the Merger with Adynxx does not close?

A.:
Alliqua has invested significant time and incurred, and expects to continue to incur, significant expenses related to the proposed Merger with Adynxx. If Alliqua does not consummate the Merger, Alliqua may be subject to certain material risks, including, the following: (i) under certain circumstances, Alliqua may be required to pay a termination fee to Adynxx of $249,000; (ii) the price of Alliqua's stock may decline and remain volatile; and (iii) certain costs related to the Merger, such as legal and accounting fees, must be paid even if the Merger is not completed. In addition, if the Merger is not completed and Alliqua's board of directors determines to seek another business combination, it may not be able to find a third party willing to provide equivalent or more attractive consideration than the consideration to be provided by each party in the Merger. In such circumstances, Alliqua's board of directors may elect to, among other things, divest all or a portion of Alliqua's business, or take the steps necessary to liquidate all of Alliqua's business and assets, and in either such case, the consideration that Alliqua receives may be less attractive than the consideration to be received by Alliqua pursuant to the Merger Agreement.

Q:
Why is Alliqua proposing to merge with Adynxx?

A.:
Alliqua's board of directors considered a number of factors that supported its decision to approve the Merger Agreement. In the course of its deliberations, Alliqua's board of directors also considered a variety of risks and other countervailing factors related to entering into the Merger Agreement.

For a more complete discussion of Alliqua's reasons for the Merger, please see the section entitled "The Merger — Alliqua's Reasons for the Merger; Recommendations of the Alliqua Board of Directors" beginning on page 67 of this proxy statement.

Q:
What is required to consummate the Merger?

A.:
To consummate the Merger, Alliqua's stockholders must approve the issuance of shares of Alliqua's common stock in the Merger and the resulting "change of control" of Alliqua under Nasdaq rules, which require the affirmative vote of a majority of the votes cast affirmatively or negatively on the Merger Proposal. In addition, Adynxx's stockholders must adopt the Merger Agreement, which requires the affirmative vote (or action by written consent) of the holders of (a) a majority of the shares of Adynxx's capital stock outstanding, voting together on an as converted to Adynxx common

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stock basis; and (b) the holders of a majority of the outstanding shares of Adynxx preferred shares, voting together on an as converted to Adynxx common stock basis. The stockholders of Adynxx are expected to approve the consummation of the transactions under the Merger Agreement by written consent concurrently with the Special Meeting. In addition to obtaining stockholder approval, each of the other closing conditions set forth in the Merger Agreement must be satisfied or waived in order to consummate the Merger. Alliqua's board of directors expects that a reverse stock split of Alliqua common stock will increase the market price of Alliqua common stock so that Alliqua is able to maintain compliance with the relevant Nasdaq listing requirements for the foreseeable future.

For a more complete description of the closing conditions under the Merger Agreement, please see the section entitled "The Merger Agreement — Conditions to the Closing of the Merger" beginning on page 81 of this proxy statement.

Q:

Are there any federal or state regulatory requirements that must be complied with or federal or state regulatory approvals or clearances that must be obtained in connection with the Merger?

A.:

Neither Alliqua nor Adynxx is required to make any filings or to obtain any approvals or clearances from any antitrust regulatory authorities in the United States or other countries to consummate the Merger. In the United States, Alliqua must comply with applicable federal and state securities laws and Nasdaq rules and regulations in connection with the issuance of shares of Alliqua's common stock in the Merger, including the filing with the SEC of this proxy statement and the required stockholder approval for the resulting "change of control" of Alliqua under Nasdaq rules. Prior to consummation of the Merger, Alliqua intends to file an initial listing application with Nasdaq pursuant to Nasdaq's "reverse merger" rules and to effect the initial listing of Alliqua's common stock issuable in connection with the Merger.

Q:

What will Adynxx's stockholders receive in the Merger?

A.:

On a pro forma basis, based upon the number of shares of Alliqua's common stock to be issued in the Merger, current Alliqua's equityholders will own approximately 14% of the combined company and current Adynxx equityholders will own approximately 86% of the combined company, subject to adjustments to the Exchange Ratio as further described under "The Merger Agreement — Exchange Ratio" beginning on page 79 of this proxy statement.

Q:

What are the material federal income tax consequences of the Merger to me?

A.:

The Merger has been structured to qualify as a reorganization within the meaning of Section 368(a) of the Code. Alliqua stockholders will not sell, exchange or dispose of any shares of Alliqua common stock as a result of the Merger. Thus, there should be no material U.S. federal income tax consequences to Alliqua stockholders as a result of the Merger.

For a more complete description of the tax consequences of the Merger, please see the section entitled "The Merger — Material U.S. Federal Income Tax Consequences of the Reverse Stock Split and the Merger" beginning on page 77 of this proxy statement.

Q:

Why is Alliqua seeking stockholder approval to issue shares of common stock to existing stockholders of Adynxx in the Merger?

A.:

Because Alliqua's common stock is listed on Nasdaq, we are subject to Nasdaq Listing Rules. Rule 5635(a) of the Nasdaq Listing Rules requires stockholder approval with respect to issuances of Alliqua's common stock, among other

instances, when the shares to be issued are being issued in connection with the acquisition of the stock or assets of another company and are equal to 20% or more of the outstanding shares of Alliqua's common stock before the issuance. Rule 5635(b) of the Nasdaq Listing Rules also requires stockholder approval when any issuance or potential issuance will result in a "change of control" of the issuer. Although Nasdaq has not adopted any rule on what constitutes a "change of control" for purposes of Rule 5635(b), Nasdaq has previously indicated that the acquisition of, or right to acquire, by a single investor or affiliated investor group, as little as 20% of the common stock (or securities convertible into or exercisable for common stock) or voting power of an issuer could constitute a change of control.

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In the case of the Merger, Alliqua will be issuing approximately 29,807,221 shares of its common stock on a fully diluted basis, and the common stock to be issued pursuant to the Merger Agreement will represent greater than 20% of its voting stock. Accordingly, Alliqua is seeking stockholder of approval of this issuance under Nasdaq Listing Rules.

Q:

What is the reverse stock split and why is it necessary?

A.:

Immediately prior to the Effective Time of the Merger, the outstanding shares of Alliqua's common stock will be combined into a lesser number of shares to be mutually agreed upon by Alliqua and Adynxx prior to the Effective Time within the range approved by Alliqua's stockholders and publicly announced by Alliqua. The board of directors of Alliqua believes that a reverse stock split may be desirable for a number of reasons. Alliqua common stock is currently, and will be following the completion of the Merger, listed on Nasdaq. According to applicable Nasdaq rules, in order for Alliqua common stock to continue to be listed on Nasdaq, Alliqua must satisfy certain requirements established by Nasdaq. The Alliqua board of directors expects that a reverse stock split of Alliqua common stock will increase the market price of Alliqua common stock so that Alliqua is able to maintain compliance with the relevant Nasdaq listing requirements for the foreseeable future.

Q:

What is the Spin-off?

A:

Prior to the Effective Time, pursuant to the Merger Agreement, Alliqua will use commercially reasonable efforts to consummate the divestiture of AquaMed Technologies, Inc. ("AquaMed"), a wholly owned subsidiary of Alliqua engaged in the custom hydrogel manufacturing business ("SpinCo"), in the form of a pro rata distribution of the common equity of SpinCo to Alliqua's stockholders. We refer to the divestiture transactions as the Spin-off. As part of the Spin-off, on November 27, 2018, AquaMed entered into an Agreement and Plan of Merger (the "AquaMed Merger Agreement") with TO Pharmaceuticals, LLC ("TOP") and AQ TOP, LLC ("AQ Merger Sub"), a wholly-owned subsidiary of AquaMed, whereby, among other transactions contemplated thereby, (1) Alliqua will undertake a series of internal transactions, following which AquaMed will own all of the assets and liabilities of the custom hydrogel and contract manufacturing business, (2) AquaMed will consummate a private placement of AquaMed's common stock in a minimum aggregate amount of $10 million immediately prior to the effective time of the merger with TOP (the "AquaMed Private Placement") and (3) TOP will merge with and into AQ Merger Sub in exchange for shares of AquaMed common stock (the "AquaMed Merger"). Following the Spin-off, the AquaMed Private Placement and the AquaMed Merger, AquaMed is expected to be an independent, publicly-traded company, of which the former stockholders of Alliqua will own 10% of the outstanding equity and, before giving effect to any fees payable in equity to financial advisors or other intermediaries, the current members of TOP and the third-party investors that participate in the AquaMed Private Placement are expected to hold approximately 90% of the total number of shares of AquaMed common stock outstanding (on a fully diluted basis) assuming a minimum of $10 million is raised in the AquaMed Private Placement. Alliqua will not retain any ownership interest in AquaMed. So long as Alliqua exercises commercially reasonable efforts to cause the Spin-off to occur concurrently with the Effective Time, the occurrence of the Spin-off is not a condition of Adynxx's obligations to the consummate the transactions contemplated by the Merger Agreement. The consummation of the Merger, however, is a condition to the closing of the Spin-off. In the event that Alliqua's stockholders do not approve Proposal 1 and the Merger is not consummated, then Alliqua may, in its discretion, determine not to effect the Spin-off, in which case, SpinCo will remain a wholly-owned subsidiary of Alliqua. In addition, the consummation of the AquaMed Merger and the Spin-off are subject to certain closing conditions that are described in a Form 8-K filed by Alliqua on November, 28, 2018. The consummation of the AquaMed Merger is subject to certain conditions, including, without limitation, (i) the effectiveness of the registration statement to be filed with the SEC and the approval for listing on the Nasdaq Capital Market of the shares of AquaMed common stock to be issued in the Spin-off, (ii) the accuracy of the parties' representations and warranties and the performance of their respective covenants contained in the AquaMed Merger Agreement, and (iii)

consummation of the AquaMed Private Placement. The consummation of the Spin-off is subject to the foregoing conditions,

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plus certain additional conditions, including, without limitation (i) the Merger Agreement being in full force and effect and the Merger being consummated immediately following the Spin-off and (ii) Alliqua being satisfied that the Spin-off will not result in any material tax payable by Alliqua.

Q:
Why am I receiving this proxy statement?

A.:
You are receiving this proxy statement because you have been identified as a stockholder of Alliqua as of the record date, and thus you are entitled to vote at Alliqua's Special Meeting. This document serves as a proxy statement used to solicit proxies for the Special Meeting. This document contains important information about the Merger and the Special Meeting of Alliqua, and you should read it carefully.

Q:
How does Alliqua's board of directors recommend that Alliqua's stockholders vote?

A.:
After careful consideration, Alliqua's board of directors unanimously recommends that Alliqua's stockholders vote:

Proposal 1 — FOR the Merger Proposal;
Proposal 2 — FOR the Reverse Stock Split Proposal; and
Proposal 3 — FOR the Adjournment Proposal.

Q:
What risks should Alliqua's stockholders consider in deciding whether to vote in favor of the share issuance and the reverse stock split?

A.:
Alliqua's stockholders should carefully read the section of this proxy statement entitled "Risk Factors" beginning on page 18, which sets forth certain risks and uncertainties related to the Merger and reverse stock split, risks and uncertainties to which the combined company's business will be subject, risks and uncertainties to which Alliqua, as an independent company, is subject and risks and uncertainties to which Adynxx, as an independent company, is subject.

Q:
When do you expect the Merger to be consummated?

A.:
Alliqua and Adynxx anticipate that the consummation of the Merger will occur as promptly as practicable after the Special Meeting and following satisfaction or waiver of all closing conditions. However, the exact timing of the consummation of the Merger is not yet known. For a more complete description of the closing conditions under the Merger Agreement, please see the section entitled "The Merger Agreement — Conditions to the Closing of the Merger" beginning on page 81 of this proxy statement.

Q:
How will the Merger affect share options to acquire Adynxx capital stock?

A.:
Upon the effectiveness of the Merger, each outstanding option to purchase Adynxx capital stock, whether vested or unvested will be assumed by Alliqua and become options to purchase Alliqua's common stock and each share of Adynxx preferred shares outstanding shall be converted to common stock, which shall have the right to receive a number of Alliqua's common stock equal to an Exchange Ratio. For a more complete discussion of the Exchange Ratio at the Effective Time of the Merger, please see the section entitled "The Merger Agreement — Merger Consideration"

beginning on page 79 of this proxy statement.

Q:
How will the reverse stock split and the Merger affect stock options and warrants to acquire Alliqua's common stock and Alliqua's stock option plans?

A.:
As of the effective time of the reverse stock split, Alliqua will adjust and proportionately decrease the number of shares of Alliqua's common stock reserved for issuance upon exercise of, and adjust and proportionately increase the exercise price of, all options and warrants to acquire Alliqua's common stock. All stock options and warrants to acquire shares of Alliqua's common stock that are outstanding immediately prior to the Effective Time of the Merger will remain outstanding following

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the Effective Time of the Merger. In addition, as of the effective time of the reverse stock split, Alliqua will adjust and proportionately decrease the total number of shares of Alliqua's common stock that may be the subject of future grants under Alliqua's stock option plans.

Q:

What do I need to do now?

A.:

You are urged to read this proxy statement carefully, including each of the annexes, and to consider how the Merger affects you. Your vote is very important to us and we hope that you will attend the Special Meeting. However, whether or not you plan to attend the Special Meeting, please vote by proxy in accordance with the instructions on your proxy card or voting instruction card (from your broker, bank or other nominee). There are three convenient ways of submitting your vote:

- By Telephone or Internet — All record holders can vote by touchtone telephone from the United States using the toll free telephone number on the proxy card, or over the Internet, using the procedures and instructions described on the proxy card. "Street name" holders may vote by telephone or Internet if their bank, broker or other nominee makes those methods available, in which case the bank, broker or other nominee will enclose the instructions with the proxy materials. The telephone and Internet voting procedures are designed to authenticate stockholders' identities, to allow stockholders to vote their shares, and to confirm that their instructions have been recorded properly.

- In Person — All record holders may vote in person at the Special Meeting. "Street name" holders may vote in person at the Special Meeting if their bank, broker or other nominee has furnished a legal proxy. If you are a "street name" holder and would like to vote your shares by proxy, you will need to ask your bank, broker or other nominee to furnish you with a nominee issued proxy. You will need to bring the nominee issued proxy with you to the Special Meeting and hand it in with a signed ballot that will be provided to you at the Special Meeting. You will not be able to vote your shares without a nominee issued proxy. Note that a broker letter that identifies you as a stockholder is not the same as a nominee issued proxy.

- By Written Proxy — All record holders can vote by written proxy card, if they have requested to receive printed proxy materials. If you are a "street name" holder and you request to receive printed proxy materials, you will receive a written proxy card and a voting instruction card from your bank, broker or other nominee.

The Board has appointed David Johnson, President and Chief Executive Officer to serve as the proxy for the Special Meeting.

If you complete all of the proxy card except one or more of the voting instructions, then the designated proxies will vote your shares as to which you provide no voting instructions in the manner described under "What if I do not specify how I want my shares voted?" below. We do not anticipate that any other matters will come before the Special Meeting, but if any other matters properly come before the meeting, then the designated proxies will vote your shares in accordance with applicable law and their judgment.

If you hold your shares in "street name," and complete the voting instruction card provided by your broker, bank or other nominee except with respect to one or more of the voting instructions, then your broker, bank or other nominee may be unable to vote your shares with respect to the proposal as to which you provide no voting instructions. See "What is a broker non-vote?" below.

Even if you currently plan to attend the Special Meeting, we recommend that you vote by telephone or Internet or return your proxy card or voting instructions as described above so that your votes will be counted if you later decide not to attend the Special Meeting or are unable to attend.

Q:

What is the quorum requirement?

A:
The presence, in person or by proxy, of the holders of a majority of the shares of the stock entitled to vote at the Special Meeting is necessary to constitute a quorum to transact business. If you are a stockholder of record, your shares will be counted towards the quorum only if you appear in person at the Special Meeting or submit a valid proxy to ensure your shares are represented at the Special

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Meeting. If you are a beneficial owner of shares held in "street name," your shares will be counted towards the quorum if your broker, bank or other nominee submits a proxy for your shares at the Special Meeting. Abstentions and broker non-votes, if any, will be counted towards the quorum requirement. If a quorum is not present or represented at the Special Meeting, the chairman of the meeting may adjourn the Special Meeting from time to time without notice or other announcement until a quorum is present or represented.

Q:
What if I do not specify how I want my shares voted?

A:
If you are a record holder who returns a completed proxy card that does not specify how you want to vote your shares on one or more proposals, the designated proxies will vote your shares for each proposal as to which you provide no voting instructions, and such shares will be voted in the following manner:

Proposal 1 — FOR the Merger Proposal;
Proposal 2 — FOR the Reverse Stock Split Proposal; and
Proposal 3 — FOR the Adjournment Proposal

If you are a "street name" holder and do not provide voting instructions on one or more proposals, your bank, broker or other nominee may be able to vote those shares. See "What is a broker non-vote?" below.

Q:
Who counts the votes?

A:
All votes will be tabulated by Jennie Carcel, Controller, the inspector of election appointed for the Special Meeting. Each proposal will be tabulated separately.

Q:
How do I vote if I hold my shares in "street name"?

A:
If you hold your shares in "street name," then you received this proxy statement from your broker, bank or other nominee, along with a form from your broker, bank or other nominee seeking instruction from you as to how to vote your shares of our common stock. In order to vote your shares, you will need to return the provided form instructing your broker, bank or other nominee as to how to vote your shares. If you hold your shares in "street name" and would like to vote in person at the Special Meeting, you must bring to the Special Meeting a proxy from the broker, bank or other nominee that holds your shares authorizing you to vote those shares at the Special Meeting.

Q:
What happens if I fail to attend the Special Meeting or abstain from voting?

A:
If you are a stockholder of record and neither attend the Special Meeting nor deliver a proxy, it will have the same effect as a vote "AGAINST" the approval of the Reverse Stock Split Proposal, but, assuming a quorum is present, will have no effect on the outcomes of the Merger Proposal and Adjournment Proposal. If you attend the Special Meeting or deliver a proxy but abstain from voting, your abstention will have the same effect as a vote "AGAINST" the approval of the Reverse Stock Split Proposal. Abstentions will have no effect on the outcome of the Merger Proposal and the Adjournment Proposal.

Q:
If I am a beneficial owner of shares, can my brokerage firm vote my shares?

A:

If you are a beneficial owner and do not vote via the Internet or telephone or by returning a signed voting instruction card to your broker, your shares may be voted only with respect to so-called “routine” matters where your broker has discretionary voting authority over your shares. Accordingly, brokers will have such discretionary authority to vote on the Adjournment Proposal and may vote “FOR” the Adjournment Proposal.

We encourage you to provide instructions to your brokerage firm via the Internet or telephone or by returning your signed voting instruction card. This ensures that your shares will be voted at the Special Meeting with respect to all of the proposals described in this proxy statement.

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Q:
What is a broker non-vote?

A:
Broker non-votes occur when shares are held in "street name" through a broker, bank or other intermediary on behalf of a beneficial owner and the broker submits a proxy but does not vote for a matter because the broker has not received voting instructions from the beneficial owner and the broker does not have discretionary voting authority on the matter. Under applicable stock exchange rules, brokers are permitted to exercise discretionary voting authority only on "routine" matters when voting instructions have not been timely received from a beneficial owner. The Adjornment Proposal is considered a "routine" matter. Therefore, if you do not provide voting instructions to your broker regarding the Adjournment Proposal, your broker will be permitted to exercise discretionary voting authority to vote your shares on such proposal. The Merger Proposal and the Reverse Stock Split Proposal are considered "non-routine" matters. Therefore, if you do not provide voting instructions to your broker regarding the Merger Proposal and/or Reverse Stock Split Proposal, your broker will not be permitted to exercise voting authority to vote your shares on such proposals and will result in a broker non-vote.

Q:
Can I change my vote?

A:
Yes. If you are a record holder, you may revoke your proxy at any time by any of the following means:

- Attending the Special Meeting and voting in person. Your attendance at the Special Meeting will not by itself revoke a proxy. You must vote your shares by ballot at the Special Meeting to revoke your proxy.

- Voting again by telephone or over the Internet (only your latest telephone or Internet vote submitted prior to the Special Meeting will be counted).

- If you requested and received written proxy materials, completing and submitting a new valid proxy bearing a later date.

- Giving written notice of revocation to the Alliqua addressed to our Chief Financial Officer, Treasurer and Secretary, Joe Warusz, at the Alliqua's address above, which notice must be received before noon, Eastern Time, on March 7, 2019.

If you are a street name holder, your bank, broker or other nominee should provide instructions explaining how you may change or revoke your voting instructions.

Q:
Should Alliqua's stockholders send in their stock certificates now?

A:
No. After the Merger is consummated, Alliqua's stockholders will receive written instructions, as applicable, from Alliqua's transfer agent for exchanging their certificates representing shares of Alliqua's common stock for new certificates giving effect to the reverse stock split.

Q:

Am I entitled to appraisal or dissenters' rights in connection with the Merger?

A:
No. You are not entitled to appraisal or dissenters' rights under Delaware law or under Alliqua's certificate of incorporation or bylaws in connection with the Merger.

Q:
Have any of Alliqua's stockholders agreed to vote in favor of the issuance of the shares in the Merger?

A:
Yes. In connection with the execution of the Merger Agreement, holders of approximately 10% of Alliqua's fully-diluted common stock (including common stock which may be issued upon exercise of options and vesting of restricted stock units or settlement of vested restricted stock units) have entered into agreements with Adynxx and Alliqua that provide, among other things, that the stockholders subject to these agreements will vote in favor of the issuance of shares of Alliqua's common stock in the Merger and grant to Adynxx an irrevocable proxy to vote all of such stockholders' shares of Alliqua's common stock in favor of the approval of the issuance of the shares of Alliqua's common stock in the Merger and against any proposal made in opposition to, or in competition with, the issuance of shares of Alliqua's common stock in the Merger.

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Q:
What are the solicitation expenses and who pays the cost of this proxy solicitation?

A:
Alliqua's board of directors is asking for your proxy and we will pay all of the costs of asking for stockholder proxies. We will reimburse brokerage houses and other custodians, nominees and fiduciaries for their reasonable out-of-pocket expenses for forwarding solicitation material to the beneficial owners of common stock and collecting voting instructions. We may use our officers and employees to ask for proxies, as described below. In addition, we have retained D.F. King to assist in the solicitation of proxies for a fee of $10,000 plus reimbursement of expenses.

Q:
Who can help answer my questions?

A:
The information provided above in this "Question and Answer" format is for your convenience only and is merely a summary of the information contained in this proxy statement. We urge you to carefully read this entire proxy statement, including the documents we refer to in this proxy statement. If you have any questions, need additional material, or require assistance in voting your shares, please feel free to contact D.F. King, the firm assisting us in the solicitation of proxies. Banks and brokers may call D.F. King at (212) 269-5550. Stockholders may call D.F. King toll-free at (800) 884-5101.

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MARKET AND DIVIDEND INFORMATION

Alliqua's common stock is listed on Nasdaq under the symbol "ALQA." Adynxx is a private company and its capital stock is not publicly traded. There has never been, nor is there expected to be in the future, a public market for Adynxx's capital stock. As of January 18, 2019, there were 19,548,969 shares of Adynxx's common stock outstanding and held of record by 14 stockholders.

Following the consummation of the Merger, and subject to successful application for initial listing with Nasdaq, Alliqua's common stock will continue to be listed on Nasdaq, but will trade under the symbol "ADYX" and under the combined company's new name, "Adynxx, Inc."

Alliqua has never declared or paid cash dividends on its capital stock. However, as previously announced, Alliqua intends to declare a special cash dividend to its stockholders of record prior to the Effective Time. Alliqua's board of directors has not yet declared the special dividend or determined the amount of the special dividend. Following the Effective Time, Alliqua intends to retain earnings, if any, to finance the growth and development of its business, and does not expect to pay any additional cash dividends to its stockholders in the foreseeable future. Payment of future dividends, if any, will be at the discretion of Alliqua's board of directors.

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## RISK FACTORS

You should consider the following factors in evaluating whether to approve the issuance of shares of Alliqua's common stock in the Merger and the resulting "change of control" of Alliqua under Nasdaq rules and the amendment to Alliqua's amended and restated certificate of incorporation to effect a reverse stock split of Alliqua's common stock. These factors should be considered in conjunction with the other information included or incorporated by reference by Alliqua in this proxy statement.

### Risks Related to the Merger

If the proposed Merger with Adynxx is not consummated, Alliqua's business could suffer materially and Alliqua's stock price could decline.

The consummation of the proposed Merger with Adynxx is subject to a number of closing conditions, including the approval by Alliqua's stockholders, approval by Nasdaq of Alliqua's application for initial listing of Alliqua's common stock in connection with the Merger, and other customary closing conditions. Alliqua is targeting a closing of the transaction by the first quarter of 2019.

If the proposed Merger is not consummated, Alliqua may be subject to a number of material risks, and its business and stock price could be adversely affected, as follows:

- Alliqua has incurred and expects to continue to incur significant expenses related to the proposed Merger with Adynxx even if the Merger is not consummated.

- the Merger Agreement contains covenants relating to Alliqua's solicitation of competing acquisition proposals and the conduct of Alliqua's business between the date of signing the Merger Agreement and the closing of the Merger. As a result, significant business decisions and transactions before the closing of the Merger require the consent of Adynxx. Accordingly, Alliqua may be unable to pursue business opportunities that would otherwise be in its best interest as a standalone company. If the Merger Agreement is terminated after Alliqua has invested significant time and resources in the transaction process, Alliqua will have a limited ability to continue its current operations without obtaining additional financing to fund its operations.

- Alliqua could be obligated to pay Adynxx a $249,000 termination fee in connection with the termination of the Merger Agreement, depending on the reason for the termination.

- Alliqua's customers, prospective customers, collaborators and other business partners and investors in general may view the failure to consummate the Merger as a poor reflection on its business or prospects.

- some of Alliqua's suppliers, distributors, collaborators and other business partners may seek to change or terminate their relationships with Alliqua as a result of the proposed Merger.

- as a result of the proposed Merger, current and prospective employees could experience uncertainty about their future roles within the combined company. This uncertainty may adversely affect Alliqua's ability to retain its key employees, who may seek other employment opportunities.

- Alliqua's management team may be distracted from day to day operations as a result of the proposed Merger.

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the market price of Alliqua's common stock may decline to the extent that the current market price reflects a market assumption that the proposed Merger will be completed.

In addition, if the Merger Agreement is terminated and Alliqua's board of directors determines to seek another business combination, it may not be able to find a third party willing to provide equivalent or more attractive consideration than the consideration to be provided by each party in the Merger. In such circumstances, Alliqua's board of directors may elect to, among other things, divest all or a portion of Alliqua's business, or take the steps necessary to liquidate all of Alliqua's business and assets, and in either such case, the consideration that Alliqua receives may be less attractive than the consideration to be received by Alliqua pursuant to the Merger Agreement.

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The Exchange Ratio is not adjustable based on the market price of Alliqua common stock so the merger consideration at the closing may have a greater or lesser value than at the time the Merger Agreement was signed.

The Merger Agreement has set the Exchange Ratio formula for the Adynxx common stock, and the Exchange Ratio is only adjustable upward or downward to reflect Alliqua's and Adynxx's equity capitalization as of immediately prior to the Effective Time and upward depending on completion of the Permitted Financing. Any changes in the market price of common stock before the completion of the Merger will not affect the number of shares Adynxx securityholders will be entitled to receive pursuant to the Merger Agreement. Therefore, if before the completion of the Merger the market price of Alliqua common stock declines from the market price on the date of the Merger Agreement, then Alliqua securityholders could receive merger consideration with substantially lower value. Similarly, if before the completion of the Merger the market price of Alliqua common stock increases from the market price on the date of the Merger Agreement, then Adynxx securityholders could receive merger consideration with substantially more value for their shares of Adynxx capital stock than the parties had negotiated for in the establishment of the Exchange Ratio.

Failure to complete the Merger may result in Alliqua and Adynxx paying a termination fee or expenses to the other party and could harm the common stock price of Alliqua and future business and operations of each company.

If the Merger is not completed, Alliqua and Adynxx are subject to the following risks:

- if the Merger Agreement is terminated under certain circumstances, Alliqua may be required to pay a termination fee to Adynxx of $249,000;

- the price of Alliqua stock may decline and remain volatile; and

- costs related to the Merger, such as legal and accounting fees which Alliqua estimates will total approximately $275,000 and $10,000, respectively, some of which must be paid even if the Merger is not completed.

In addition, if the Merger Agreement is terminated and the board of directors of Alliqua determines to seek another business combination, there can be no assurance that either Alliqua will be able to find a partner willing to provide equivalent or more attractive consideration than the consideration to be provided by Adynxx.

If the conditions to the Merger are not met, the Merger may not occur.

Even if the Merger is approved by the stockholders of Alliqua and Adynxx, specified conditions must be satisfied or waived to complete the Merger. These conditions are set forth in the Merger Agreement and described in the section entitled "The Merger Agreement — Conditions to the Merger" in this proxy statement. Alliqua and Adynxx cannot assure you that all of the conditions will be satisfied or waived. If the conditions are not satisfied or waived, the Merger may not occur or will be delayed, and Alliqua and Adynxx each may lose some or all of the intended benefits of the Merger.

Some of Alliqua's officers and directors have conflicts of interest that may influence them to support or approve the Merger.

Officers and directors of Alliqua participate in arrangements that provide them with interests in the Merger, including, among others, their continued service as a director of the combined company, retention and severance benefits, the acceleration of restricted stock and option vesting and continued indemnification. These interests, among others, may influence the officers and directors of Alliqua to support or approve the Merger. For a more detailed discussion see "The Merger — Interests of Alliqua's Directors and Executive Officers in the Merger" beginning on page 77 of this proxy statement.

The Merger may be completed even though material adverse changes may result from the announcement of the Merger, industry-wide changes and other causes.

In general, either party can refuse to complete the Merger if there is a material adverse change affecting the other party between October 11, 2018, the date of the Merger Agreement, and the closing. However,

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some types of changes do not permit either party to refuse to complete the Merger, even if such changes would have a material adverse effect on Alliqua or Adynxx, to the extent they resulted from the following and do not have a materially disproportionate effect on Alliqua or Adynxx, as the case may be:

- changes in general economic, business, financial or market conditions;
- changes or events affecting the industries or industry sectors in which the parties operate generally;
- changes in generally accepted accounting principles;
- changes in laws, rules, regulations, decrees, rulings, ordinances, codes or requirements issued, enacted, adopted or otherwise put into effect by or under the authority of any governmental body;
- changes caused by the announcement or pendency of the Merger;
- changes caused by any action taken by either party with the prior written consent of the other party;
- changes caused by any decision, action, or inaction by the U.S. Federal Drug Administration (the "FDA") or another comparable foreign governmental body, with respect to any product candidate of either party;
- changes caused by any act of war, terrorism, national or international calamity or any other similar event;
- with respect to Alliqua, a decline in Alliqua's stock price; or
- with respect to Alliqua, a change in the listing status of Alliqua's common stock on Nasdaq.

If adverse changes occur but Alliqua and Adynxx must still complete the Merger, the combined company's stock price may suffer.

The market price of the combined company's common stock may decline as a result of the Merger.

The market price of the combined company's common stock may decline as a result of the Merger for a number of reasons including if:

- the combined company does not achieve the perceived benefits of the Merger as rapidly or to the extent anticipated by financial or industry analysts;
- the effect of the Merger on the combined company's business and prospects is not consistent with the expectations of financial or industry analysts; or
- investors react negatively to the effect on the combined company's business and prospects from the Merger.

Alliqua's stockholders may not realize a benefit from the Merger commensurate with the ownership dilution they will experience in connection with the Merger.

If the combined company is unable to realize the strategic and financial benefits currently anticipated from the Merger, Alliqua's stockholders will have experienced substantial dilution of their ownership interest without receiving any commensurate benefit. Significant management attention and resources will be required to integrate the two companies. Delays in this process could adversely affect the combined company's business, financial results, financial condition and stock price following the Merger. Even if the combined company were able to integrate the business operations successfully, there can be no assurance that this integration will result in the realization of the full benefits of synergies, innovation and operational efficiencies that may be possible from this integration and that these benefits will be achieved within a reasonable period of time.

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During the pendency of the Merger, Alliqua may not be able to enter into a business combination with another party and will be subject to contractual limitations on certain actions because of restrictions in the Merger Agreement.

Covenants in the Merger Agreement impede the ability of Alliqua or Adynxx to make acquisitions or complete other transactions that are not in the ordinary course of business pending completion of the Merger. As a result, if the Merger is not completed, the parties may be at a disadvantage to their competitors. In addition, while the Merger Agreement is in effect and subject to limited exceptions, each party is prohibited from soliciting, initiating, encouraging or taking actions designed to facilitate any inquiries or the making of any proposal or offer that could lead to the entering into certain extraordinary transactions with any third party, such as a sale of assets, an acquisition of Alliqua's common stock, a tender offer for Alliqua's common stock, a Merger or other business combination outside the ordinary course of business. Any such transactions could be favorable to such party's stockholders.

Because the lack of a public market for Adynxx's capital stock makes it difficult to evaluate the fairness of the Merger, Adynxx's stockholders may receive consideration in the Merger that is greater than or less than the fair market value of Adynxx's capital stock.

The outstanding share capital of Adynxx is privately held and is not traded in any public market. The lack of a public market makes it extremely difficult to determine the fair market value of Adynxx. Since the percentage of Alliqua's equity to be issued to Adynxx's stockholders was determined based on negotiations between the parties, it is possible that the value of the Alliqua's common stock to be issued in connection with the Merger will be greater than the fair market value of Adynxx. Alternatively, it is possible that the value of the shares of Alliqua's common stock to be issued in connection with the Merger will be less than the fair market value of Adynxx.

The combined company will incur significant transaction costs as a result of the Merger, including investment banking, legal and accounting fees. In addition, the combined company will incur significant consolidation and integration expenses which cannot be accurately estimated at this time. These costs could include the possible relocation of certain operations from Pennsylvania to other offices of the combined company as well as costs associated with terminating existing office leases and the loss of benefits of certain favorable office leases. Actual transaction costs may substantially exceed Adynxx's estimates and may have an adverse effect on the combined company's financial condition and operating results.

Failure of the Merger to qualify as a reorganization within the meaning of Section 368(a) of the Code could harm the combined company.

The parties intend for the Merger to qualify as a reorganization within the meaning of Section 368(a) of the Code, as amended. For a full description of the tax consequences of the Merger, see "The Merger — Material U.S. Federal Income Tax Consequences of the Reverse Stock Split and the Merger" beginning on page 77 of this proxy statement. To comply with the requirements for a Section 368(a) reorganization, certain structural and other requirements for the transaction must be met; if not satisfied, the Adynxx stockholders could be subject to tax liability.

The Merger is expected to result in a limitation on Alliqua's ability to utilize our net operating loss carryforward.

Under Section 382 of the Code, use of Alliqua's net operating loss carryforwards ("NOLs") will be limited if Alliqua experiences a cumulative change in ownership of greater than 50% in a moving three year period. Alliqua will experience an ownership change as a result of the Merger and therefore its ability to utilize its NOLs and certain credit carryforwards remaining at the Effective Time will be limited. The limitation will be determined by the fair market value of Alliqua's common stock outstanding prior to the ownership change, multiplied by the applicable federal rate. Limitations imposed on Alliqua's ability to utilize NOLs could cause U.S. federal and state income taxes to be paid earlier than would be paid if such limitations were not in effect and could cause such NOLs to expire unused, in each case reducing or eliminating the benefit of such NOLs.

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The opinion received by Alliqua's board of directors from Wainwright has not been, and is not expected to be, updated to reflect changes in circumstances that may have occurred since the date of the opinion.

At a meeting held on October 5, 2018, Alliqua's financial advisor, Wainwright, rendered its Opinion to the effect that, based upon and subject to the assumptions, factors, qualifications and limitations set forth in the written opinion described herein, as of October 5, 2018, the Exchange Ratio was fair, from a financial point of view, to Alliqua. The Opinion does not speak as of the time the Merger will be completed or any date other than the date of such Opinion. The Opinion does not reflect changes that may occur or may have occurred after the date of the Opinion, including changes to the operations and prospects of Alliqua or Adynxx, changes in general market and economic conditions or regulatory or other factors. Any such changes may materially alter or affect the relative values of Alliqua and Adynxx. Wainwright does not have any obligation to update, revise or reaffirm its opinion to reflect subsequent developments and has not done so. See the section entitled "The Merger — Opinion of Alliqua's Financial Advisor" beginning on page 69 and Annex H to this proxy statement.

Certain stockholders could attempt to influence changes within Alliqua which could adversely affect Alliqua's operations, financial condition and the value of Alliqua's common stock.

Alliqua's stockholders may from time to time seek to acquire a controlling stake in Alliqua, engage in proxy solicitations, advance stockholder proposals or otherwise attempt to effect changes. Campaigns by stockholders to effect changes at publicly-traded companies are sometimes led by investors seeking to increase short-term stockholder value through actions such as financial restructuring, increased debt, special dividends, stock repurchases or sales of assets or the entire company. Responding to proxy contests and other actions by activist stockholders can be costly and time-consuming, and could disrupt Alliqua's operations and divert the attention of the Alliqua board of directors and senior management from the pursuit of the proposed Merger transaction. These actions could adversely affect Alliqua's operations, financial condition, Alliqua's ability to consummate the Merger and the value of Alliqua common stock.

Alliqua and Adynxx may become involved in securities litigation or stockholder derivative litigation in connection with the Merger, and this could divert the attention of Alliqua and Adynxx management and harm the combined company's business, and insurance coverage may not be sufficient to cover all related costs and damages.

Securities litigation or stockholder derivative litigation frequently follows the announcement of certain significant business transactions, such as the sale of a business division or announcement of a business combination transaction. Alliqua and Adynxx may become involved in this type of litigation in connection with the Merger, and the combined company may become involved in this type of litigation in the future. Litigation often is expensive and diverts management's attention and resources, which could adversely affect the business of Alliqua, Adynxx and the combined company.

Risks Related to the Reverse Stock Split

The reverse stock split may not increase Alliqua's stock price over the long term.

The principal purpose of the reverse stock split is to increase the per-share market price of Alliqua's common stock above the minimum bid price requirement under The Nasdaq Listing Rules so that the listing of the combined company and the shares of Alliqua common stock being issued in the Merger on either Nasdaq will be approved. It cannot be assured, however, that the reverse stock split will accomplish this objective for any meaningful period of time. While it is expected that the reduction in the number of outstanding shares of common stock will proportionally increase the market price of Alliqua's common stock, it cannot be assured that the reverse stock split will increase the market price of its common stock by a multiple of the reverse stock split ratio to be mutually agreed upon by Alliqua and Adynxx, or result in any permanent or sustained increase in the market price of Alliqua's common stock, which is dependent upon many factors, including Alliqua's business and financial performance, general market conditions, and prospects for future success. Thus, while the stock price of the combined company might meet the continued listing requirements for Nasdaq initially, it cannot be assured that it will continue to do so.

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The reverse stock split may decrease the liquidity of Alliqua's common stock.

Although the board of directors believes that the anticipated increase in the market price of Alliqua's common stock could encourage interest in its common stock and possibly promote greater liquidity for its stockholders, such liquidity could also be adversely affected by the reduced number of shares outstanding after the reverse stock split. The reduction in the number of outstanding shares may lead to reduced trading and a smaller number of market makers for Alliqua's common stock.

The reverse stock split may lead to a decrease in Alliqua's overall market capitalization.

Should the market price of Alliqua's common stock decline after the reverse stock split, the percentage decline may be greater, due to the smaller number of shares outstanding, than it would have been prior to the reverse stock split. A reverse stock split is often viewed negatively by the market and, consequently, can lead to a decrease in Alliqua's overall market capitalization. If the per share market price does not increase in proportion to the reverse stock split ratio, then the value of the combined company, as measured by its stock capitalization, will be reduced. In some cases, the per-share stock price of companies that have effected reverse stock splits subsequently declined back to pre-reverse split levels, and accordingly, it cannot be assured that the total market value of Alliqua's common stock will remain the same after the reverse stock split is effected, or that the reverse stock split will not have an adverse effect on Alliqua's stock price due to the reduced number of shares outstanding after the reverse stock split.

Risks Related to Alliqua

Alliqua has limited sources of revenue, which may negatively impact the value and liquidity of Alliqua's common stock.

On January 5, 2018, Alliqua entered into an Asset Purchase Agreement with Celularity, Inc. ("Celularity") pursuant to which Alliqua agreed to sell substantially all of its assets to Celularity (the "Asset Sale Transaction"). Since the consummation of the Asset Sale Transaction, Alliqua's operations have been curtailed. Currently, Alliqua's sole source of revenue is its hydrogel manufacturing business. In connection with the consummation of the Merger, Alliqua intends to divest the hydrogel manufacturing business as described in the section entitled "The Spin-off" beginning on page 91 of this proxy statement.

The report of Alliqua's independent registered public accounting firm contains an explanatory paragraph as to Alliqua's ability to continue as a going concern.

Because Alliqua has had recurring losses and negative cash flows from operating activities, among other factors, the report of Marcum LLP, Alliqua's independent registered public accounting firm, with respect to Alliqua's financial statements at December 31, 2017, and for the year ended December 31, 2017, contains an explanatory paragraph as to Alliqua's potential inability to continue as a going concern. This opinion indicates that substantial doubt exists regarding Alliqua's ability to remain in business.

Alliqua has experienced significant losses and expect losses to continue for the foreseeable future.

Alliqua has incurred annual net losses of $25.7 million and $28.2 million, during the years ended December 31, 2017 and 2016, respectively. As of December 31, 2017, Alliqua had an accumulated deficit of $150.0 million. Alliqua expects to incur additional operating losses for the foreseeable future.

Alliqua depends on key personnel.

Alliqua believes that its success depends, in part, upon its ability to retain and attract skilled personnel, which may require substantial additional funds. There can be no assurance that Alliqua will be able to find and attract additional qualified employees or retain any such personnel. Alliqua's inability to hire qualified personnel, the loss of services of Alliqua's key personnel, or the loss of services of executive officers or key employees that may be hired in the future may have a material and adverse effect on Alliqua's business.

Alliqua's future success depends upon market acceptance of Alliqua's existing and future products.

Alliqua believes that its success will depend in part upon the acceptance of its existing and future products by the medical community, hospitals and physicians and other health care providers, third-party

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payers, and end-users. Such acceptance may depend upon the extent to which the medical community and end-users perceive Alliqua's products as safer, more effective or cost-competitive than other similar products. Ultimately, for Alliqua's products to gain general market acceptance, it may also be necessary for Alliqua to develop marketing partners for the distribution of its products. There can be no assurance that Alliqua's products will achieve significant market acceptance on a timely basis, or at all. Failure of some or all of Alliqua's future products to achieve significant market acceptance could have a material adverse effect on Alliqua's business, financial condition, and results of operations.

Alliqua is dependent on significant customers.

Alliqua's hydrogel manufacturing business is currently its sole source of revenue, and much of this revenue is generated from a limited number of clients, who account for a substantial percentage of Alliqua's total revenues. For the nine-month period ended September 30, 2018, two major customers accounted for approximately 76% of AquaMed's revenue, with each customer individually accounting for 63%, and 13%, respectively. The loss of any of Alliqua's significant customers would have a significantly negative effect on Alliqua's overall operations.

Alliqua operates in a highly competitive industry.

Competition from other hydrogel manufacturers is intense. There can be no assurance that Alliqua can develop products that are more effective or achieve greater market acceptance than competitive products, or that Alliqua's competitors will not succeed in developing or acquiring products and technologies that are more effective than those being developed by Alliqua, that would render Alliqua's products and technologies less competitive or obsolete. Alliqua's competitors enjoy several competitive advantages over Alliqua, including some or all of the following:

- large and established distribution networks in the United States and/or in international markets;
- greater financial, managerial and other resources for products research and development, sales and marketing efforts and protecting and enforcing intellectual property rights;
- significantly greater name recognition;
- more expansive portfolios of intellectual property rights; and
- greater experience in obtaining and maintaining regulatory approvals and/or clearances from the U.S. Food and Drug Administration and other regulatory agencies.

Alliqua's competitors' products will compete directly with Alliqua's products. In addition, Alliqua's competitors, as well as new market entrants, may develop or acquire new products that will compete directly or indirectly with Alliqua's products. The presence of this competition in Alliqua's market may lead to pricing pressure which would make it more difficult to sell Alliqua's products at a price that will make Alliqua profitable or prevent Alliqua from selling its products at all. Alliqua's failure to compete effectively would have a material and adverse effect on Alliqua's business, results of operations and financial condition.

Alliqua is subject to governmental regulations.

As a manufacturer of medical products, Alliqua is generally subject to regulation by the U.S. Food and Drug Administration and the Federal Trade Commission, among other state and federal governmental authorities in the U.S., with respect to the manufacturing, marketing, labeling, record keeping, claims and advertising of Alliqua's products. Alliqua's hydrogel manufacturing facility is also subject to various state regulations.

Failure to comply with applicable regulatory requirements can result in, among other things, suspensions or withdrawals of approvals or clearances, seizures or recalls of products, injunctions against the manufacture, holding, distribution, marketing and sale of a product, civil and criminal sanctions. Furthermore, changes in existing

regulations or the adoption of new regulations could prevent Alliqua

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from obtaining, or affect the timing of, future regulatory approvals. Meeting regulatory requirements and evolving government standards may delay marketing of Alliqua's products for a considerable period of time, impose costly procedures upon Alliqua's activities and result in a competitive advantage to larger companies that compete against Alliqua.

Alliqua has limited sales, marketing and distribution capabilities.

Alliqua currently has limited sales, marketing and distribution capabilities. Alliqua must either develop its own sales, marketing and distribution capabilities, which will be expensive and time consuming, or make arrangements with third parties to perform these services for Alliqua. If Alliqua enters into third party arrangements, the third parties may not be capable of successfully selling any of Alliqua's products. If Alliqua decides to market any of its products on its own, Alliqua will have to commit significant resources to developing a marketing and sales force and supporting distribution capabilities. If Alliqua decides to enter into arrangements with third parties for performance of these services, Alliqua may find that they are not available on terms acceptable to it, or at all. If Alliqua is not able to establish and maintain successful arrangements with third parties or build its own sales and marketing infrastructure, its business and financial condition will be adversely affected.

Alliqua may face intellectual property infringement claims that could be time-consuming, costly to defend and could result in Alliqua's loss of significant rights and, in the case of patent infringement claims, the assessment of treble damages.

On occasion, Alliqua may receive notices of claims of Alliqua's infringement, misappropriation or misuse of other parties' proprietary rights. Alliqua may have disputes regarding intellectual property rights with the parties that have licensed those rights to Alliqua. Alliqua may also initiate claims to defend Alliqua's intellectual property. Intellectual property litigation, regardless of its outcome, is expensive and time-consuming, could divert management's attention from Alliqua's business and have a material negative effect on Alliqua's business, operating results or financial condition. In addition, the outcome of such litigation may be unpredictable. If there is a successful claim of infringement against Alliqua, Alliqua may be required to pay substantial damages — including treble damages if Alliqua were to be found to have willfully infringed a third party's patent — to the party claiming infringement, and to develop non-infringing technology, stop selling Alliqua's products or using technology that contains the allegedly infringing intellectual property or enter into royalty or license agreements that may not be available on acceptable or commercially practical terms, if at all. Alliqua's failure to develop non-infringing technologies or license the proprietary rights on a timely basis could harm Alliqua's business. In addition, modifying Alliqua's products to exclude infringing technologies could require Alliqua to seek re-approval or clearance from various regulatory bodies for Alliqua's products, which would be costly and time consuming. Also, Alliqua may be unaware of pending patent applications that relate to Alliqua's technology. Parties making infringement claims on future issued patents may be able to obtain an injunction that would prevent Alliqua from selling Alliqua's products or using technology that contains the allegedly infringing intellectual property, which could harm Alliqua's business.

Alliqua's products risk exposure to product liability claims.

Alliqua is exposed to potential product liability risks, which are inherent in the testing, manufacturing and marketing of its products. Alliqua may incur significant expense investigating and defending any product liability claims, even if they do not result in liability. Moreover, even if no judgments, fines, damages or liabilities are imposed on Alliqua, Alliqua's reputation could suffer, which could have a material adverse effect on Alliqua's business, financial condition and results of operations.

Alliqua is reliant upon two manufacturers for key ingredients of the manufacture of Alliqua's hydrogels.

The Dow Chemical Company and the BASF Corporation are the principal manufacturers of the two polymers, polyethylene oxide and polyvinylpyrrolidone, respectively, that Alliqua primarily uses in the manufacture of hydrogels. Although Alliqua has not experienced significant production delays attributable to supply changes, Alliqua believes that developing alternative sources of supply for the polymers used to make its current hydrogels would be difficult over a short period of time. Because Alliqua has no direct

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control over its third-party suppliers, interruptions or delays in the products and services provided by these third parties may be difficult to remedy in a timely fashion. In addition, if such suppliers are unable or unwilling to deliver the necessary raw materials or products, Alliqua may be unable to redesign or adapt its technology to work without such raw materials or products or find alternative suppliers or manufacturers. In such events, Alliqua could experience interruptions, delays, increased costs or quality control problems, which would have a material and adverse effect on Alliqua's business, results of operations and financial condition.

Risks Related to the Spin-off

The proposed Spin-off of Alliqua's custom hydrogel manufacturing business, including the AquaMed Merger, may not be completed on the currently contemplated timeline or terms, or at all, may be more expensive than anticipated and may not achieve the intended benefits.

There can be no assurance as to whether or when the proposed Spin-off of Alliqua's custom hydrogel manufacturing business via SpinCo or the AquaMed Merger will occur. Following the Spin-off, Alliqua will no longer own any assets or be subject to any liabilities relating to the custom hydrogel manufacturing business. While Alliqua may remain subject to liabilities related to the operation of the custom hydrogel manufacturing business prior to the time of the Spin-off, AquaMed is expected to indemnify Alliqua for all such liabilities incurred prior to the Spin-off; however, there can be no assurances that Alliqua will be able to successfully enforce such indemnity to cover all or a portion of any such liabilities.

In addition, the consummation of the AquaMed Merger is subject to certain conditions, including, without limitation, (i) the effectiveness of the registration statement to be filed with the SEC and the approval for listing on the Nasdaq Capital Market of the shares of AquaMed common stock to be issued in the Spin-off, (ii) the accuracy of the parties' representations and warranties and the performance of their respective covenants contained in the AquaMed Merger Agreement, and (iii) consummation of the AquaMed Private Placement. The consummation of the Spin-off is subject to the foregoing conditions, plus certain additional conditions, including, without limitation (i) the Merger Agreement being in full force and effect and the Merger being consummated immediately following the Spin-off and (ii) Alliqua being satisfied that the Spin-off will not result in any material tax payable by Alliqua. For these and other reasons, the Spin-off and AquaMed Merger may not be completed on the terms or timeline contemplated, if at all.

Alliqua expects that the process of completing the Spin-off and AquaMed Merger will be time-consuming and involve significant costs and expenses, which may be significantly higher than what Alliqua currently anticipates, may increase in the event that the timing of the transaction is delayed and may not yield a benefit if the transaction is not completed. In particular, if the Spin-off is not completed prior to the Merger, the combined company will continue to incur all of the costs and other obligations associated with the operation of the custom hydrogel manufacturing business, which could divert resources from Adynxx's business.

The Spin-Off is a taxable transaction and Alliqua and its stockholders may be subject to a tax liability in connection with the distribution of shares of AquaMed.

For U.S. federal income tax purposes, the distribution by Alliqua of the shares of AquaMed common stock will not be eligible for treatment as a tax-free distribution. Accordingly, each holder of Alliqua common stock who receives shares of AquaMed common stock in the Spin-off generally will be treated as if such stockholder received a taxable distribution in an amount equal to the fair market value of AquaMed common stock received (including any fractional share deemed to be received by and sold on behalf of the stockholder), which will result in: (a) a dividend to the extent of such stockholder's ratable share of Alliqua's current and accumulated earnings and profits; then (b) a reduction in such stockholder's basis in Alliqua's common stock (but not below zero) to the extent the amount received exceeds the amount referenced in clause (a); and then (c) gain from the sale or exchange of Alliqua common stock to the extent the amount received exceeds the sum of the amounts referenced in clauses (a) and (b). Accordingly, the amount of taxable income realized by each Alliqua stockholder in the Spin-off may depend upon its basis in its Alliqua stock, but such tax liability may be significant.

In addition, a corporate level U.S. federal income tax will be payable by the consolidated group of which Alliqua is the common parent if gain realized in the Spin-off exceeds any net operating losses that

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may be available to offset such gain. The tax would be based upon the gain, if any, computed as the difference between the fair market value of the AquaMed common stock and Alliqua's adjusted basis in such stock. Alliqua expects that it will have sufficient losses available to fully offset any gain realized as a result of the Spin-off.

Potential indemnification liabilities in connection with the Spin-off could materially and adversely affect Alliqua.

In connection with the Spin-off, Alliqua will provide indemnification obligations designed to make Alliqua financially responsible for liabilities retained by Alliqua following the Spin-off. If Alliqua is required to indemnify SpinCo under those circumstances, Alliqua could be subject to substantial liabilities.

After the Spin-off, certain of Alliqua directors and officers may have actual or potential conflicts of interest because of their previous or continuing positions at Alliqua.

Because of their current or former positions with Alliqua, certain of SpinCo's expected directors own Alliqua common stock and equity awards. Following the Spin-off, even though SpinCo's board of directors is expected to consist of a majority of directors who are independent, some of its directors will continue to have a financial interest in Alliqua common stock and equity awards. Continuing ownership of Alliqua common stock and equity awards, or service as a director at both companies could create, or appear to create, potential conflicts of interest if SpinCo has disagreements with Alliqua about any continuing contracts between SpinCo and Alliqua or faces decisions that could have different implications for SpinCo and Alliqua.

Risks Related to Adynxx's Financial Condition and Capital Requirements

Adynxx has incurred losses since its inception, has a limited operating history on which to assess its business, and anticipates that it will continue to incur significant losses for the foreseeable future.

Adynxx is a clinical development-stage biopharmaceutical company with a limited operating history. Adynxx has incurred net losses in each year since its inception in 2007 with the exception of 2013, including net losses of $6.7 million and $11.6 million for the years ended December 31, 2016 and 2017, respectively, and $4.4 million for the nine months ended September 30, 2018. As of September 30, 2018, Adynxx had an accumulated deficit of $35.7 million.

The audit report to Adynxx's financial statements for the year ended December 31, 2017, which appears elsewhere herein, includes an explanatory paragraph related to Adynxx's ability to continue as a going concern. As of September 30, 2018, Adynxx had cash of $1.8 million. Between November 2015 and January 2016, Adynxx received $5.0 million in financing under a secured loan agreement with Oxford Finance, LLC ("Oxford"). As of September 30, 2018, $4.2 million of principal and accrued interest was outstanding and matures on November 1, 2019. In March 2018, Adynxx received $1.5 million in financing under a series of convertible promissory notes from current investors which are due and payable upon the request of the majority of note holders on or after March 29, 2019. In September 2018, Adynxx received an additional $1.5 million in financing under the same series of convertible promissory notes from current investors which are due and payable upon the request of the majority of note holders on or after September 27, 2019. In the event of an equity financing with total proceeds to Adynxx of at least $5.0 million (excluding conversion of the convertible promissory notes), all outstanding principal plus unpaid accrued interest of the notes will convert at a conversion price equal to 80% of the cash price paid per share for equity securities by investors in the equity financing. If the Merger closes prior to any such financing, the notes will convert into shares of Adynxx's Series B preferred stock immediately prior to the closing of the Merger. In December 2018, Adynxx received an additional $1.5 million in financing in the form of convertible promissory notes from current investors which are due and payable upon the request of the majority of note holders on or after December 28, 2019. In the event of an equity financing with total proceeds to Adynxx of at least $5.0 million (excluding conversion of the convertible promissory notes), all outstanding principal plus unpaid accrued interest of the notes will convert at a conversion price equal to the cash price paid per share for equity securities by investors in the equity financing.

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In December 2018, Adynxx received Notice of Award from NIDA, part of the NIH, for an award to support the clinical development of the company's lead product candidate, brivoligide. The funding opportunity (RFA-DA-19-002), titled "Development of Medications to Prevent and Treat Opioid Use Disorders and Overdose," is a UG3/UH3 Phase Innovation Awards Cooperative Agreement involving two phases. The UG3 phase is to support a project with specific milestones to be accomplished by the end of the 2-year period. The UH3 phase is to provide funding for 3 years to a project that successfully completed the milestones set in the UG3 phase. Application budgets are limited to $3 million direct costs per year and UG3 projects that have met their milestones will be considered by NIDA and prioritized for transition to the UH3 phase, with the total funding currently expected to be available under both the UG3 and UH3 phases to be a maximum of $15 million in direct costs. The grant award will provide Adynxx with $5.7 million over the two-year UG3 phase to complete a Phase 2 study of brivoligide in patients undergoing mastectomy with immediate tissue expander or implant placement that score high on the Pain Catastrophizing Scale (PCS). Following completion of milestones related to the Phase 2 mastectomy study, Adynxx can receive an additional award of up to $9.0 million over three years for a Phase 3 study of brivoligide.

Adynxx has devoted substantially all of its financial resources to identifying and developing its product candidates, including conducting clinical studies and providing general and administrative support for its operations. To date, Adynxx has financed its operations primarily through the sale of equity securities, payments associated with strategic collaborations, secured loan agreements and convertible promissory notes. The amount of its future net losses will depend, in part, on the rate of its future expenditures and its ability to obtain funding through equity or debt financings, strategic collaborations, or grants. Biopharmaceutical product development is a highly speculative undertaking and involves a substantial degree of risk. Adynxx expects losses to increase as it continues Phase 2 development of its lead program brivoligide in two models of postoperative pain and potentially advances additional product candidates through investigational new drug ("IND") enabling activities and into clinical development. While Adynxx has not yet commenced pivotal clinical studies for any product candidate and it may be several years, if ever, before Adynxx completes pivotal clinical studies and has a product candidate approved for commercialization, Adynxx expects to invest significant funds into these clinical candidates to determine the potential to advance these compounds to regulatory approval.

If Adynxx obtains regulatory approval to market a product candidate, its future revenue will depend upon the size of any markets in which its product candidates may receive approval, and its ability to achieve sufficient market acceptance, hospital formulary access, pricing, reimbursement from third-party payors, and adequate market share for its product candidates in those markets. Even if Adynxx obtains adequate market share for its product candidates, because the potential markets in which its product candidates may ultimately receive regulatory approval could be very small, Adynxx may never become profitable despite obtaining such market share and acceptance of its products. Adynxx expects to continue to incur significant expenses and increasing operating losses for the foreseeable future and its expenses will increase substantially if and as Adynxx:

- continues the clinical development of its product candidates;
- advances its programs into larger, more expensive clinical studies;
- initiates additional nonclinical, clinical, or other studies for its product candidates;
- identifies, educates and develops potential commercial opportunities, such as reduction in postoperative pain for patients scoring greater than or equal to 16 (≥16) on the Pain Catastrophizing Scale ("PCS") for the brivoligide product candidate;
- seeks regulatory and marketing approvals and reimbursement for its product candidates;

- undertakes the manufacturing or has manufactured its product candidates;

- establishes a sales, marketing, and distribution infrastructure to commercialize any products for which Adynxx may obtain marketing approval and market for itself;

- seeks to identify, assess, acquire, and/or develop other product candidates;

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- makes milestone, royalty or other payments under third party license agreements;

- seeks to maintain, protect, and expand its intellectual property portfolio;

- seeks to attract and retain skilled personnel;

- creates additional infrastructure to support its operations as a public company and its product development and planned future commercialization efforts; and

- experiences any delays or encounters issues with the development and potential for regulatory approval of its clinical candidates such as safety issues, clinical trial accrual delays, longer follow-up for planned studies, additional major studies, or supportive studies necessary to support marketing approval.

Further, the net losses Adynxx incurs may fluctuate significantly from quarter to quarter and year to year, such that a period-to-period comparison of its results of operations may not be a good indication of its future performance.
Adynxx has never generated any revenue from product sales and may never be profitable.
Adynxx has no products approved for commercialization and has never generated any revenue from product sales. Adynxx's ability to generate revenue and achieve profitability depends on its ability, alone or with strategic collaboration partners, to successfully complete the development of, and obtain the regulatory and marketing approvals necessary to commercialize one or more of its product candidates. Adynxx does not anticipate generating revenue from product sales for the foreseeable future. Adynxx's ability to generate future revenue from product sales depends heavily on its success in many areas, including but not limited to:

- completing research and development of its product candidates;

- obtaining regulatory and marketing approvals for its product candidates;

- manufacturing product candidates and establishing and maintaining supply and manufacturing relationships with third parties that meet regulatory requirements and Adynxx's supply needs in sufficient quantities to meet market demand for its product candidates, if approved;

- marketing, launching and commercializing product candidates for which Adynxx obtains regulatory and marketing approval, either directly or with a collaborator or distributor;

- gaining market acceptance of its product candidates as treatment options;

- addressing any competing products;

- protecting and enforcing its intellectual property rights, including patents, trade secrets, and know-how;

- negotiating favorable terms in any collaboration, licensing, or other arrangements into which Adynxx may enter;

- obtaining reimbursement or pricing for its product candidates that supports profitability; and

- attracting, hiring, and retaining qualified personnel.

Even if one or more of the product candidates that Adynxx develops is approved for commercial sale, Adynxx anticipates incurring significant costs associated with commercializing any approved product candidate. Adynxx will have to develop or acquire commercial-scale manufacturing capabilities in order to continue development and potential commercialization of its product candidates. Additionally, if Adynxx is not able to generate revenue from the sale of any approved products, Adynxx may never become profitable.

Servicing Adynxx's indebtedness requires a significant amount of cash, and we may not have sufficient cash flow from Adynxx's business to pay Adynxx substantial indebtedness.

As of September 30, 2018, Adynxx's total indebtedness was $7.3 million, of which $4.2 million was secured indebtedness, collateral for which includes but is not limited to a negative lien against Adynxx's intellectual property rights. Adynxx's ability to make scheduled payments of the principal, to pay interest

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on, to refinance the loan agreement or convertible notes or to make cash payments in connection with any conversion of the Notes depends on Adynxx's future performance, which is subject to economic, financial, competitive and other factors beyond Adynxx's control. We may not be able to raise sufficient capital or generate cash flow from operations in the future sufficient to service Adynxx's indebtedness and make necessary capital expenditures. If we are unable to generate such cash flow, we may be required to adopt one or more alternatives if they are available to us based on the terms of the indenture governing the indebtedness, such as selling assets, restructuring indebtedness or obtaining additional equity capital on terms that may be onerous or highly dilutive. Adynxx's ability to refinance Adynxx's indebtedness will depend on the capital markets and Adynxx's financial condition at such time. We may not be able to engage in any of these activities or engage in these activities on desirable terms, which could result in a default on Adynxx's debt obligations.

Despite Adynxx's current indebtedness levels, Adynxx may still incur substantially more indebtedness or take other actions which would intensify the risks discussed above.

Despite Adynxx's current indebtedness levels, and the restrictions Adynxx is under based on the terms of the secured loan agreement with Oxford from incurring additional senior indebtedness, Adynxx may be able to incur substantial additional indebtedness in the future, subject to any restrictions contained in Adynxx's then-existing debt instruments, some of which may be secured indebtedness, however the terms of such indebtedness may not be commercially attractive, if available.

Adynxx faces risks related to a government funded award. If NIDA/NIH were to eliminate, reduce or delay funding from this award, this would have a significant negative impact on the brivoligide program.

Funding of the brivoligide program is substantially dependent upon a NIDA/NIH award for the costs related to the Phase 2 and Phase 3 mastectomy model studies. If NIDA/NIH were to eliminate, reduce or delay the funding for this award or disallow some of Adynxx's incurred costs, Adynxx would have to obtain additional funding for continued development or regulatory registration for brivoligide or significantly reduce or stop the development effort. In contracting with NIDA/NIH, Adynxx is subject to various U.S. government contract requirements which may limit reimbursement or if Adynxx is found to be in violation could result in contract termination. If the U.S. government terminates Adynxx's award for its convenience, or if Adynxx defaults by failing to perform in accordance with the award schedule and terms, significant negative impact on Adynxx's cash flows and operations could result.

Adynxx's grant award from NIDA/NIH has special requirements, which create additional risks of reduction or loss of funding.

Adynxx has received a grant award from NIDA/NIH for the development of brivoligide in the mastectomy model of postoperative pain. In contracting with these government agencies, Adynxx is subject to various U.S. government requirements, including general clauses for a cost-reimbursement research and development contract, which may limit reimbursement or, if Adynxx is found to be in violation, could result in contract termination.

U.S. government awards typically contain a number of extraordinary provisions that would not typically be found in commercial contracts and which may create a disadvantage and additional risks to us as compared to competitors that do not rely on U.S. government awards. These risks include the ability of the U.S. government to unilaterally:

- terminate or reduce the scope of an award with or without cause;
- interpret relevant regulations (federal acquisition regulation clauses);
- require performance under circumstances which may not be favorable to Adynxx;
- require an in process review where the U.S. government will review the project and its options under the contract;
- control the timing and amount of funding, which impacts the development progress of Adynxx's programs; and

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- audit and object to Adynxx's contract-related costs and fees, including allocated indirect costs.

Raising additional capital may cause dilution to Adynxx's stockholders, restrict its operations or require Adynxx to relinquish rights.

To the extent that Adynxx raises additional capital through the sale of equity, debt or other securities convertible into equity, your ownership interest will be diluted, and the terms of these new securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing, if available at all, would likely involve agreements that include covenants limiting or restricting Adynxx's ability to take specific actions, such as incurring additional debt, making capital expenditures, making additional product acquisitions, or declaring dividends. If Adynxx raises additional funds through collaborations, strategic alliances or licensing arrangements with third parties, Adynxx may have to relinquish valuable rights to its product candidates or future revenue streams or grant licenses on terms that are not favorable to Adynxx. Adynxx cannot assure you that it will be able to obtain additional funding if and when necessary to fund its entire portfolio of product candidates to meet its projected plans. If Adynxx is unable to obtain funding on a timely basis, Adynxx may be required to delay or discontinue one or more of its development programs or the commercialization of any product candidates or be unable to expand its operations or otherwise capitalize on potential business opportunities, which could materially affect Adynxx's business, financial condition, and results of operations.

Risks Related to the Development of Adynxx's Product Candidates

Adynxx is heavily dependent on the success of its product candidates, which are in the early stages of clinical development. Adynxx cannot give any assurance that it will generate data for any of its product candidates sufficient to receive regulatory approval in its planned indications, which will be required before they can be commercialized. To date, Adynxx has invested substantially all of its efforts and financial resources to identify and develop its portfolio of product candidates. Its future success is dependent on its ability to successfully further develop, obtain regulatory approval for, and commercialize one or more product candidates. Adynxx currently generates no revenue from sales of any drugs, and Adynxx may never be able to develop or commercialize a product candidate.

Adynxx's product candidate brivoligide, which is currently in Phase 2 of clinical development, is being developed for the reduction of postoperative pain in patients scoring ≥16 on the PCS. Adynxx has not prospectively demonstrated a statistically significant clinical benefit in this patient population for the primary endpoint in any clinical study and may not be able to do so. Furthermore, the FDA has not previously granted an indication for the reduction of postoperative pain in patients scoring ≥16 on the PCS. Additionally, in order to obtain an indication for the reduction of postoperative pain without restriction by type of surgical procedure, Adynxx intends to study brivoligide in pivotal trials in one orthopedic and one soft-tissue model of postoperative pain. Adynxx has studied brivoligide to date in total knee arthroplasty ("TKA"), an orthopedic model of postoperative pain, and intends to study brivoligide in mastectomy with immediate tissue expander or implant placement ("mastectomy") as a soft-tissue model of postoperative pain. Failure to do so may limit the likelihood of FDA approval for brivoligide and may limit the addressable patient population and related commercial opportunity. Further, Adynxx may not be able to replicate or develop additional data to satisfy regulatory requirements for approval. Adynxx's other product candidate, AYX2, has not yet been evaluated in clinical studies and may fail to show the desired safety and efficacy during clinical development. There can be no assurance that the data that Adynxx develops for its product candidates in its planned indications will be sufficient to obtain regulatory approval.

Adynxx's current product candidates are for the treatment of pain. The evaluation of pain therapeutics often relies upon patient-reported outcomes such as the Numerical Rating Scale ("NRS") of pain as clinical study endpoints. While these endpoints are well-validated and accepted by the FDA and comparable foreign authorities for evaluation of efficacy of product candidates for the treatment of pain, there may be increased variability associated with these patient-reported outcomes as compared to objective measures used in evaluation of efficacy for product candidates treating other disease states. If these patient-reported endpoints are associated with increased variability in future studies, the data generated may not be sufficient to obtain regulatory approval.

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In addition, none of Adynxx's product candidates have advanced into a pivotal study for their proposed indications and it may be years before such studies are initiated and completed, if at all. Adynxx is not permitted to market or promote any of its product candidates before it receives regulatory approval from the FDA or comparable foreign regulatory authorities, and Adynxx may never receive such regulatory approval for any of its product candidates. Adynxx cannot be certain that any of its product candidates will be successful in clinical studies or receive regulatory approval. Further, its product candidates may not receive regulatory approval even if they are successful in clinical studies. If Adynxx does not receive regulatory approvals for its product candidates, Adynxx may not be able to continue its operations.

Adynxx research and development is focused on discovering and developing novel drugs based on transcription factor decoys, and the approach Adynxx is taking to discover and develop drugs is not proven and may never lead to marketable products.

The discovery and development of drugs based on transcription factor decoys is an emerging field, and the scientific discoveries that form the basis for Adynxx's efforts to discover and develop product candidates are relatively new. The scientific evidence to support the feasibility of developing differentiated product candidates based on these discoveries is both preliminary and limited, and has not led to products which have obtained regulatory approval by the FDA and comparable foreign authorities. Therefore, Adynxx does not know if its approach will be successful.

Adynxx has yet to present the current clinical data to the relevant regulatory authorities to give an opinion on the adequacy of the current clinical data set and planned studies for potential regulatory approval

Adynxx plans to present the clinical and non-clinical data sets to the FDA and relevant foreign regulatory authorities after completion of the planned Phase 2 studies at an End of Phase 2 meeting or receipt of scientific advice from the EMA, as applicable. Until the results of these meetings are known and documented, there can no assurance as to what requirements may be imposed for filing an NDA or Marketing Approval in the EMA for brivoligide. Adynxx is currently relying on opinions from experts and regulatory precedents to design its development program. It is possible that the official position of the regulatory authorities would be substantially different from the advice Adynxx has received and that could increase both the time and cost of further development for brivoligide, which may limit or prohibit further development of brivoligide, resulting in a material harm to Adynxx's business, financial condition, results of operations and prospects.

Even if Adynxx successfully completes the necessary preclinical studies and clinical trials, Adynxx cannot predict when, or if, Adynxx will obtain regulatory approval to commercialize a product candidate and the regulatory approval may be for a more narrow indication than Adynxx seeks.

The time required to obtain approval by the FDA and comparable foreign authorities is unpredictable, typically takes many years following the commencement of clinical studies, and depends upon numerous factors. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions, which may cause delays in the approval or the decision not to approve an application. Adynxx has not obtained regulatory approval for any product candidate, and it is possible that none of its existing product candidates or any product candidates Adynxx may seek to develop in the future will ever obtain regulatory approval.

Applications for Adynxx's product candidates could fail to receive regulatory approval for many reasons, including but not limited to the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design, size or implementation of its clinical studies;

- the FDA or comparable foreign regulatory authorities may disagree with the use of and definition of one orthopedic and one soft-tissue surgical model of postoperative pain as appropriate for approval for general postoperative pain;

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- The FDA does not currently have published guidance on the requirements for a general postoperative pain indication and may publish guidance that is not in alignment with current Adynxx clinical development plans, which may cause Adynxx to alter development plans, thereby increasing the costs and time required to complete clinical development of brivoligide;

- the FDA or comparable foreign regulatory authorities may disagree with the use of the PCS as a tool for patient selection for treatment with brivoligide;

- the population studied in the clinical program may not be sufficiently broad or representative to assure safety in the full population for which Adynxx seeks approval;

- the FDA or comparable foreign regulatory authorities may disagree with Adynxx's interpretation of data from its development efforts;

- the data collected from clinical studies of Adynxx's product candidates may not be sufficient to support the submission of a new drug application ("NDA"), or other submission or to obtain regulatory approval in the United States or foreign jurisdictions;

- the FDA or comparable foreign regulatory authorities may find failures in Adynxx's manufacturing processes, validation procedures and specifications, or facilities of its third-party manufacturers with which Adynxx contracts for clinical and commercial supplies that may delay or limit Adynxx's ability to obtain regulatory approval for its product candidates; and

- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering Adynxx's NDA or other submission insufficient for approval.

The lengthy and uncertain regulatory approval process, as well as the unpredictability of the results of clinical studies, may result in Adynxx's failing to obtain regulatory approval to market any of its product candidates, which would significantly harm its business, results of operations, and prospects. Even if Adynxx's product candidates meet their safety and efficacy endpoints in clinical trials, the regulatory authorities may not complete their review processes in a timely manner, may issue a complete response letter, or ultimately Adynxx may not be able to obtain regulatory approval. In addition, Adynxx may experience delays or rejections if an FDA Advisory Committee or other regulatory authority recommends non-approval or restrictions on approval. In addition, Adynxx may experience delays or rejections based upon additional government regulation from future legislation or administrative action, or changes in regulatory authority policy during the period of product development, clinical trials and the review process.
Regulatory authorities have substantial discretion in the approval process and may refuse to accept any application or may decide that Adynxx's data are insufficient for approval and require additional preclinical, clinical or other studies. In addition, varying interpretations of data obtained from preclinical and clinical testing could delay, limit or prevent the receipt of marketing approval for a product candidate.
Even if Adynxx obtains regulatory approval for a product candidate, its products will remain subject to regulatory scrutiny.
Even if Adynxx obtains regulatory approval in a jurisdiction, the applicable regulatory authority may still impose significant restrictions on the indicated uses or marketing of Adynxx's product candidates, or impose ongoing

requirements for potentially costly post-approval studies, post-market surveillance or patient or drug restrictions. Additionally, the holder of an approved NDA is obligated to monitor and report adverse events ("AEs") and any failure of a product to meet the specifications in the NDA. The holder of an approved NDA must also submit new or supplemental applications and obtain FDA approval for certain changes to the approved product, product labeling or manufacturing process.

Regulatory authorities also may approve a product candidate for more limited indications than requested or they may impose significant limitations in the form of narrow indications, warnings or Risk Evaluation and Mitigation Strategies ("REMS"). These regulatory authorities may require precautions or contra-indications with respect to conditions of use or they may grant approval subject to the performance of costly post-marketing clinical trials. In addition, regulatory authorities may not approve the labeling

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claims that are necessary or desirable for the successful commercialization of Adynxx's product candidates. Any of the foregoing scenarios could materially harm the commercial prospects for Adynxx's product candidates and materially harm its business, financial condition, results of operations and prospects.

In addition, product manufacturers and their facilities are subject to payment of user fees and continual review and periodic inspections by the FDA and other regulatory authorities for compliance with good manufacturing practices ("GMP") and adherence to commitments made in the NDA. If Adynxx or a regulatory agency discovers previously unknown problems with a product such as AEs of unanticipated severity or frequency, or problems with the facility where the product is manufactured, a regulatory agency may impose restrictions relative to that product or the manufacturing facility, including requiring recall or withdrawal of the product from the market or suspension of manufacturing.

If Adynxx fails to comply with applicable regulatory requirements following approval of any of its product candidates, a regulatory agency may take a variety of actions, including:

- issue a warning letter asserting that Adynxx is in violation of the law;
- seek an injunction or impose civil or criminal penalties or monetary fines;
- suspend or withdraw regulatory approval;
- suspend any ongoing clinical studies;
- refuse to approve a pending marketing application, such as a NDA or supplements to a NDA submitted by Adynxx;
- seize products; or
- refuse to allow Adynxx to enter into supply contracts, including government contracts.

Drug development involves a lengthy and expensive process with an uncertain outcome, and results of earlier studies may not be predictive of future study results.

Clinical testing is expensive and generally takes many years to complete, and the outcome is inherently uncertain. Failure can occur at any time during the clinical study process. The results of preclinical studies and early clinical studies of Adynxx's product candidates may not be predictive of the results of larger, later-stage controlled clinical studies. Product candidates that have shown promising results in early-stage clinical studies may still suffer significant setbacks in subsequent clinical studies. Adynxx's clinical studies to date have been conducted on a small number of patients in limited numbers of clinical sites. Adynxx will have to conduct larger, controlled studies in its proposed indications to verify the results obtained to date and to support any regulatory submissions for further clinical development. A number of companies in the biopharmaceutical industry have suffered significant setbacks in advanced clinical studies due to lack of efficacy or adverse safety profiles despite promising results in earlier, smaller clinical studies. Moreover, clinical data are often susceptible to varying interpretations and analyses. Adynxx does not know whether any Phase 2, Phase 3, or other clinical studies Adynxx may conduct will demonstrate consistent or adequate efficacy and safety with respect to the proposed indication for use sufficient to obtain regulatory approval to receive regulatory approval or market its drug candidates.

Adynxx may find it difficult to enroll patients in its clinical studies given the limited number of patients scoring ≥16 on the PCS who are undergoing the procedures Adynxx intends to use as its models of postoperative pain for testing of

brivoligide. Adynxx may also find it difficult to enroll patients in surgical models that are performed under general anesthesia due to the intrathecal route of administration of brivoligide. Difficulty in enrolling patients could delay or prevent clinical studies of its product candidates.

Identifying and qualifying patients to participate in clinical studies of Adynxx's product candidates is essential to their success. The timing of Adynxx's clinical studies depends in part on the rate at which Adynxx can recruit patients to participate in clinical trials of its product candidates, and Adynxx may experience delays in completion of its clinical studies if Adynxx encounters difficulties in enrollment.

In future clinical trials of brivoligide, Adynxx will be evaluating brivoligide using surgical models including but not limited to TKA and mastectomy. While Adynxx has successfully completed enrollment in three Phase 2 studies of postoperative pain following TKA to date within projected timelines, it may not be

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able to do so successfully in the future. Adynxx has never conducted a study using the mastectomy model of postoperative pain, and may not meet projected enrollment timelines. Some competitors have ongoing clinical trials for product candidates that use the same surgical models as Adynxx's product candidates, and patients who would otherwise be eligible for its clinical trials may instead enroll in competitors' clinical trials.

The eligibility criteria of Adynxx's planned clinical studies may further limit the availability of suitable study participants as Adynxx expects to require that patients have specific measurable characteristics or meet certain criteria to assure that they are appropriate for inclusion in its clinical studies. In future clinical trials of brivoligide, Adynxx will be evaluating brivoligide in patients scoring ≥16 on the PCS. Approximately one third of individuals score ≥16 on the PCS, however if this rate is not reflected in patient populations at the clinical trial sites, Adynxx may have fewer patients eligible for enrollment than expected. In addition, Adynxx may not be able to identify, recruit, and enroll a sufficient number of patients to complete its clinical studies in a timely fashion because of the perceived risks and benefits of the product candidate under study, the availability and efficacy of competing therapies and clinical studies, the willingness of patients to receive an intrathecal injection if undergoing a surgical procedure typically performed under general anesthesia, and the willingness of physicians to participate in its planned clinical studies. If patients are unwilling to participate in Adynxx's clinical studies for any reason, the timeline for conducting studies and obtaining regulatory approval of its product candidates may be delayed.

If Adynxx experiences delays in the completion of, or termination of, any clinical study of its product candidates, the commercial prospects of its product candidates could be harmed, and its ability to generate product revenue from any of these product candidates could be delayed or prevented. In addition, any delays in completing its clinical studies would likely increase overall costs, impair product candidate development and jeopardize Adynxx's ability to obtain regulatory approval relative to its current plans. Any of these occurrences may harm its business, financial condition, and prospects significantly.

Clinical studies are costly, time consuming and inherently risky, and Adynxx may fail to demonstrate safety and efficacy to the satisfaction of applicable regulatory authorities.

Clinical development is expensive, time consuming and involves significant risk. Adynxx cannot guarantee that any clinical studies will be conducted as planned or completed on schedule, if at all. A failure of one or more clinical studies can occur at any stage of development. Events that may prevent successful or timely completion of clinical development include but are not limited to:

- inability to generate satisfactory preclinical, toxicology, or other in vivo or in vitro data to support the initiation or continuation of clinical studies;

- delays in reaching agreement on acceptable terms with contract research organizations ("CROs") and clinical study sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and clinical study sites;

- delays in obtaining required Institutional Review Board ("IRB"), approval at each clinical study site;

- refusal to permit the conduct of a study by regulatory authorities, after review of an IND, or equivalent foreign application or amendment;

- delays in recruiting qualified patients in its clinical studies;

- failure by clinical sites or its CROs or other third parties to adhere to clinical study requirements;

- failure to perform in accordance with the FDA's Good Clinical Practice requirements ("GCP"), or applicable foreign regulatory guidelines;

- high patient drop-out rate in Adynxx's clinical studies;

- occurrence of AEs associated with Adynxx's product candidates;

- changes in regulatory requirements and guidance that require amending or submitting new clinical protocols;

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- the cost of clinical studies of Adynxx's product candidates;

- negative or inconclusive results from Adynxx's clinical trials which may result in Adynxx's deciding, or regulators requiring Adynxx, to conduct additional clinical studies or abandon development programs in other ongoing or planned indications for a product candidate; and

- delays in reaching agreement on acceptable terms with third party manufacturers and the time for manufacture of sufficient quantities of its product candidates for use in clinical studies.

Any inability to successfully complete clinical development and obtain regulatory approval could result in additional costs to Adynxx or impair its ability to generate revenue. Clinical study delays could also shorten any periods during which its products have patent protection and may allow competitors to develop and bring products to market before Adynxx does, which could impair its ability to successfully commercialize its product candidates and may harm its business and results of operations.

Adynxx's product candidates may cause undesirable side effects or have other properties that could delay or prevent their regulatory approval, limit the commercial profile of an approved label, or result in significant negative consequences following marketing approval, if any.

Undesirable side effects caused by its product candidates could cause Adynxx or regulatory authorities to interrupt, delay, or terminate clinical studies or even if approved, result in a restrictive label or delay regulatory approval by the FDA or comparable foreign regulatory authorities. Adynxx will continue to evaluate its product candidates in additional clinical trials, and there is no guarantee that severe side effects will not be identified.

Brivoligide targets Early Growth Response 1 ("EGR1"), a transcription factor that has a role in memory consolidation within the hippocampus. There is a potential risk of transient alteration in memory function with brivoligide if sufficient material is distributed to the brain. This risk has been evaluated in nonclinical studies and in the clinical studies to date, but has not been observed; however, studies using the mastectomy model will involve movement of the brivoligide injection to the upper regions of the spinal canal which may involve increased risk of brain exposure and possible transient cognitive or memory dysfunction.

Additionally, even if one or more of its product candidates receives marketing approval, and Adynxx or others later identify undesirable side effects caused by such products, potentially significant negative consequences could result, including but not limited to:

- regulatory authorities may withdraw approvals of such products;

- regulatory authorities may require additional warnings on the label;

- Adynxx may be required to create a REMS plan, which could include a medication guide outlining the risks of such side effects for distribution to patients, a communication plan for healthcare providers, and/or other elements to assure safe use;

- Adynxx could be sued and held liable for harm caused to patients; and

- its reputation may suffer.

Any of these events could prevent Adynxx from achieving or maintaining market acceptance of a product candidate, even if approved, and could significantly harm its business, results of operations, and prospects.

Adynxx may not be successful in any efforts to identify, license, discover, develop, or commercialize additional product candidates.

Although a substantial amount of Adynxx's effort will focus on the continued clinical testing, potential approval, and commercialization of its existing product candidates, the success of Adynxx's business is also expected to depend in part upon its ability to identify, license, discover, develop, or commercialize additional product candidates. Research programs to identify new product candidates require substantial technical, financial, and human resources. Adynxx may focus its efforts and resources on potential programs or

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product candidates that ultimately prove to be unsuccessful. Adynxx's research programs or licensing efforts may fail to yield additional product candidates for clinical development and commercialization for a number of reasons, including but not limited to the following:

- Adynxx's research or business development methodology or search criteria and process may be unsuccessful in identifying potential product candidates;

- Adynxx's collaboration with twoXAR, which relies upon artificial intelligence technology to generate potential product opportunities, may not generate viable product candidates;

- Adynxx may not be able or willing to assemble sufficient resources to acquire or discover additional product candidates;

- its product candidates may not succeed in preclinical or clinical testing;

- its potential product candidates may be shown to have harmful side effects or may have other characteristics that may make the products unmarketable or unlikely to receive marketing approval;

- competitors may develop alternatives that render Adynxx's product candidates obsolete or less attractive;

- product candidates Adynxx develops may be covered by third parties' patents or other exclusive rights;

- the market for a product candidate may change during Adynxx's development program so that such a product may become unreasonable to continue to develop;

- a product candidate may not be capable of being produced in commercial quantities at an acceptable cost, or at all; and

- a product candidate may not be accepted as safe and effective by patients, the medical community, or third-party payors.

If any of these events occur, Adynxx may be forced to abandon its development efforts for a program or programs, or Adynxx may not be able to identify, license, discover, develop, or commercialize additional product candidates, which would have a material adverse effect on its business and could potentially cause Adynxx to cease operations.

Adynxx may not be successful in meeting its diligence obligations under its existing collaboration or under future license agreements necessary to maintain product candidate licenses in effect. In addition, if required in order to commercialize its product candidates, Adynxx may be unsuccessful in obtaining or maintaining necessary rights to its product candidates through acquisitions and in-licenses.

Adynxx has a collaboration with twoXAR and may seek to obtain rights to intellectual property, through licenses from third parties and under patents that Adynxx does not own, to develop and commercialize additional product candidates. Because its programs may require the collaboration with or use of proprietary rights held by third parties, the growth of its business will likely depend in part on its ability to maintain in effect these collaborations and

proprietary rights. For example, Adynxx has certain specified diligence obligations under its collaboration with twoXAR. Adynxx may not be able to achieve the required diligence milestones in a timely manner, which may result in a right of termination by twoXAR, and Adynxx may be unable to successfully negotiate an extension or waiver of those termination rights. Any termination of the collaboration with twoXAR or future license agreements with third parties with respect to its product candidates would be expected to negatively impact its business prospects.

Adynxx may be unable to acquire or in-license any compositions, methods of use, processes, or other third-party intellectual property rights from third parties that Adynxx identifies as necessary for its product candidates. The licensing and acquisition of third-party intellectual property rights is a competitive area, and a number of more established companies are also pursuing strategies to license or acquire third-party intellectual property rights that Adynxx may consider attractive. These established companies may have a competitive advantage over Adynxx due to their size, cash resources, and greater clinical development and

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commercialization capabilities. In addition, companies that perceive Adynxx to be a competitor may be unwilling to assign or license rights to Adynxx. Even if Adynxx is able to license or acquire third-party intellectual property rights that are necessary for its product candidates, there can be no assurance that they will be available on favorable terms.

Adynxx collaborates with U.S. and foreign academic institutions to identify product candidates, accelerate its research and conduct development. Typically, these institutions have provided Adynxx with an option to negotiate an exclusive license to any of the institution's rights in the patents or other intellectual property resulting from the collaboration. Regardless of such option, Adynxx may be unable to negotiate a license within the specified timeframe or under terms that are acceptable to Adynxx. If Adynxx is unable to do so, the institution may offer the intellectual property rights to other parties, potentially blocking its ability to pursue a program of interest to Adynxx.

If Adynxx is unable to successfully obtain and maintain rights to required third-party intellectual property, Adynxx may have to abandon development of that product candidate or pay additional amounts to the third party, and its business and financial condition could suffer.

Even if Adynxx obtains regulatory approval for a product candidate, Adynxx will remain subject to ongoing regulatory requirements.

If Adynxx's product candidates are approved, they will be subject to ongoing regulatory requirements with respect to manufacturing, labeling, packaging, storage, advertising, promotion, sampling, record-keeping, conduct of post-marketing studies, and submission of safety, efficacy and other post-approval information, including both federal and state requirements in the United States and requirements of comparable foreign regulatory authorities.

Manufacturers and manufacturers' facilities are required to continuously comply with FDA and comparable foreign regulatory authority requirements, including ensuring that quality control and manufacturing procedures conform to current Good Manufacturing Practices ("cGMP"), regulations and corresponding foreign regulatory manufacturing requirements. As such, Adynxx and its contract manufacturers will be subject to continual review and inspections to assess compliance with cGMP and adherence to commitments made in any NDA or marketing authorization application ("MAA").

Any regulatory approvals that Adynxx receives for its product candidates may be subject to limitations on the approved indicated uses for which the product candidate may be marketed or to the conditions of approval, or contain requirements for potentially costly post-marketing testing, including Phase 4 clinical trials, and surveillance to monitor the safety and efficacy of the product candidate. Adynxx will be required to report certain adverse reactions and production problems, if any, to the FDA and comparable foreign regulatory authorities. Any new legislation addressing drug safety issues could result in delays in product development or commercialization, or increased costs to assure compliance. If its original marketing approval for a product candidate was obtained through an accelerated approval pathway, Adynxx could be required to conduct a successful post-marketing clinical study in order to confirm the clinical benefit for its products. An unsuccessful post-marketing study or failure to complete such a study could result in the withdrawal of marketing approval.

If a regulatory agency discovers previously unknown problems with a product, such as AEs of unanticipated severity or frequency, or problems with the facility where the product is manufactured, or disagrees with the promotion, marketing or labeling of a product, the regulatory agency may impose restrictions on that product or Adynxx, including requiring withdrawal of the product from the market. If Adynxx fails to comply with applicable regulatory requirements, a regulatory agency or enforcement authority may, among other things:

- issue warning letters;
- impose civil or criminal penalties;
- suspend or withdraw regulatory approval;
- suspend any of Adynxx's ongoing clinical studies;

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- refuse to approve pending applications or supplements to approved applications submitted by Adynxx;

- impose restrictions on Adynxx's operations, including closing its contract manufacturers' facilities; or

- require a product recall.

Any government investigation of alleged violations of law would be expected to require Adynxx to expend significant time and resources in response and could generate adverse publicity. Any failure to comply with ongoing regulatory requirements may significantly and adversely affect its ability to develop and commercialize its products and the value of Adynxx and its operating results would be adversely affected.

Adynxx relies on third parties to conduct its clinical studies, and perform other services. If these third parties do not successfully perform and comply with regulatory requirements, Adynxx may not be able to successfully complete clinical development, obtain regulatory approval or commercialize its product candidates and its business could be substantially harmed.

Adynxx has relied upon and plans to continue to rely upon third-party CROs to conduct, monitor and manage its ongoing clinical program. Adynxx relies on these parties for execution of clinical studies and manages and controls only certain aspects of their activities. Adynxx remains responsible for ensuring that each of its studies is conducted in accordance with the applicable protocol, legal, regulatory, and scientific standards and its reliance on the CROs does not relieve Adynxx of its regulatory responsibilities. Adynxx and its CROs and other vendors are required to comply with all applicable laws, regulations and guidelines, including those required by the FDA and comparable foreign regulatory authorities for all of its product candidates in clinical development. If Adynxx or any of its CROs or vendors fail to comply with applicable laws, regulations and guidelines, the results generated in its clinical studies may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require Adynxx to perform additional studies before approving its marketing applications. Adynxx cannot guarantee that its CROs and other vendors will meet these requirements, or that upon inspection by any regulatory authority, such regulatory authority will determine that efforts, including any of its clinical studies, comply with applicable requirements. Failure to comply with these laws, regulations and guidelines may require Adynxx to repeat clinical studies, which would be costly and delay the regulatory approval process.

If any of Adynxx's relationships with these third-party CROs terminate, Adynxx may not be able to enter into arrangements with alternative CROs in a timely manner or do so on commercially reasonable terms. In addition, Adynxx's CROs may not prioritize Adynxx's clinical studies relative to those of other customers and any turnover in personnel or delays in the allocation of CRO employees by the CRO may negatively affect its clinical studies. If CROs do not successfully carry out their contractual duties or obligations or meet expected deadlines, Adynxx's clinical studies may be delayed or terminated and Adynxx may not be able to meet its current plans with respect to its product candidates. CRO contracts may also involve higher costs than anticipated, which could negatively affect Adynxx's financial condition and operations.

Adynxx relies and expects to continue to rely on third parties to manufacture its clinical product supplies, and Adynxx intends to rely on third parties to produce and process its product candidates, if approved, and Adynxx's commercialization of any of its product candidates could be stopped, delayed or made less profitable if those third parties fail to obtain approval of government regulators, fail to provide Adynxx with sufficient quantities of drug product, or fail to do so at acceptable quality levels or prices.

Adynxx does not currently have nor does it plan to acquire the infrastructure or capability internally to manufacture its clinical supplies for use in the conduct of Adynxx's clinical trials, and Adynxx lacks the resources and the capability to manufacture any of its product candidates on a clinical or commercial scale. Adynxx currently relies on outside vendors to manufacture its clinical supplies of its product candidates and plan to continue relying on third parties to manufacture its product candidates on a commercial scale, if approved. Adynxx plans to rely on third party manufacturers and their responsibilities will include purchasing from third-party suppliers the materials necessary to

produce its product candidates for its clinical studies and regulatory approval. There are expected to be a limited number of suppliers for the

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active ingredients and other materials that Adynxx expects to use to manufacture its product candidates, and Adynxx may not be able to identify alternative suppliers to prevent a possible disruption of the manufacture its product candidates for its clinical studies, and, if approved, ultimately for commercial sale. Although Adynxx generally does not expect to begin a clinical study unless it believes it has a sufficient supply of a product candidate to complete the study, any significant delay or discontinuity in the supply of a product candidate, or the active ingredient or other material components in the manufacture of the product candidate could delay completion of its clinical studies and potential delay in regulatory approval of its product candidates, which would harm its business and results of operations.

With respect to its brivoligide product candidate, Adynxx relies on Nitto-Denko Avecia, Inc. ("Avecia") and CordenPharma GmbH ("Corden") to supply its clinical study materials and Adynxx does not have long-term supply agreements or commitments from those parties to supply its materials. Moreover, even if Adynxx had a longer-term supply arrangement, Adynxx may be precluded from entering into a back-up or alternative supplier arrangement which may increase the risk for further development, regulatory approval, or commercialization of its product candidates. Adynxx has not established clinical study material supply agreements for AYX2 and may not be able to do so.

The facilities used by Adynxx's contract manufacturers to manufacture its product candidates must be approved by the FDA pursuant to inspections that will be conducted after Adynxx submits its marketing applications to the FDA. Adynxx does not control the manufacturing process of, and is completely dependent on, its contract manufacturing partners for compliance with the regulatory requirements, known as cGMPs, for manufacture of Adynxx's product candidates. If Adynxx's contract manufacturers cannot successfully manufacture material that conforms to Adynxx's specifications and the strict regulatory requirements of the FDA or others, they will not be able to secure and/or maintain regulatory approval for their manufacturing facilities. In addition, Adynxx has no control over the ability of its contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of its product candidates or if it withdraws any such approval in the future, Adynxx may need to find alternative manufacturing facilities, which would significantly impact Adynxx's ability to develop, obtain regulatory approval for or market its product candidates, if approved.

Adynxx does not yet have sufficient information to reliably estimate the cost of the commercial manufacturing of its product candidates, and the actual cost to manufacture its product candidates could materially and adversely affect the commercial viability of its product candidates. As a result, Adynxx may never be able to develop a commercially viable product.

In addition, Adynxx's reliance on third-party manufacturers exposes Adynxx to the following additional risks:

- Adynxx may be unable to identify manufacturers on acceptable terms or at all.

- Adynxx's third-party manufacturers might be unable to, in a timely fashion, formulate and manufacture Adynxx's product or produce the quantity and quality required to meet Adynxx's clinical and commercial needs, if any.

- Contract manufacturers may not be able to execute Adynxx's manufacturing procedures appropriately.

- Adynxx's future contract manufacturers may not perform as agreed or may not remain in the contract manufacturing business for the time required to supply its clinical trials or to successfully produce, store and distribute its products.

- Manufacturers are subject to ongoing periodic unannounced inspection by the FDA and corresponding state agencies to ensure strict compliance with cGMP and other government regulations and corresponding foreign standards. Adynxx does not have control over third-party manufacturers' compliance with these regulations and standards.

- Adynxx may not own, or may have to share, the intellectual property rights to any improvements made by Adynxx's third-party manufacturers in the manufacturing process for its product candidates.

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- Adynxx's third-party manufacturers could breach or terminate their agreement with Adynxx.

Each of these risks could delay Adynxx's clinical trials, the approval of any of its product candidates by the FDA or the commercialization of its product candidates or result in higher costs or deprive Adynxx of potential product revenue. In addition, Adynxx relies on third parties to perform release testing on its product candidates prior to delivery to patients. If these tests are not appropriately conducted and test data are not reliable, patients could be put at risk of serious harm and could result in product liability suits.

The manufacture of medical products is complex and requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. Manufacturers often encounter difficulties in production, particularly in scaling up and validating initial production and maintaining absence of contamination. These problems include difficulties with production costs and yields, quality control, including stability of the product, quality assurance testing, operator error, shortages of qualified personnel, as well as compliance with strictly enforced federal, state and foreign regulations. Furthermore, if contaminants are discovered in Adynxx's supply of its product candidates or in the manufacturing facilities, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. Adynxx cannot assure that any stability or other issues relating to the manufacture of its product candidates will not occur in the future. Additionally, Adynxx's manufacturers may experience manufacturing difficulties due to resource constraints or as a result of labor disputes or unstable political environments. If Adynxx's manufacturers were to encounter any of these difficulties, or otherwise fail to comply with their contractual obligations, Adynxx's ability to provide its product candidates to patients in clinical trials would be jeopardized. Any delay or interruption in the supply of clinical trial supplies could delay the completion of clinical trials, increase the costs associated with maintaining clinical trial programs and, depending upon the period of delay, require Adynxx to commence new clinical trials at additional expense or terminate clinical trials completely.

Certain components used in the manufacture of brivoligide are sourced from a single vendor.

Brivoligide is an oligonucleotide, and Adynxx currently uses Avecia as a single supplier for brivoligide drug substance. There are currently a limited number of oligonucleotide manufacturers with commercial scale capabilities globally. While Adynxx intends to develop second sources for manufacturing of its drug candidates in the future it may not be able to do so, or may not be able to do so on commercially reasonable terms. Any interruption in the supply of a key material could significantly delay its research and development process or increase its expenses for commercialization or development products. The quality of materials can be critical to the performance of a drug delivery technology, so a reliable source that provides a consistent supply of materials is important.

Adynxx faces intense competition from other companies developing products for the reduction of postoperative pain. Brivoligide faces significant competition. If Adynxx is able to successfully develop brivoligide for the reduction of postoperative pain, it will compete with EXPAREL (bupivacaine liposome injectable suspension, marketed by Pacira Pharmaceuticals, Inc.), HTX-011 (bupivacaine and meloxicam, in development by Heron Therapeutics, NDA submitted to the FDA in 2018), Ofirmev (intravenous acetaminophen, marketed by Mallinckrodt Pharmaceuticals), branded and generic oral opioid pain therapeutics, branded and generic oral NSAIDs and potentially other products in development for the reduction of postoperative pain that reach the market.

Many of Adynxx's existing or potential competitors have substantially greater financial, technical and human resources than Adynxx, and significantly greater experience in the discovery and development of product candidates, as well as in obtaining regulatory approvals of those product candidates in the United States and in foreign countries. Many of Adynxx's current and potential future competitors also have significantly more experience commercializing drugs that have been approved for marketing. Mergers and acquisitions in the pharmaceutical and biotechnology industries could result in even more resources being concentrated among a smaller number of Adynxx's competitors. Competition may reduce the number and types of patients available to us to participate in clinical trials, because some patients who might have opted to enroll in Adynxx's trials may instead opt to enroll in a trial being conducted by one of Adynxx's competitors.

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Small or early-stage companies and research institutions may also prove to be significant competitors, particularly through collaborative arrangements with large and established pharmaceutical companies. Adynxx will also face competition from these parties in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials, and acquiring or in-licensing technologies and products complementary to its programs or potentially advantageous to its business. If any of Adynxx's competitors succeed in obtaining approval from the FDA or other regulatory authorities for their products sooner than Adynxx does or for products that are more effective or less costly than Adynxx's products, its commercial opportunity could be significantly reduced. Major technological changes can happen quickly in the biotechnology and pharmaceutical industries, and the development of new mechanisms of action, technologically improved or different products or drug delivery technologies may make Adynxx's product candidates or platform technologies obsolete or noncompetitive.

Adynxx currently has limited marketing and sales experience. If Adynxx is unable to establish sales and marketing capabilities or enter into agreements with third parties to market and sell its product candidates, Adynxx may be unable to generate any revenue.

Adynxx has no experience selling and marketing its product candidates and Adynxx currently has no marketing or sales organization. To successfully commercialize any products that may result from its development programs, Adynxx will need to invest in and develop these capabilities, either on its own or with others, which would be expensive, difficult and time consuming. Any failure or delay in the timely development of Adynxx's internal commercialization capabilities could adversely impact the potential for success of its products.

Further, given its lack of prior experience in marketing and selling pharmaceutical products, Adynxx may rely on future collaborators to commercialize its products. If collaborators do not commit sufficient resources to commercialize its future products and Adynxx is unable to develop the necessary marketing and sales capabilities on its own, Adynxx will be unable to generate sufficient product revenue to sustain or grow its business. Adynxx may be competing with companies that currently have extensive and well-funded marketing and sales operations, in particular in the markets its product candidates are intended to address. Without appropriate capabilities, whether directly or through third party collaborators, Adynxx may be unable to compete successfully against these more established companies.

The commercial success of any of Adynxx's current or future product candidates will depend upon the degree of market acceptance by physicians, patients, third-party payors, and others in the medical community.

In addition to extensive internal efforts, the successful commercialization of brivoligide will require many third parties, over whom Adynxx has no control, to choose to utilize brivoligide. These third parties include physicians and hospital pharmacy and therapeutics committees ("P&T committees"). Generally, if brivoligide obtains FDA approval, before Adynxx can attempt to sell brivoligide in a hospital, brivoligide must be approved for addition to that hospital's list of approved drugs, or formulary list, by the hospital's P&T committee. A hospital's P&T committee typically governs all matters pertaining to the use of medications within the institution, including the review of medication formulary data and recommendations for the appropriate use of drugs within the institution to the medical staff. The frequency of P&T committee meetings at hospitals varies considerably, and P&T committees often require additional information to aid in their decision-making process. Therefore, Adynxx may experience substantial delays in obtaining formulary approvals. Additionally, hospital pharmacists may be concerned that the cost of acquiring brivoligide for use in their institutions will adversely impact their overall pharmacy budgets, which could cause pharmacists to resist efforts to add brivoligide to the formulary, or to implement restrictions on the usage of brivoligide in order to control costs. Adynxx cannot guarantee that it will be successful in obtaining the approvals needed from enough P&T committees quickly enough to optimize hospital sales of brivoligide.

In addition, there is significant uncertainty related to the insurance coverage and reimbursement for newly approved products. In the United States, the principal decisions about coverage and reimbursement for new drugs are typically made by the Centers for Medicare & Medicaid Services ("CMS"), an agency within the U.S. Department of Health and Human Services, as CMS decides whether and to what extent a

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new drug will be covered and reimbursed under Medicare. Private payors tend to follow the coverage reimbursement policies established by CMS to a substantial degree. It is difficult to predict what CMS will decide with respect to reimbursement for products such as Adynxx's and what reimbursement codes its products may receive.

Outside the United States, international operations are generally subject to extensive governmental price controls and other price-restrictive regulations, and Adynxx believes the increasing emphasis on cost-containment initiatives in Europe, Canada, and other countries has and will continue to put pressure on the pricing and usage of products. In many countries, the prices of products are subject to varying price control mechanisms as part of national health systems. Price controls or other changes in pricing regulation could restrict the amount that Adynxx is able to charge for its products. Accordingly, in markets outside the United States, the potential revenue may be insufficient to generate commercially reasonable revenue and profits.

Moreover, increasing efforts by governmental and third-party payors in the United States and abroad to limit or reduce healthcare costs may result in restrictions on coverage and the level of reimbursement for new products and, as a result, they may not cover or provide adequate payment for its products. Adynxx expects to experience pricing pressures in connection with products due to the increasing trend toward managed healthcare, including the increasing influence of health maintenance organizations and additional legislative changes. The downward pressure on healthcare costs in general, particularly prescription drugs, has and is expected to continue to increase in the future. As a result, profitability of Adynxx's products may be more difficult to achieve even if they receive regulatory approval.

Even if Adynxx obtains hospital formulary approval for brivoligide, physicians must still prescribe brivoligide for its commercialization to be successful. Because brivoligide is a new drug with a limited track record of sales in the United States, any inability to supply brivoligide to customers in a timely manner, or any unexpected side effects that develop from use of the drug, particularly early in product launch, may lead physicians to not accept brivoligide as a viable treatment. Because administration of brivoligide will be intended for patients scoring ≥16 on the PCS, and will require administration of the one-page PCS evaluation tool prior to surgery, physicians may not accept brivoligide as a viable addition to their patient treatment pathway.

If brivoligide does not achieve broad market acceptance, the revenues that are generated from its sales will be limited. The degree of market acceptance of brivoligide also depends on a number of other factors, including:

- changes in the postoperative pain standard of care for the targeted indications for brivoligide, which could reduce the marketing impact of any claims that can be made;

- lack of healthcare practitioners' comfort with intrathecal administration of brivoligide, particularly in surgical procedures which are not currently performed using spinal anesthesia;

- the prevalence and severity of AEs associated with brivoligide;

- cost of treatment versus economic and clinical benefit in relation to alternative treatments;

- the availability of adequate coverage or reimbursement by third parties, such as insurance companies and other healthcare payers, and by government healthcare programs, including Medicare and Medicaid;

- the extent and strength of marketing and distribution of brivoligide;

- the safety, efficacy and other potential advantages over, and availability of, alternative treatments, including, in the case of brivoligide, a number of products already used to treat postoperative pain in the hospital setting and following

hospital discharge; and

- distribution and use restrictions imposed by the FDA or to which Adynxx agrees as part of a mandatory REMS or voluntary risk management plan.

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Adynxx's ability to effectively promote and sell brivoligide and any product candidates that it may develop, license or acquire in the hospital marketplace will also depend on pricing and cost effectiveness, including its ability to produce a product at a competitive price and therefore achieve acceptance of the product onto hospital formularies, and its ability to obtain sufficient third-party coverage or reimbursement. Since many hospitals are members of group purchasing organizations, which leverage the purchasing power of a group of entities to obtain discounts based on the collective buying power of the group, Adynxx's ability to attract customers in the hospital marketplace will also depend on its ability to effectively promote its product candidates to group purchasing organizations. Adynxx will also need to demonstrate acceptable evidence of safety and efficacy, as well as relative convenience and ease of administration. Market acceptance could be further limited depending on the prevalence and severity of any expected or unexpected adverse side effects associated with Adynxx's product candidates.

Further, the availability of inexpensive generic forms of postsurgical pain management products may also limit acceptance of brivoligide among physicians, patients, P&T Committees and third-party payers. If brivoligide does not achieve an adequate level of acceptance among physicians, patients and third-party payers, Adynxx may not generate meaningful revenues from brivoligide and may not become profitable.

Risks Related to Adynxx's Business Operations

Adynxx's future success depends in part on its ability to retain its President and Chief Executive Officer, Chief Medical Officer, and Chief Scientific Officer, and to attract, retain, and motivate other qualified personnel.

Adynxx is highly dependent upon the efforts of its senior management, including Rick Orr, its President and Chief Executive Officer, Donald C. Manning, Chief Medical Officer, and Julien Mamet, founder and Chief Scientific Officer. The loss of the services provided by these individuals may adversely impact the achievement of its objectives. These individuals could leave Adynxx's employment at any time, as they are "at will" employees. The loss of the services of these individuals and other members of Adynxx's senior management could delay or prevent the achievement of research, development, marketing, or product commercialization objectives. Adynxx does not maintain any "key-man" insurance policies on any of the key employees nor does Adynxx intend to obtain such insurance. Recruiting and retaining other qualified employees, consultants, and advisors for Adynxx's business, including scientific and technical personnel, will also be critical to Adynxx success. There is currently a shortage of highly qualified personnel in Adynxx's industry, which is likely to continue. As a result, competition for personnel is intense and the turnover rate can be high. Adynxx may not be able to attract and retain personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for individuals with similar skill sets. In addition, failure to succeed in development and commercialization of Adynxx's product candidates may make it more challenging to recruit and retain qualified personnel. The inability to recruit and retain qualified personnel, or the loss of the services of key members of senior management could impede the progress of Adynxx's research, development, and commercialization objectives.

Adynxx will need to expand its organization and Adynxx may experience difficulties in managing this growth, which could disrupt its operations.

As of September 30, 2018, Adynxx had six full-time employees. As Adynxx's development and commercialization plans and strategies develop, Adynxx expects to need additional managerial, operational, sales, marketing, financial, legal, and other resources. Its management may need to divert a disproportionate amount of its attention away from its day-to-day activities and devote a substantial amount of time to managing these growth activities. Adynxx may not be able to effectively manage the expansion of its operations, which may result in weaknesses in its infrastructure, operational mistakes, loss of business opportunities, loss of employees, and reduced productivity among remaining employees. Adynxx's expected growth could require significant capital expenditures and may divert financial resources from other projects, such as the development of additional product candidates. If its management is unable to effectively manage its growth, its expenses may increase more than expected, its ability to generate and/or grow revenue could be reduced and Adynxx may not be able to implement its business strategy. Adynxx's future financial performance and its ability to commercialize product candidates and compete effectively will depend, in part, on its ability to effectively manage any future growth.

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Failure in Adynxx's information technology and storage systems could significantly disrupt the operation of Adynxx's business.

Adynxx's ability to execute its business plan and maintain operations depends on the continued and uninterrupted performance of its information technology ("IT"), systems. IT systems are vulnerable to risks and damages from a variety of sources, including telecommunications or network failures, malicious human acts and natural disasters. Moreover, despite network security and back-up measures, some of Adynxx's and its vendors' servers are potentially vulnerable to physical or electronic break-ins, computer viruses and similar disruptive problems. Despite precautionary measures to prevent unanticipated problems that could affect its IT systems, sustained or repeated system failures that interrupt its ability to generate and maintain data could adversely affect its ability to operate its business.

Adynxx may acquire businesses or products, or form strategic alliances, in the future, and may not realize the benefits of such acquisitions.

Adynxx may acquire additional businesses or products, form strategic alliances, or create joint ventures with third parties that it believes will complement or augment its existing business. If Adynxx acquires businesses with promising markets or technologies, it may not be able to realize the benefit of acquiring such businesses if it is unable to successfully integrate them with its existing operations and company culture. Adynxx may encounter numerous difficulties in developing, manufacturing, and marketing any new products resulting from a strategic alliance or acquisition that delay or prevent it from realizing their expected benefits or enhancing its business. Adynxx cannot provide any assurance that, following any such acquisition, it will achieve the synergies expected in order to justify the transaction, which could result in a material adverse effect on Adynxx's business and prospects.

The Patient Protection and Affordable Care Act and future legislative changes may increase the difficulty and cost for Adynxx to obtain marketing approval for and commercialize its product candidates and affect the prices that Adynxx may obtain.

In the United States and some foreign jurisdictions, there have been, and Adynxx expects there will continue to be, a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could, among other things, prevent or delay marketing approval of any of Adynxx's product candidates, restrict or regulate post-approval activities, and affect Adynxx's ability to profitably sell any products for which it obtains marketing approval.

For example, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, collectively the Affordable Care Act, was enacted to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for health care and health insurance industries, impose new taxes and fees on the healthcare industry, and impose additional healthcare policy reforms. The law has continued the downward pressure on pharmaceutical pricing, especially under the Medicare program, and increased the industry's regulatory burdens and operating costs. Among the provisions of the Affordable Care Act of importance to Adynxx's potential product candidates are the following:

- an annual, nondeductible fee payable by any entity that manufactures or imports specified branded prescription drugs and biologic agents;

- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program;

- a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected;

- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts (increasing to 70% commencing January 1, 2019) off negotiated prices of applicable brand drugs to eligible

beneficiaries under their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D;

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- extension of manufacturers' Medicaid rebate liability to individuals enrolled in Medicaid managed care organizations;

- expansion of eligibility criteria for Medicaid programs in certain states;

- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program;

- a new requirement to annually report drug samples that manufacturers and distributors provide to physicians; and

- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

Adynxx cannot predict the full impact of the Affordable Care Act on pharmaceutical companies, as many of the reforms require the promulgation of detailed regulations implementing the statutory provisions, some of which have not yet fully occurred. For example, in January 2016, the Centers for Medicare and Medicaid Services issued a final rule regarding the Medicaid Drug Rebate Program, effective April 1, 2016, that, among other things, revises the manner in which the "average manufacturer price" is to be calculated by manufacturers participating in the program and implements certain amendments to the Medicaid rebate statute created under the Affordable Care Act. Further, there have been judicial and Congressional challenges to certain aspects of the Affordable Care Act, and Adynxx expects there will be additional challenges and amendments to the Affordable Care Act in the future. Adynxx continues to evaluate the effect that the Affordable Care Act and its possible repeal and replacement has on its business.

Other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. For example, in August 2011, the President of the United States signed into law the Budget Control Act of 2011, which, among other things, included further reductions to Medicare payments to providers of 2% per fiscal year, which went into effect in April 2013 and, due to subsequent legislative amendments to the statute, will stay in effect through 2027 unless additional Congressional action is taken. Additionally, in January 2013, the American Taxpayer Relief Act of 2012 was signed into law, which, among other things, reduced Medicare payments to several types of providers and increased the statute of limitations period in which the government may recover overpayments to providers from three to five years. Further, there have been several recent United States Congressional inquiries and proposed federal and state legislation designed to, among other things, bring more transparency to drug pricing, review the relationship between pricing and manufacturer patient programs, reduce the out-of-pocket cost of prescription drugs, and reform government program reimbursement methodologies for drugs.

Moreover, the Drug Supply Chain Security Act, which was enacted in 2012 as part of the Food and Drug Administration Safety and Innovation Act, imposes new obligations on manufacturers of pharmaceutical products related to product tracking and tracing. Legislative and regulatory proposals have been made to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. Adynxx is not sure whether additional legislative changes will be enacted, or whether the current regulations, guidance or interpretations will be changed, or what the impact of such changes on Adynxx's business, if any, may be. In addition, increased scrutiny by the United States Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject Adynxx to more stringent product labeling and post-marketing testing and other requirements.

Adynxx expects that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for Adynxx's product candidate or additional pricing pressures.

Adynxx may be subject, directly or indirectly, to federal and state healthcare fraud and abuse laws, false claims laws, and health information privacy and security laws. If Adynxx is unable to comply, or has not fully complied, with such laws, it could face substantial penalties.

If Adynxx obtains FDA approval for any of its product candidates and begins commercializing those products in the United States, its operations may be subject to various federal and state fraud and abuse laws, including, without limitation, the federal Anti-Kickback Statute, the federal False Claims Act, and

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physician sunshine laws and regulations. These laws may impact, among other things, its proposed sales, marketing, and education programs. In addition, Adynxx may be subject to patient privacy regulation by both the federal government and the states in which Adynxx conduct its business. The laws that may affect its ability to operate include:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons from knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, to induce, or in return for, the purchase or recommendation of an item or service reimbursable under a federal healthcare program, such as the Medicare and Medicaid programs;

- federal civil and criminal false claims laws and civil monetary penalty laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid, or other third-party payors that are false or fraudulent;

- the federal Health Insurance Portability and Accountability Act of 1996 (“HIPAA”), which created new federal criminal statutes that prohibit executing a scheme to defraud any healthcare benefit program and making false statements relating to healthcare matters;

- HIPAA, as amended by the Health Information Technology and Clinical Health Act (“HITECH”), and its implementing regulations, which imposes certain requirements relating to the privacy, security, and transmission of individually identifiable health information;

- the federal physician sunshine requirements under the Health Care Reform Laws requires manufacturers of drugs, devices, biologics, and medical supplies to report annually to the U.S. Department of Health and Human Services information related to payments and other transfers of value to physicians, other healthcare providers, and teaching hospitals, and ownership and investment interests held by physicians and other healthcare providers and their immediate family members and applicable group purchasing organizations; and

- state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws that may apply to items or services reimbursed by any third-party payor, including commercial insurers, state laws that require pharmaceutical companies to comply with the pharmaceutical industry’s voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures, and state laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of the statutory exceptions and safe harbors available, it is possible that some of Adynxx’s business activities could be subject to challenge under one or more of such laws. In addition, recent health care reform legislation has strengthened these laws. For example, the Health Care Reform Law, among other things, amends the intent requirement of the federal anti-kickback and criminal healthcare fraud statutes. A person or entity no longer needs to have actual knowledge of this statute or specific intent to violate it. Moreover, the Health Care Reform Law provides that the government may assert that a claim including items or services resulting from a violation of the federal anti-kickback statute constitutes a false or fraudulent claim for purposes of the

False Claims Act.

If Adynxx's operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to Adynxx, Adynxx may be subject to penalties, including civil and criminal penalties, damages, fines, exclusion from participation in government health care programs, such as Medicare and Medicaid, imprisonment, and the curtailment or restructuring of its operations, any of which could adversely affect its ability to operate Adynxx's business and its results of operations.

If Adynxx fails to comply with environmental, health and safety laws and regulations, Adynxx could become subject to fines or penalties or incur costs that could have a material adverse effect on the success of its business.

Adynxx's research and development activities and its third-party manufacturers' and suppliers' activities involve the controlled storage, use, and disposal of hazardous materials, including the components

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of its product candidates and other hazardous compounds. Adynxx and its manufacturers and suppliers are subject to laws and regulations governing the use, manufacture, storage, handling, and disposal of these hazardous materials. In some cases, these hazardous materials and various wastes resulting from their use are stored at Adynxx's and its manufacturers' facilities pending their use and disposal. Adynxx cannot eliminate the risk of contamination, which could cause an interruption of its commercialization efforts, research and development efforts and business operations, environmental damage resulting in costly clean-up and liabilities under applicable laws and regulations governing the use, storage, handling, and disposal of these materials and specified waste products. Although Adynxx believes that the safety procedures utilized by it and its third-party manufacturers for handling and disposing of these materials generally comply with the standards prescribed by these laws and regulations, Adynxx cannot guarantee that this is the case or eliminate the risk of accidental contamination or injury from these materials. In such an event, Adynxx may be held liable for any resulting damages and such liability could exceed its resources and state or federal or other applicable authorities may curtail Adynxx's use of certain materials and/or interrupt its business operations. Furthermore, environmental laws and regulations are complex, change frequently, and have tended to become more stringent. Adynxx cannot predict the impact of such changes and cannot be certain of its future compliance. Adynxx does not currently carry biological or hazardous waste insurance coverage.

Adynxx or the third parties upon whom it depends may be adversely affected by earthquakes or other natural disasters and its business continuity and disaster recovery plans may not adequately protect Adynxx from a serious disaster.

Adynxx corporate headquarters is located in the San Francisco Bay Area which has in the past experienced severe earthquakes and other natural disasters. Adynxx does not carry earthquake insurance. Earthquakes or other natural disasters could severely disrupt its operations or those of its collaborators, and have a material adverse effect on its business, results of operations, financial condition, and prospects. If a natural disaster, terrorist attack, power outage, or other event occurred that prevented Adynxx from using or damaged critical elements of its business and operations (such as the manufacturing facilities of its third-party contract manufacturers) its business may be disrupted for a substantial period of time. Adynxx has limited or no disaster recovery and business continuity plans in place currently and its business would be impaired in the event of a serious disaster or similar event. Adynxx may incur substantial expenses to develop and implement any disaster recovery and business continuity plans, which could have a material adverse effect on its business.

Adynxx's principal stockholders own a significant percentage of its stock and will be able to exert significant control over matters subject to stockholder approval.

Adynxx's principal stockholders and their affiliates currently beneficially own approximately 90% of Adynxx's outstanding voting stock. Therefore, these stockholders have the ability and may continue to have the ability to influence Adynxx through this ownership position. These stockholders may be able to determine some or all matters requiring stockholder approval. For example, these stockholders, acting together, may be able to control elections of directors, amendments of organizational documents, or approval of any merger, sale of assets, or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for Adynxx's common stock that you may believe are in your best interest as one of Adynxx's stockholders.

Risks Related to Adynxx's Intellectual Property

Adynxx intends to rely on exclusivity from patent rights for its product candidates and any future product candidates. If Adynxx is unable to obtain or maintain exclusivity, Adynxx may not be able to compete effectively in its markets.

Adynxx has sought to protect its proprietary position by filing patent applications in the United States and abroad related to its product candidates that are important to its business. This process can be expensive and time consuming, and Adynxx may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that Adynxx will fail to identify patentable aspects of its research and development output before it is too late to obtain patent protection.

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The patent position of biotechnology and pharmaceutical companies generally is highly uncertain and involves complex legal and factual questions for which legal principles remain unsolved. Adynxx owns the rights to issued patents and to patent applications that cover Adynxx's product candidates and their application. The patent applications that Adynxx owns may fail to result in issued patents with claims that cover its product candidates in the United States or in other foreign countries. Further, third parties may challenge the validity of Adynxx issued patents, their enforceability, or scope, which may result in such patents being narrowed, found unenforceable or invalidated. There is no assurance that all potentially relevant prior art relating to Adynxx patents and patent applications has been found, which can invalidate a patent or prevent a patent from issuing from a pending patent application. Furthermore, even if they are unchallenged, Adynxx's patents and patent applications may not adequately protect its intellectual property, provide exclusivity for its product candidates, or prevent others from designing intellectual property around the Adynxx claims. Any of these outcomes could impair Adynxx's ability to prevent competition from third parties, which may have an adverse impact on its business.

Adynxx has filed several patent applications covering various aspects of its product candidates. Adynxx cannot offer any assurances about which, if any, patents will issue, the breadth of any such patent or whether any issued patents will be found invalid and unenforceable or will be threatened by third parties. Any successful opposition to these patents or any other patents owned by or licensed to Adynxx after patent issuance could deprive Adynxx of rights necessary for the successful commercialization of any product candidates that Adynxx may develop. Further, if Adynxx encounters delays in regulatory approvals, the period of time during which Adynxx could market a product candidate under patent protection could be reduced.

Adynxx may not have sufficient patent term protections for its products to effectively protect its business.

Patents have a limited term. In the United States, the statutory expiration of a patent is generally 20 years after it is filed. Although various extensions may be available, the life of a patent, and the protection it affords, is limited. Even if patents covering its product candidates are obtained, once the patent life has expired for a product, Adynxx's products may be open to competition from generic medications. In addition, upon issuance in the United States any patent term can be adjusted based on certain delays caused by the applicant(s) or the United States Patent and Trademark Office ("USPTO"). For example, a patent term can be reduced based on certain delays caused by the patent applicant during patent prosecution.

Patent term extensions under the Hatch-Waxman Act in the United States and under supplementary protection certificates in Europe may be available to extend the patent or data, regulatory exclusivity terms associated with the products. With respect to Adynxx's product candidates brivoligide and AYX2, a portion of the potential commercial opportunity will likely rely on patent term extensions, and Adynxx cannot provide any assurances that any such patent term extensions will be obtained and, if so, for how long. As a result, Adynxx may not be able to maintain exclusivity for its products for an extended period, which would negatively impact its business and results of operations. If Adynxx does not have sufficient patent terms or regulatory exclusivity to protect its products, its business and results of operations will be adversely affected.

Patent laws and rule changes could increase the uncertainties and costs surrounding the prosecution of Adynxx's patent applications and the enforcement or defense of its issued patents.

Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of Adynxx's patents or narrow the scope of their protection. The laws of foreign countries may not protect Adynxx's patent rights to the same extent as the laws of the United States. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Adynxx therefore cannot be certain that it was the first to make the invention claimed in its owned and licensed patents or pending applications, or that Adynxx was the first to file for patent protection of such inventions. Assuming the other requirements for patentability are met, in the United States prior to March 15, 2013, the first to make the claimed invention is entitled to the patent, while outside the United States, the first to file a patent application is entitled to the patent. After

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March 15, 2013, under the Leahy-Smith America Invents Act, or the Leahy-Smith Act, enacted on September 16, 2011, the United States has moved to a first to file system. The Leahy-Smith Act also includes a number of significant changes that affect the way patent applications will be prosecuted and may also affect patent litigation. The effects of these changes are currently unclear as the USPTO must still implement various regulations, the courts have yet to address any of these provisions and the applicability of the act and new regulations on specific patents discussed herein have not been determined and would need to be reviewed. In general, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of Adynxx's patent applications and the enforcement or defense of Adynxx's issued patents, all of which could have a material adverse effect on Adynxx's business and financial condition.

If Adynxx is unable to maintain effective proprietary rights for its product candidates or any future product candidates, Adynxx may not be able to compete effectively in its markets.

In addition to the protection afforded by patents, Adynxx relies on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable or that Adynxx elects not to patent, processes for which patents are difficult to enforce and any other elements of its product candidate discovery and development processes that involve proprietary know-how, information or technology that is not covered by patents. However, trade secrets can be difficult to protect. Adynxx seeks to protect its proprietary technology and processes, in part, by entering into confidentiality agreements with its employees, consultants, scientific advisors, and contractors. Adynxx also seeks to preserve the integrity and confidentiality of its data and trade secrets by maintaining physical security of its premises and physical and electronic security of its information technology systems. While Adynxx has confidence in these individuals, organizations and systems, agreements or security measures may be breached, and Adynxx may not have adequate remedies for any breach. In addition, its trade secrets may otherwise become known or be independently discovered by competitors.

Although Adynxx requires all of its employees and consultants to assign their inventions to Adynxx, and all of its employees, consultants, advisors, and any third parties who have access to its proprietary know-how, information, or technology to enter into confidentiality agreements, Adynxx cannot provide any assurances that all such agreements can be duly enforced or that its trade secrets and other confidential proprietary information will not be disclosed or that competitors will not otherwise gain access to its trade secrets or independently develop substantially equivalent information and techniques. Misappropriation or unauthorized disclosure of Adynxx's trade secrets could impair its competitive position and may have a material adverse effect on its business. Additionally, if the steps taken to maintain its trade secrets are deemed inadequate, Adynxx may have insufficient recourse against third parties for misappropriating the trade secret.

Third-party claims of intellectual property infringement may prevent or delay Adynxx's development and commercialization efforts.

Adynxx's commercial success depends in part on avoiding infringement of the patents and proprietary rights of third parties. There have been many lawsuits and other proceedings involving patent and other intellectual property rights in the biotechnology and pharmaceutical industries, including patent infringement lawsuits, interferences, oppositions, and reexamination proceedings before the USPTO and corresponding foreign patent offices. Numerous U.S. and foreign issued patents and pending patent applications, which are owned by third parties, exist in the fields in which Adynxx is developing product candidates. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that its product candidates may be subject to claims of infringement of the patent rights of third parties.

Third parties may assert that Adynxx is employing their proprietary technology without authorization. There may be third-party patents or patent applications with claims to materials, formulations, methods of manufacture, or methods for treatment related to the use or manufacture of its product candidates. Adynxx has conducted freedom to operate analyses with respect to only certain of its product candidates, and has not requested independent formal written opinions, and therefore Adynxx does not know whether there are any third-party patents that would impair its ability to commercialize these product candidates. Adynxx

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also cannot guarantee that any of its analyses are exhaustive, nor can Adynxx be sure that Adynxx has identified each and every patent and pending application in the United States and abroad that is relevant or necessary to the commercialization of its product candidates. Because patent applications can take many years to issue, there may be currently pending patent applications that may later result in issued patents that its product candidates may infringe. In addition, third parties may obtain patents in the future and claim that the use of Adynxx technologies infringes upon their patents. If any third-party patents were held by a court of competent jurisdiction to cover aspects of Adynxx product candidate's formulations, manufacturing process, methods of use, or of any molecules formed during their manufacturing process or any final product itself, the holders of any such patents may be able to block its ability to commercialize such product candidate unless Adynxx obtained a license under the applicable patents, or until such patents expire or are finally determined to be invalid or unenforceable. Such a license may not be available on commercially reasonable terms, or at all.

Parties making claims against Adynxx may obtain injunctive or other equitable relief, which could effectively block its ability to further develop and commercialize one or more of its product candidates. Defense of these claims, regardless of their merit, would involve substantial litigation expense and would be a substantial diversion of employee resources from its business. In the event of a successful claim of infringement against Adynxx, Adynxx may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, pay royalties, redesign its infringing products or obtain one or more licenses from third parties, which may be impossible or require substantial time and monetary expenditure.

Intellectual property may be discovered in the future through government funded programs and thus may be subject to federal regulations such as "march-in" rights, certain reporting requirements and a preference for U.S.-based companies. Compliance with such regulations may limit Adynxx's exclusive rights, and limit Adynxx's ability to contract with non-U.S. manufacturers.

Adynxx has received a grant award from NIDA/NIH for the development of brivoligide in the mastectomy model of postoperative pain. Intellectual property may be generated through the use of this U.S. government funding and would therefore be subject to certain federal regulations. As a result, the U.S. government may in the future have certain rights to intellectual property embodied in Adynxx's current or future product candidates pursuant to the Bayh-Dole Act of 1980 (the "Bayh-Dole Act"). These U.S. government rights in certain inventions developed under a government-funded program include a non-exclusive, non-transferable, irrevocable worldwide license to use inventions for any governmental purpose. In addition, the U.S. government has the right, under certain limited circumstances, to require Adynxx to grant exclusive, partially exclusive, or non-exclusive licenses to any of these inventions to a third party if it determines that: (i) adequate steps have not been taken to commercialize the invention; (ii) government action is necessary to meet public health or safety needs; or (iii) government action is necessary to meet requirements for public use under federal regulations (also referred to as "march-in rights"). The U.S. government also has the right to take title to these inventions if Adynxx fails to disclose the invention to the government or fails to file an application to register the intellectual property within specified time limits. Intellectual property generated under a government funded program is also subject to certain reporting requirements, compliance with which may require Adynxx to expend substantial resources. In addition, the U.S. government requires that any products embodying the subject invention or produced through the use of the subject invention be manufactured substantially in the United States. The manufacturing preference requirement can be waived if the owner of the intellectual property can show that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible. This preference for U.S. manufacturers may limit Adynxx's ability to contract with non-U.S. product manufacturers for products covered by such intellectual property.

Adynxx's product candidates may be subject to generic competition.

Under the Hatch-Waxman Act, a pharmaceutical manufacturer may file an abbreviated new drug application ("ANDA"), seeking approval of a generic copy of an approved innovator product. Under the Hatch-Waxman Act, a manufacturer may also submit an NDA under section 505(b)(2) that references the

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FDA's finding of safety and effectiveness of a previously approved drug. A 505(b)(2) NDA product may be for a new or improved version of the original innovator product. Innovative small molecule drugs may be eligible for certain periods of regulatory exclusivity (e.g., five years for new chemical entities, three years for changes to an approved drug requiring a new clinical study, seven years for orphan drugs), which preclude FDA approval (or in some circumstances, FDA filing and review of) an ANDA or 505(b)(2) NDA relying on the FDA's finding of safety and effectiveness for the innovative drug. In addition to the benefits of regulatory exclusivity, an innovator NDA holder may have patents claiming the active ingredient, product formulation or an approved use of the final drug product, which would be listed with the product in the FDA publication, "Approved Drug Products with Therapeutic Equivalence Evaluations," known as the "Orange Book." If there are patents listed in the Orange Book, a generic applicant that seeks to market its product before expiration of the patents must include in the ANDA or 505(b)(2) what is known as a "Paragraph IV certification," challenging the validity or enforceability of, or claiming non-infringement of, the listed patent or patents. Notice of the certification must be given to the innovator, too, and if within 45 days of receiving notice the innovator sues to protect its patents, approval of the ANDA is stayed for 30 months, or as lengthened or shortened by the court.

If there are patents listed for its product candidates in the Orange Book, ANDAs and 505(b)(2) NDAs with respect to those product candidates would be required to include a certification as to each listed patent indicating whether the ANDA applicant does or does not intend to challenge the patent. Adynxx cannot predict whether any patents issuing from its pending patent applications will be eligible for listing in the Orange Book, how any generic competitor would address such patents, whether Adynxx would sue on any such patents, or the outcome of any such suit.

Adynxx may not be successful in securing or maintaining proprietary patent protection for products and technologies Adynxx develops or licenses. Moreover, if any patents that are granted and listed in the Orange Book are successfully challenged by way of a Paragraph IV certification and subsequent litigation, the affected product could more immediately face generic competition and its sales would likely decline materially. Should sales decline, Adynxx may have to write off a portion or all of the intangible assets associated with the affected product and its results of operations and cash flows could be materially and adversely affected.

All of Adynxx assets are subject to a first-priority lien in favor of Oxford under a security agreement entered into in connection with the Loan Agreement with Oxford, and the Loan Agreement contains a negative pledge on all of Adynxx's intellectual property. The foreclosure on such assets, including intellectual property related to Adynxx's product candidates, or exercise of other remedies available to Oxford under the Loan Agreement could materially adversely affect Adynxx's business operations and future prospects.

All of the assets (including intellectual property rights) owned by Adynxx are subject to a first-priority lien in favor of Oxford under a security agreement entered into in connection with the Loan Agreement with Oxford. There can be no assurance that Adynxx will remain in compliance with its obligations under the Loan Agreement. In the event of foreclosure or exercise of other remedies by Oxford under such agreement on the assets (including such intellectual property) pledged to Oxford, Adynxx's ability to use and develop its product candidates as well as Adynxx's business operations and future prospects will be materially adversely affected. In addition, the Loan Agreement contains a negative pledge on all of Adynxx's intellectual property rights.

Although Adynxx is not currently involved in any litigation, Adynxx may be involved in lawsuits to protect or enforce its patents, which could be expensive, time consuming, and unsuccessful.

Competitors may infringe Adynxx's patents or the patents of its potential licensors. Although Adynxx is not currently involved in any litigation, if Adynxx was to initiate legal proceedings against a third party to enforce a patent covering one of its product candidates, the defendant could counterclaim that the patent covering

Adynxx product candidate is invalid and/or unenforceable. In patent litigation in the United States, defendant counterclaims alleging invalidity and/or unenforceability are a commonplace. Grounds for a validity challenge of a patent could be an alleged failure to meet any of several statutory requirements for patentability, including lack of novelty, obviousness, or non-enablement. Grounds for an unenforceability

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assertion could be an allegation that someone connected with prosecution of the patent withheld relevant information from the USPTO, or made a misleading statement, during prosecution. The outcome following legal assertions of invalidity and unenforceability is unpredictable.

Interference proceedings provoked by third parties or brought by Adynxx or declared by the USPTO may be necessary to determine the priority of inventions with respect to Adynxx's patents or patent applications or those of its licensors. An unfavorable outcome of such interference proceeding could require Adynxx to cease using the related technology or to attempt to license rights to it from the prevailing party. Adynxx's business could be harmed if the prevailing party does not offer Adynxx a license on commercially reasonable terms. Its defense of litigation or interference proceedings may fail and, even if successful, may result in substantial costs and distract its management and other employees. In addition, the uncertainties associated with litigation could have a material adverse effect on its ability to raise the funds necessary to continue its clinical trials, continue its research programs, license necessary technology from third parties, or enter into development partnerships that would help Adynxx bring its product candidates to market.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of Adynxx confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions, or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a material adverse effect on the price of its common stock.

Adynxx may be subject to claims that its employees, consultants, or independent contractors have wrongfully used or disclosed confidential information of third parties or that its employees have wrongfully used or disclosed alleged trade secrets of their former employers.

Adynxx employs individuals who were previously employed at universities or other biotechnology or pharmaceutical companies, including its competitors or potential competitors. Although Adynxx has written agreements and make every effort to ensure that its employees, consultants, and independent contractors do not use the proprietary information or intellectual property rights of others in their work for Adynxx, and Adynxx is not currently subject to any claims that its employees, consultants, or independent contractors have wrongfully used or disclosed confidential information of third parties, Adynxx may in the future be subject to such claims. Litigation may be necessary to defend against these claims. If Adynxx fails in defending any such claims, in addition to paying monetary damages, Adynxx may lose valuable intellectual property rights or personnel, which could adversely impact its business. Even if Adynxx is successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

Adynxx may not be able to protect its intellectual property rights throughout the world.

Filing, prosecuting, and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and Adynxx's intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Competitors may use Adynxx's technologies in jurisdictions where Adynxx has not obtained patent protection to develop its own products and may also export infringing products to territories where Adynxx has patent protection, but enforcement is not as strong as that in the United States. These products may compete with its products and its patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents, trade secrets, and other intellectual property protection, particularly those relating to biotechnology products, which could make it difficult for Adynxx to stop the infringement of its patents or marketing of competing products in violation of its proprietary rights generally. Proceedings to enforce Adynxx's patent rights in foreign jurisdictions, whether or not successful, could result in substantial costs and divert Adynxx's efforts and attention from other aspects of its business, could put Adynxx's patents at risk of being invalidated or interpreted narrowly and its patent applications at risk of not issuing and could provoke third parties to assert claims against Adynxx. Adynxx

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may not prevail in any lawsuits that Adynxx initiates and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, its efforts to enforce its intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that Adynxx develops or licenses.

Risks Related to the Combined Company

If any of the events described in "Risks Related to Alliqua" or "Risks Related to Adynxx" occur, those events could cause potential benefits of the Merger not to be realized.

Following completion of the Merger, the combined company will be susceptible to many of the risks described in the sections herein entitled "Risks Related to Alliqua" and "Risks Related to Adynxx." To the extent any of the events in the risks described in those sections occur, those events could cause the potential benefits of the Merger not to be realized and the market price of the combined company's common stock to decline.

The historical financial information of Alliqua and Adynxx presented herein may not be representative of their respective results or financial condition if they had been operated as a combined company, and as a result may not be representative of the combined company's results or financial condition after the Merger.

The historical financial information of Alliqua and Adynxx included elsewhere in this proxy statement reflect assumptions and allocations made by Alliqua and Adynxx, respectively. The historical results and financial condition of Alliqua and Adynxx presented herein may be different from those that would have resulted had Alliqua and Adynxx been operated together as a combined company during the applicable periods or at the applicable dates. As a result, the historical financial information of Alliqua and Adynxx is not indicative of future operating results or financial position of the combined company.

The unaudited pro forma condensed combined financial information presented herein may not be representative of the combined companies' results after the Merger.

The unaudited pro forma condensed combined financial information included elsewhere in this proxy statement has been presented for informational purposes only and is not necessarily indicative of the financial position or results of operations that actually would have occurred had the Merger been completed as of the date indicated, nor is it indicative of future operating results or financial position. The unaudited pro forma condensed combined financial information has been derived from the historical financial statements of Alliqua and Adynxx and adjustments and assumptions have been made regarding the combined company after giving effect to the Merger. The information upon which these adjustments and assumptions have been made is preliminary, and these kinds of adjustments and assumptions are difficult to make with accuracy. Moreover, the unaudited pro forma condensed combined financial information does not reflect all costs that are expected to be incurred by the combined company in connection with the Merger. The assumptions used in preparing the unaudited pro forma condensed combined financial information may not ultimately be accurate, and other factors may affect the combined company's results and financial condition following consummation of the Merger. The unaudited pro forma condensed combined financial information does not reflect the costs of integration activities or transaction-related costs or incremental expenditures associated with the transaction. Accordingly, the unaudited pro forma condensed combined financial information included elsewhere in this proxy statement does not reflect what Alliqua's or Adynxx's results or financial condition would have been had Alliqua and Adynxx been a consolidated entity during all periods presented.

Alliqua and Adynxx do not anticipate that the combined company will pay any cash dividends in the foreseeable future.

The current expectation is that the combined company will retain its future earnings, if any, to fund the development and growth of the combined company's business. As a result, capital appreciation, if any, of the common stock of the combined company will be your sole source of gain, if any, for the foreseeable future.

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Failure by the combined company upon completion of the Merger to comply with the initial listing standards of Nasdaq will prevent its stock from being listed on Nasdaq.

Upon completion of the Merger, Alliqua, under the new name "Adynxx, Inc.," will be required to meet the initial listing requirements to maintain the listing and continued trading of its shares on Nasdaq. These initial listing requirements are more difficult to achieve than the continued listing requirements. Pursuant to the Merger Agreement, Alliqua agreed to use its reasonable best efforts to cause the shares of Alliqua common stock being issued in the Merger to be approved for listing on Nasdaq at or prior to the Effective Time of the Merger. Based on information currently available to Alliqua, Alliqua anticipates that its stock will be unable to meet the $4.00 (or, to the extent applicable, $3.00) minimum bid price initial listing requirement at the closing of the Merger unless it effects a reverse stock split. The board of directors of Alliqua intends to effect a reverse stock split of the shares of Alliqua common stock at a ratio of between one-for-two to one-for-20, with such specific ratio to be mutually agreed upon by Alliqua and Adynxx. In addition, often times a reverse stock split will not result in a trading price for the affected common stock that is proportional to the ratio of the split. Following the Merger, if Alliqua is unable to satisfy Nasdaq listing requirements, Nasdaq may notify New Adynxx that its shares of common stock will not be listed on Nasdaq.

Upon a potential delisting from Nasdaq, if New Adynxx common stock is not then eligible for quotation on another market or exchange, trading of the shares could be conducted in the over-the-counter market or on an electronic bulletin board established for unlisted securities such as the Pink Sheets or the OTC Bulletin Board. In such event, it is likely that there would be significantly less liquidity in the trading of New Adynxx's common stock; decreases in institutional and other investor demand for the shares, coverage by securities analysts, market making activity and information available concerning trading prices and volume; and fewer broker dealers willing to execute trades in New Adynxx common stock. Also, it may be difficult for New Adynxx to raise additional capital if New Adynxx's common stock is not listed on a major exchange. The occurrence of any of these events could result in a further decline in the market price of New Adynxx's common stock and could have a material adverse effect on New Adynxx.

The Merger will result in changes to Alliqua's board of directors and the combined company may pursue different strategies than either Alliqua or Adynxx may have pursued independently.

If Alliqua and Adynxx complete the Merger, the composition of Alliqua's board of directors will change in accordance with the Merger Agreement. Following completion of the Merger, the combined company's board of directors will consist of eight members, one of whom shall be designed by Alliqua and the others shall be designated by Adynxx. Currently, it is anticipated that the combined company will continue to advance the product and development efforts and business strategies of Adynxx primarily. However, because the composition of the board of directors of the combined company will consist of directors from both Alliqua and Adynxx, the combined company may determine to pursue certain business strategies that neither Alliqua nor Adynxx would have pursued independently.

Future sales of shares by existing stockholders could cause the combined company's stock price to decline.

If existing stockholders of Alliqua and Adynxx sell, or indicate an intention to sell, substantial amounts of the combined company's common stock in the public market after legal restrictions on resale discussed in this proxy statement lapse, the trading price of the common stock of the combined company could decline. Based on an assumed closing date of December 31, 2018, the combined company is expected to have outstanding a total of approximately 35 million shares of common stock (prior to giving effect to the proposed reverse stock split) immediately following the closing of the Merger. All of Adynxx's executive officers and directors and principal stockholders are subject to lock-up agreements that restrict their ability to transfer shares of the combined company's capital stock during the period ending on, and including, the 180th day after the date of the closing of the Merger, subject to specified exceptions. After the lock-up agreements expire, approximately 27 million shares of common stock (prior to giving effect to the proposed reverse stock split) held by the combined company's directors, executive officers and principal stockholders will be subject to volume limitations under Rule 144 under the Securities Act and various vesting agreements.

In addition, upon the closing of the Merger Alliqua expects to assume approximately 4.2 million shares of common stock subject to outstanding Adynxx options (on an as-converted to Alliqua common

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stock basis and prior to giving effect to the proposed reverse stock split). The combined company intends to register all of the shares of common stock issuable upon exercise of outstanding Adynxx options, and upon the exercise of any options or other equity incentives the combined company may grant in the future, for public resale under the Securities Act. Accordingly, these shares will be able to be freely sold in the public market upon issuance as permitted by any applicable vesting requirements, subject to the lock-up agreements described above.

Ownership of the combined company's common stock may be highly concentrated, and it may prevent you and other stockholders from influencing significant corporate decisions.

Upon completion of the Merger, Adynxx equityholders are estimated to beneficially own or control approximately 86% of the combined company. Accordingly, Adynxx stockholders will have substantial influence over the outcome of a corporate action of the combined company requiring stockholder approval, including the election of directors, any Merger, consolidation or sale of all or substantially all of the combined company's assets or any other significant corporate transaction. These stockholders also may exert influence in delaying or preventing a change in control of the combined company, even if such change in control would benefit the other stockholders of the combined company.

The combined company's management will be required to devote a substantial time to comply with public company regulations.

As a public company, the combined company will incur significant legal, accounting and other expenses that Adynxx did not incur as a private company. The Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act as well as rules implemented by the SEC and Nasdaq, impose various requirements on public companies, including those related to corporate governance practices. The combined company's management and other personnel will need to devote a substantial amount of time to these requirements. Certain members of Adynxx's management, which will continue as the management of the combined company, do not have significant experience in addressing these requirements. Moreover, these rules and regulations will increase the combined company's legal and financial compliance costs relative to those of Adynxx and will make some activities more time consuming and costly.

The Sarbanes-Oxley Act requires, among other things, that the combined company maintain effective internal control over financial reporting and disclosure controls and procedures. In particular, the combined company must perform system and process evaluation and testing of its internal control over financial reporting to allow management and the combined company's independent registered public accounting firm to report on the effectiveness of its internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act. The combined company's compliance with these requirements will require that it incur substantial accounting and related expenses and expend significant management efforts. The combined company will need to hire additional accounting and financial staff to satisfy the ongoing requirements of Section 404 of the Sarbanes-Oxley Act. The costs of hiring such staff may be material and there can be no assurance that such staff will be immediately available to the combined company. Moreover, if the combined company is not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act, or if the combined company or its independent registered public accounting firm identifies deficiencies in its internal control over financial reporting that are deemed to be material weaknesses, investors could lose confidence in the accuracy and completeness of the combined company's financial reports, the market price of the combined company's common stock could decline and the combined company could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities.

The sale or availability for sale of a substantial number of shares of common stock of the combined company after the Merger and after expiration of the lock-up period could adversely affect the market price of such shares after the Merger.

Sales of a substantial number of shares of common stock of the combined company in the public market after the Merger or after expiration of the lock-up period and other legal restrictions on resale, or the perception that these sales could occur, could adversely affect the market price of such shares and could materially impair the combined company's ability to raise capital through equity offerings in the future.

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Alliqua and Adynxx are unable to predict what effect, if any, market sales of securities held by significant stockholders, directors or officers of the combined company or the availability of these securities for future sale will have on the market price of the combined company's common stock after the Merger.

Some provisions of the combined company's charter document and Delaware law may have antitakeover effects that could discourage an acquisition of the combined company by others, even if an acquisition would be beneficial to the combined company's stockholders, and may prevent attempts by the combined company's stockholders to replace or remove the combined company's management.

Provisions in New Adynxx's amended and restated certificate of incorporation and bylaws as well as provisions of the DGCL, could make it more difficult for a third party to acquire New Adynxx or increase the cost of acquiring New Adynxx, even if doing so would benefit stockholders, including transactions in which stockholders might otherwise receive a premium for their shares. These provisions include:

- establishing a classified board of directors such that not all members of the board are elected at one time;
- allowing the authorized number of New Adynxx's directors to be changed only by resolution of the board of directors;
- authorizing the issuance of "blank check" preferred stock, the terms of which may be established and shares of which may be issued without stockholder approval;
- eliminating the ability of stockholders to call a Special Meeting of stockholders; and
- establishing advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted upon at stockholder meetings.

These provisions may frustrate or prevent any attempts by New Adynxx stockholders to replace or remove management by making it more difficult for stockholders to replace members of New Adynxx's board of directors, which will be responsible for appointing the members of New Adynxx management. In addition, New Adynxx will be subject to Section 203 of the DGCL, which generally prohibits a Delaware corporation from engaging in any of a broad range of business combinations with an interested stockholder for a period of three years following the date on which the stockholder became an interested stockholder, unless such transactions are approved by the board of directors. This provision could have the effect of delaying or preventing a change of control, whether or not it is desired by or beneficial to New Adynxx stockholders.

New Adynxx's business and operations would suffer in the event of system failures, security breaches or cyber-attacks. New Adynxx's computer systems, as well as those of various third parties on which New Adynxx relies, including those of New Adynxx's CROs and other contractors, consultants, and law and accounting firms, may sustain damage from computer viruses, unauthorized access, data breaches, phishing attacks, cybercriminals, natural disasters, terrorism, war and telecommunication and electrical failures. New Adynxx relies on third-party providers to implement effective security measures and identify and correct for any such failures, deficiencies or breaches. The risk of a security breach or disruption, particularly through cyber-attacks or cyber intrusion, including by computer hackers, foreign governments, and cyber terrorists, has generally increased as the number, intensity and sophistication of attempted attacks and intrusions from around the world have increased. Adynxx has experienced phishing attacks in the past, which have not had a material impact on Adynxx's operations; however, New Adynxx may in the future experience material system failures or security breaches that could cause interruptions in New Adynxx's operations or result in a material disruption of New Adynxx's drug development programs. For example, the loss of nonclinical or clinical trial data from completed, ongoing or planned trials could result in delays in New Adynxx's regulatory approval efforts and significantly increase New Adynxx's costs to recover or reproduce the data. To the extent that any

disruption or security breach were to result in a loss of or damage to New Adynxx's data or applications, or inappropriate disclosure of personal, confidential or proprietary information, New Adynxx could incur liability and the further development of New Adynxx's product candidates could be delayed.

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

Certain statements contained or incorporated by reference into this proxy statement and the attached annexes may constitute “forward-looking statements” within the meaning of the federal securities laws. These forward-looking statements include statements concerning our outlook for the future, as well as other statements of beliefs, future plans and strategies or anticipated events, and similar expressions concerning matters that are not historical facts. These statements can be identified by the use of forward-looking terminology such as “believes,” “estimates,” “expects,” “may,” “wil “should,” “could,” or “anticipates,” or the negative thereof or other variations thereon or other comparable terminology. The forward-looking statements included in this proxy statement, the documents incorporated by reference into this proxy statement or the attached annexes are based on management’s current expectations and assumptions about future events, which are inherently subject to uncertainties, risks and changes in circumstances that are difficult to predict and could cause actual results to differ materially from those expressed in, or implied by, the forward-looking statement. These risks and uncertainties include, but are not limited to:

- the occurrence of any event, change or other circumstances that could give rise to the termination of the Merger Agreement;
- our stockholders failing to approve the Merger Proposal;
- the failure of one or more conditions to the closing of the Merger to be satisfied or waived by the applicable party;
- an increase in the amount of costs, fees, expenses and other charges related to the Merger Agreement or related transactions;
- risks arising from the diversion of management’s attention from our ongoing business operations;
- risks associated with our ability to identify and realize business opportunities following the Merger;
- the progress, timing, costs and results of Adynxx’s clinical trials;
- the potential advantages and differentiated profile of Adynxx’s product candidates compared to existing therapies;
- our ability to continue as a going concern;
- inadequate capital;
- the uncertainty regarding the adequacy of our liquidity to pursue or complete business objectives, including a return of capital to shareholders and execution of a definitive business restructure;
- our ability to comply with cGMPs;

- loss or retirement of key executives;

- our plans to make significant additional outlays of working capital before we expect to generate significant revenues and the uncertainty regarding when we will begin to generate significant revenues, if we are able to do so;

- adverse economic conditions and/or intense competition;

- loss of a key customer or supplier;

- entry of new competitors;

- adverse federal, state and local government regulation;

- technological obsolescence of our manufacturing process and equipment;

- technical problems with our research and products;

- risks of mergers and acquisitions including the time and cost of implementing transactions and the potential failure to achieve expected gains, revenue growth or expense savings;

- price increases for supplies and components;

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- the inability to carry out our business plans; and

- the other factors discussed under the heading “Risk Factors” in this proxy statement.

Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make.

Readers are cautioned not to place undue reliance on forward-looking statements. Any forward-looking statement speaks only as of the date that it was made and we undertake no obligation to update any forward-looking statement, whether as a result of new information or otherwise, except as required under applicable law.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this proxy statement, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements as predictions of future events.

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## THE SPECIAL MEETING

### Time, Date and Place

The Special Meeting is scheduled to be held on March 8, 2019 at 9:00 A.M. Eastern Time, at 2150 Cabot Blvd., West, Suite B, Langhorne, PA 19047.

### Purpose of the Special Meeting

At our Special Meeting, stockholders will act upon the matters outlined in the notice, including the following:

- the Merger Proposal;
- the Reverse Stock Split Proposal; and
- the Adjournment Proposal.

Other than the proposals noted above, we do not expect a vote to be taken on any other matters at the Special Meeting or any adjournment or postponement thereof. However, if any other matters are properly presented at the Special Meeting or any adjournment or postponement thereof for consideration, the holders of the proxies solicited by this proxy statement will have discretion to vote on such matters in accordance with applicable law and their judgment.

### Recommendation of Our Board

Our Board unanimously recommends that stockholders vote “FOR” the Merger Proposal, “FOR” the Reverse Stock Split Proposal and “FOR” the Adjournment Proposal. In reaching its decision to approve the Merger, the Merger Agreement, the issuance of Alliqua’s common stock pursuant to the Merger Agreement and the transactions contemplated by the Merger and to recommend that you vote in the manner noted above, our Board considered a wide range of material factors relating to the Merger and consulted with management and outside financial and legal advisors. For more information on these factors see “The Merger — Alliqua’s Reasons for the Merger; Recommendations of the Alliqua Board of Directors” beginning on page 67.

### Record Date and Voting Power

Holders of our common stock as of the close of business on the record date, January 22, 2019, (the “Record Date”) are entitled to notice of, and to vote at, the Special Meeting and any postponements or adjournments of the Special Meeting. At the close of business on the Record Date, we expect there will be 5,005,210 shares of our common stock outstanding and entitled to vote at the Special Meeting. No other shares of capital stock were outstanding on the Record Date.

Each share of our common stock issued and outstanding as of the close of business on the Record Date is entitled to one vote.

### Quorum

The presence, in person or by proxy, of the holders of a majority of the shares of the stock entitled to vote at the Special Meeting is necessary to constitute a quorum to transact business. There must be a quorum for business to be conducted at the Special Meeting. However, even if a quorum does not exist, the chair of the Special Meeting may adjourn the Special Meeting to another place, date and time.

Once a share is represented in person or by proxy at the Special Meeting, it will be counted for purposes of determining whether a quorum exists at the Special Meeting and any adjournment or postponement of the Special Meeting. However, if a new record date is set for the adjourned or postponed Special Meeting, a new quorum will have to be established. For purposes of determining the presence of a quorum, abstentions will be counted as present at the Special Meeting.

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Required Vote

Proposal 1: Merger Proposal

The approval of the Merger Proposal requires the affirmative vote of the majority of the votes cast affirmatively or negatively on the Merger Proposal.

Holders of our common stock may vote “FOR,” “AGAINST” or “ABSTAIN” with respect to the Merger Proposal.

Proposal 2: Reverse Stock Split Proposal

The approval of the Reverse Stock Split Proposal requires the affirmative vote of the outstanding shares of Alliqua’s common stock entitled to vote at the Special Meeting.

Holders of our common stock may vote “FOR,” “AGAINST” or “ABSTAIN” with respect to the Reverse Stock Split Proposal.

Proposal 3: Adjournment Proposal

The approval of the Adjournment Proposal requires the affirmative vote of a majority of the votes cast affirmatively or negatively on the Adjournment Proposal.

Holders of our common stock may vote “FOR,” “AGAINST” or “ABSTAIN” with respect to the Adjournment Proposal.

Voting by Stockholders

Your vote is very important to us and we hope that you will attend the Special Meeting. However, whether or not you plan to attend the Special Meeting, please vote by proxy in accordance with the instructions on your proxy card or voting instruction card (from your broker, bank or other nominee). There are three convenient ways of submitting your vote:

- By Telephone or Internet — All record holders can vote by touchtone telephone from the United States using the toll free telephone number on the proxy card, or over the Internet, using the procedures and instructions described on the proxy card. “Street name” holders may vote by telephone or Internet if their bank, broker or other nominee makes those methods available, in which case the bank, broker or other nominee will enclose the instructions with the proxy materials. The telephone and Internet voting procedures are designed to authenticate stockholders’ identities, to allow stockholders to vote their shares, and to confirm that their instructions have been recorded properly.

- In Person — All record holders may vote in person at the Special Meeting. “Street name” holders may vote in person at the Special Meeting if their bank, broker or other nominee has furnished a legal proxy. If you are a “street name” holder and would like to vote your shares by proxy, you will need to ask your bank, broker or other nominee to furnish you with a nominee issued proxy. You will need to bring the nominee issued proxy with you to the Special Meeting and hand it in with a signed ballot that will be provided to you at the Special Meeting. You will not be able to vote your shares without a nominee issued proxy. Note that a broker letter that identifies you as a stockholder is not the same as a nominee issued proxy.

- By Written Proxy — All record holders can vote by written proxy card, if they have requested to receive printed proxy materials. If you are a “street name” holder and you request to receive printed proxy materials, you will receive a written proxy card and a voting instruction card from your bank, broker or other nominee.

The Board has appointed David Johnson, President and Chief Executive Officer to serve as the proxy for the Special Meeting.

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Even if you currently plan to attend the Special Meeting, we recommend that you vote by telephone or Internet or return your proxy card or voting instructions as described above so that your votes will be counted if you later decide not to attend the Special Meeting or are unable to attend.

Voting by Stockholders Holding Shares in "Street Name"

If you hold your shares in "street name," you will need to return the provided form instructing your broker, bank or other nominee as to how to vote your shares. If you hold your shares in "street name" and would like to vote in person at the Special Meeting, you must bring to the Special Meeting a proxy from the broker, bank or other nominee that holds your shares authorizing you to vote those shares at the Special Meeting.

Abstentions

Assuming a quorum is present, abstentions will have no effect on the outcome of the Merger Proposal.

Abstentions will have the same effect as a vote "AGAINST" the Reverse Stock Split Proposal.

Assuming a quorum is present, abstentions will have no effect on the outcome of the Adjournment Proposal.

For purposes of determining the presence of a quorum, abstentions will be counted as present at the Special Meeting.

Broker Non-Votes

Brokers, banks or other nominees who hold shares in "street name" for their customers have authority to vote those shares on "routine" proposals when they have not received instructions from the beneficial owners of such shares. However, brokers, banks or other nominees do not have the authority to vote shares they hold for their customers on "non-routine" proposals when they have not received instructions from the beneficial owners of such shares.

Broker non-votes occur when shares are held in "street name" through a broker, bank or other intermediary on behalf of a beneficial owner, and the broker submits a proxy but does not vote for a matter because the broker has not received voting instructions from the beneficial owner and the broker does not have discretionary voting authority on the matter. Under applicable stock exchange rules, brokers are permitted to exercise discretionary voting authority only on "routine" matters when voting instructions have not been timely received from a beneficial owner. The Adjournment Proposal is considered a "routine" matter. Therefore, if you do not provide voting instructions to your broker regarding the Adjournment Proposal, your broker will be permitted to exercise discretionary voting authority to vote your shares on such proposal. The Merger Proposal and Reverse Stock Split Proposal are considered "non-routine" matters. Therefore, if you do not provide voting instructions to your broker regarding the Merger Proposal and/or Reverse Stock Split Proposal, your broker will not be permitted to exercise voting authority to vote your shares on such proposals and will result in a broker non-vote. Broker non-votes will have no effect on the outcome of the Merger Proposal and Reverse Stock Split proposal.

Failure to Vote

If you are a stockholder of record and you do not vote at the Special Meeting in person or properly return your proxy card or vote over the Internet or by phone, your shares will not be voted at the Special Meeting, will not be counted as present in person or by proxy at the Special Meeting and will not be counted for purposes of determining whether a quorum exists.

As discussed above, brokers, banks and other nominees do not have discretionary voting authority with respect the Merger Proposal or the Reverse Stock Split Proposal. Accordingly, if you are the beneficial owner of shares held in "street name" and you do not issue voting instructions to your broker, bank or other nominee with respect to the Merger Proposal or the Reverse Stock Split Proposal, your shares will not be voted with respect to the Merger Proposal or the Reverse Stock Split Proposal. If you are the beneficial owner of shares held in "street name" and you do not issue voting instructions to your broker, bank or other nominee with respect to the Adjournment Proposal, your broker will have discretionary authority to vote your shares with respect to such proposal.

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A failure to vote will have the same effect as a vote "AGAINST" the approval of the Reverse Stock Split Proposal but, assuming a quorum is present, will have no effect on the outcome of the Merger Proposal or the Adjournment Proposal.

Proxies; Revocation of Proxies

Proxies that are signed and returned by a stockholder of record without voting instructions will be voted "FOR" the Merger Proposal, the Reverse Stock Split Proposal and the Adjournment Proposal in accordance with the recommendation of our Board.

If you are a record holder, you may revoke your proxy at any time by any of the following means:

- Attending the Special Meeting and voting in person. Your attendance at the Special Meeting will not by itself revoke a proxy. You must vote your shares by ballot at the Special Meeting to revoke your proxy.

- Voting again by telephone or over the Internet (only your latest telephone or Internet vote submitted prior to the Special Meeting will be counted).

- If you requested and received written proxy materials, completing and submitting a new valid proxy bearing a later date.

- Giving written notice of revocation to Alliqua addressed to our Chief Financial Officer, Treasurer and Secretary, Joe Warusz, at Alliqua's address above, which notice must be received before noon, Eastern Time, on March 7, 2019.

If you are a street name holder, your bank, broker or other nominee should provide instructions explaining how you may change or revoke your voting instructions.

Adjournments

The Special Meeting may be adjourned for any purpose, including for the purpose of obtaining a quorum or soliciting additional votes if there are insufficient votes to authorize the Merger Proposal or the Reverse Stock Split Proposal. Any adjournment may be made without notice (if the adjournment is not for more than 30 days and a new record date is not fixed for the adjourned meeting), by an announcement made at the Special Meeting of the time, date and place of the adjourned meeting. Any adjournment will allow stockholders of record who have already sent in proxies to revoke them at any time prior to their use at the Special Meeting, as adjourned. See "Proposal 3: Approval of Possible Adjournment of the Special Meeting" on page 100 for more information concerning the adjournment of the Special Meeting.

Solicitation of Proxies

This proxy solicitation is being made by us on behalf of our Board. We will bear the costs of soliciting proxies. We have engaged D.F. King to assist with the solicitation of proxies and will pay D.F. King approximately $10,000 and reimburse it for reasonable out-of-pocket expenses for these and other advisory services to be provided in connection with the Special Meeting. In addition, we have agreed to indemnify D.F. King against any losses arising out of that firm's solicitation of proxies on our behalf.

The solicitation of proxies will initially be made by mail. Forms of proxies and proxy materials may also be distributed through brokers, banks and other nominees to the beneficial owners of our common stock, in which case such parties will be reimbursed for their reasonable out-of-pocket expenses. Proxies may also be solicited in person or by telephone, facsimile, electronic mail or other electronic medium by D.F. King or by certain of our directors, officers or employees. Any of our directors, officers or employees participating in the solicitation will not receive additional compensation for their efforts but will be reimbursed for out-of-pocket expenses.

Questions and Additional Information

If you have any questions, need additional material, or require assistance in voting your shares, please feel free to contact D.F. King, the firm assisting us in the solicitation of proxies. Banks and brokers may call D.F. King at (212)

269-5550. Stockholders may call D.F. King toll-free at (800) 884-5101.

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THE MERGER

This section and the section entitled "The Merger Agreement" beginning on page 79 of this proxy statement describe the material aspects of the Merger, including the Merger Agreement. While Alliqua believes that this description covers the material terms of the Merger and the Merger Agreement, it may not contain all of the information that is important to you. You should read carefully this entire proxy statement, including the Merger Agreement, which is attached as Annex A and Annex B to this proxy statement, and the other documents to which Alliqua has referred to or incorporated by reference herein. For a more detailed description of where you can find those other documents, please see the section entitled "Where You Can Find More Information" beginning on page 176 of this proxy statement.

Background of the Merger

Prior to the Asset Sale Transaction with Celularity, which was consummated on May 7, 2018, Alliqua was a regenerative technologies company that commercialized differentiated regenerative medical products which assist the body in the repair or replacement of soft tissue. Following the Asset Sale Transaction, Alliqua's sole remaining line of business is its hydrogel contract manufacturing business.

As a consequence of this curtailment in Alliqua's business activities, Alliqua's board of directors began evaluating its strategic opportunities to maximize stockholder value. Alliqua's Chief Executive Officer, Mr. David I. Johnson, provided Alliqua's board of directors a preliminary assessment of a variety of strategic alternatives that Alliqua could pursue to maximize stockholder value, including engaging in a reverse merger process, a sale of some or all of Alliqua's assets, or a liquidation of Alliqua.

On April 14, 2018, Alliqua's board of directors, acting by unanimous written consent, approved the engagement of Wainwright to act as Alliqua's financial advisor to assist Alliqua in identifying and evaluating potential targets for a reverse merger transaction. Alliqua executed an engagement letter with Wainwright promptly following such approval.

Following Wainwright's engagement, and during the month of April 2018, bid request letters were sent to 20 reverse merger candidates. In identifying the reverse merger candidates that received bid request letters, Alliqua focused primarily on biotechnology companies possessing (i) product development candidates with the potential for significant value appreciation, (ii) resources sufficient to achieve potentially meaningful development milestones, including resources that might be obtained through financing activities consummated prior to the effectiveness of a combination with Alliqua, (iii) an ability to enter into an agreement in the near-term for a combination with a public company and thereafter proceed in an orderly manner toward implementing the combination, and (iv) a management team with the breadth and skills to accomplish the foregoing.

Alliqua received 11 indications of interests in response. Alliqua, together with Wainwright, conducted additional due diligence on each of the 11 candidates that submitted an indication of interest. Ten of the 11 candidates made a presentation to certain members of Alliqua's board of directors and management. Another three candidates identified subsequent to the initial distribution of bid request letters also submitted indications of interest and made presentations to Alliqua. These activities resulted in Alliqua selecting three finalists (Party A, Party B and Party C), which appeared to possess each of the criteria described in the preceding paragraph, for further due diligence and further discussions.

On June 29, 2018, Mr. Johnson met with representatives of Party A. Following such discussion, the representative of Party A and Alliqua determined that pursuing a combination was not in the best interest of either party at such time.

On March 25, 2018, Mr. Johnson met with representatives of Party B. Following such discussion, Mr. Johnson indicated that Alliqua was not interested in pursuing a combination with Party B at such time.

On January 23, 2018, Mr. Johnson met informally with a representative of Party C. The representative of Party C expressed an interest in pursuing a business combination and suggested formal meetings.

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On February 27, 2018, Mr. Johnson met with representatives of Party C at the offices of Alliqua's legal counsel, Haynes and Boone, LLP ("Haynes and Boone"). The parties discussed their respective businesses, strategic plans for Party C's clinical studies and a potential business combination. Following the meeting, the parties exchanged messages and calls continuing to discuss matters relating to their respective businesses and a potential business combination.

During the first week of July, 2018, Mr. Johnson asked Haynes and Boone to prepare a term sheet for a proposed transaction with Party C. Mr. Johnson sent a draft of the term sheet to the chief executive officer of Party C during the second week of July 2018. Following Party C's receipt of the draft term sheet, the parties exchanged messages and calls continuing to negotiate the term sheet.

On July 12, 2018, Alliqua's board of directors held a telephonic meeting with representatives of Haynes and Boone and Wainwright present. Mr. Johnson provided an update regarding the nature and status of various companies being explored as possible counterparties for a potential combination with Alliqua, including Party A, Party B, and Party C. Alliqua's board of directors also discussed the proposed term sheet with Party C. Alliqua's board of directors unanimously approved the proposed term sheet with Party C.

On July 23, 2018, Alliqua and Party C entered into a non-binding term sheet for a reverse merger between Alliqua and Party C. Alliqua and Party C continued to conduct due diligence on each other following the execution of the non-binding and instructed their respective counsels to prepare definitive documentation for the transactions contemplated by the term sheet.

On July 30, 2018, Haynes and Boone delivered an initial draft of a proposed merger agreement to Party C's legal counsel.

On August 3, 2018, Party C's legal counsel sent a revised draft of the proposed merger agreement to Haynes and Boone. Between August 3, 2018 and August 17, 2018, Alliqua and Party C together with their legal counsel continued to negotiate and exchange drafts of the merger agreement. Haynes and Boone and legal counsel for Party C also held numerous due diligence conference calls during this time.

On August 20, 2018, Mr. Johnson had a telephonic discussion with the chief executive officer of Party C. On this call, Mr. Johnson and the chief executive officer of Party C determined that they would not be able to come to agreement on various remaining open issues in the merger agreement and that the proposed transaction with Alliqua and Party C would be abandoned.

On August 22, 2018, an investment banker met with Mr. Johnson in New York City to discuss a potential transaction with Adynxx. This meeting was then followed up by an in-person management presentation in New York City on August 27, 2018 with Rick Orr, Adynxx's Chief Executive Officer, Donald Manning, Adynxx's Chief Medical Officer, representatives from Wainwright, and the banker who had introduced the companies on August 22, 2018. Following this in-person management presentation, Messrs. Johnson and Orr spoke by telephone on August 30, 2018, whereby Mr. Orr expressed a commitment to complete the proposed transaction. It was also on this call that Mr. Orr first confirmed that Adynxx would be willing to provide 10% of the combined company to Alliqua stockholders if the combined company raised $20 million.

On September 1, 2018, Mr. Orr delivered a presentation to Mr. Johnson which included an overview of Adynxx and the proposed terms of a transaction. Both Alliqua and Adynxx began to exchange due diligence materials and opened virtual data rooms to each other and their respective counsels.

Mr. Johnson instructed Haynes and Boone to prepare an initial draft of a merger agreement for a reverse merger between Alliqua and Adynxx, and Mr. Johnson forwarded this draft to Mr. Orr on September 5, 2018. On September 6, and September 10, 2018, Alliqua and Adynxx together with their respective legal counsels held multiple due diligence calls.

On September 7, 2018, Alliqua's board of directors held a telephonic meeting to discuss the new opportunity with Adynxx. At this meeting, Alliqua's board of directors determined that Alliqua should pursue a transaction with Adynxx as Adynxx appeared to meet all of the criteria previously identified for a reverse merger target. Alliqua's board of directors approved Alliqua's entry into a thirty-day exclusivity agreement with Adynxx.

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On September 9, 2018, Alliqua and Adynxx entered into a mutual thirty-day exclusivity agreement.

On September 14, Adynxx legal counsel, Cooley LLP ("Cooley"), sent a revised draft of the proposed merger agreement to Haynes and Boone.

On September 21, 2018, Mr. Orr, Mr. Johnson and representatives of Cooley and Haynes and Boone held an all hands conference call to discuss various open issues on the merger agreement. Between September 24, 2018, and September 26, 2018, Cooley and Haynes and Boone continued to negotiate and exchange drafts of the merger agreement.

On September 26, and October 1, 2018, Mr. Orr and Mr. Johnson had several discussions regarding the remaining open issue on the merger agreement, the setting of the exchange ratio. On October 1, 2018, Mr. Orr and Mr. Johnson reached an understanding regarding the exchange ratio.

Between October 1, and October 11, 2018, representatives of Haynes and Boone and representatives of Cooley continued to work together to finalize the merger agreement, disclosure schedules and other ancillary documents.

On October 5, 2018, Alliqua's board of directors held a telephonic meeting, with representatives from Wainwright and Haynes and Boone present. Prior to the meeting, the Committee received the current draft merger agreement, drafts of the lock-up and voting agreements, and written summaries of these documents. The board also received a copy of Wainwright's fairness presentation. The board discussed and asked questions regarding the merger agreement and the terms of the proposed transaction. A representative of Wainwright walked the board through its fairness presentation and gave the board the opportunity to ask questions. At the request of the Board, Wainwright rendered its oral opinion, subsequently confirmed in writing by delivery of Wainwright's written opinion dated the same date, to the effect that, based upon and subject to the assumptions, factors, qualifications and limitations contained therein, as of October 5, 2018, the Exchange Ratio was fair, from a financial point of view, to Alliqua. For a detailed discussion of Wainwright's opinion, please refer to the section entitled "The Merger — Opinion of Alliqua's Financial Advisor" beginning on page 69.

On October 8, 2018, Alliqua's board of directors held a further telephonic meeting to further discuss the results of Wainwright's fairness presentation and its written opinion and the terms of the proposed transaction. Representatives of Haynes and Boone updated the board on the remaining legal matters to be completed for the execution of the merger agreement. The board also considered the factors described under "The Merger — Alliqua's Reasons for the Merger; Recommendations of the Alliqua Board of Directors" beginning on page 67, as well as the process of SEC review and the various risks, such as non-consummation of the merger, arising in connection with the proposed transaction. Following extensive discussion of all of the foregoing by the board, the board unanimously (i) approved the merger agreement and consummation of the merger upon the terms and subject to the conditions set forth in the merger agreement, (ii) determined that the terms of the merger agreement and the transactions contemplated by the merger agreement, including the merger, are fair to, advisable and in the best interests of Alliqua and its stockholders, (iii) directed that the merger agreement be submitted to Alliqua's stockholders for adoption at the special meeting, and (iv) recommend that Alliqua's stockholders adopt the merger agreement and approve the transactions contemplated by the merger agreement, including the merger.

On October 11, 2018, each of Adynxx, Alliqua, and Merger Sub executed and delivered the merger agreement, effective as of October 11, 2018.

On October 12, 2018, Alliqua and Adynxx issued a joint press release announcing the execution of the merger agreement and the proposed transaction.

On November 7, 2018, Alliqua, Adynxx and Merger Sub entered into Amendment No. 1 to the merger agreement, which amends the Exchange Ratio formula by correcting a typographical error in the definition of "Total Outstanding Shares." The amendment does not affect the percentages of the combined company that Alliqua's stockholders and Adynxx's stockholders will own immediately following the effective time of the merger.

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Alliqua's Reasons for the Merger; Recommendations of the Alliqua Board of Directors

Alliqua's board of directors considered the following factors in reaching its conclusion to approve and adopt the Merger Agreement and the transactions contemplated thereby and to recommend that the Alliqua stockholders approve the merger, adopt the Merger Agreement and approve the other transactions contemplated by the Merger Agreement, including the issuance of shares of Alliqua common stock in the Merger, all of which Alliqua's board of directors viewed as supporting its decision to approve the business combination with Adynxx:

- Alliqua's board of directors believes, based in part on the judgment, advice and analysis of Alliqua's management with respect to the potential strategic, financial and operational benefits of the Merger (which judgment, advice and analysis was informed in part on the business, technical, financial, accounting and legal due diligence investigation performed with respect to Adynxx), that:

  Adynxx has two novel product candidates brivoligide and AYX2 both of which are non-opioid therapeutics to treat pain;

  with the ongoing opioid crisis in the United States, there is a critical need for novel and effective non-opioid therapeutics to treat pain and reduce opioid usage;

  the combined organization will be led by experienced senior management from Adynxx and a board of directors of eight members designated by Adynxx and one member designated by Alliqua;

  Adynxx has delivered voting agreements from its officers, directors and certain of its stockholders, representing approximately 35% of Adynxx's outstanding capital stock, in which each such individual or entity has agreed to vote in favor of the Merger Agreement and the related transactions; and

  the combined company will have the ability to maintain Alliqua's listing on Nasdaq.

- Alliqua's board of directors also reviewed with the management of Alliqua Adynxx's current plans for development of its product candidates to confirm the likelihood that the combined organization would possess sufficient financial resources to allow the management team to focus on the continued development of its product candidates.

- Alliqua's board of directors considered the opportunity as a result of the merger for Alliqua's stockholders to participate in the potential value that may result from development of the Adynxx product candidate portfolio and the potential increase in value of the combined organization following the merger.

- Alliqua's board of directors concluded that the Merger would provide the existing Alliqua stockholders with an opportunity to participate in the potential increase in value of the combined organization following the merger.

- Alliqua's board of directors considered Wainwright's opinion to Alliqua's board of directors that the Exchange Ratio was fair, from a financial point of view, to Alliqua, as more fully described below under the caption "The Merger — Opinion of Alliqua's Financial Advisor."

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Alliqua's board of directors also reviewed various factors impacting the financial condition, results of operations and prospects for Alliqua, including:

the curtailment of Alliqua's operations following the Asset Sale Transaction with Celularity;

the strategic alternatives of Alliqua to the Merger, including potential transactions that could have resulted from discussions that Alliqua's management conducted with other potential merger partners;

the risks associated with, and the uncertain value, timing and costs to stockholders of, liquidating Alliqua or effecting a sale of all or some of its assets and thereafter distributing the proceeds;

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the risks of continuing to operate Alliqua on a stand-alone basis, including Alliqua's current financial situation and the need to rebuild Alliqua's infrastructure and management to continue its operations; and

the risks associated with Alliqua's continued ability to maintain its Nasdaq listing as a stand-alone company.

- Alliqua's board of directors also reviewed the terms and conditions of the proposed Merger Agreement and associated transactions, as well as the safeguards and protective provisions included therein intended to mitigate risks, including:

the fact that immediately following the consummation of the merger, Adynxx stockholders, warrantholders and optionholders will own approximately 86% of the fully-diluted common stock of Alliqua, with Alliqua stockholders, optionholders and warrantholders, whose shares of Alliqua stock will remain outstanding after the merger, holding approximately 14% of the fully-diluted common stock of Alliqua, subject to adjustment as described elsewhere in this proxy statement;

the limited number and nature of the conditions to Adynxx's obligation to consummate the merger, including the absence of any financing contingency, and the limited risk of non-satisfaction of such conditions as well as the likelihood that the Merger will be consummated on a timely basis;

the respective rights of, and limitations on, Alliqua and Adynxx under the Merger Agreement to consider certain unsolicited acquisition proposals under certain circumstances should Alliqua or Adynxx receive a superior proposal;

the reasonableness of the potential termination fee payable by Alliqua under certain circumstances of $249,000 or the reasonableness of the potential termination fee payable by Adynxx under certain circumstances of $249,000;

the voting agreements, pursuant to which certain directors, officers and affiliated stockholders of Adynxx agreed, solely in their capacity as stockholders, to vote their shares of Adynxx capital stock in favor of adoption of the Merger Agreement; and

the belief that the terms of the Merger Agreement, including the parties' representations, warranties and covenants, and the conditions to their respective obligations, are reasonable under the circumstances.

In the course of its deliberations, the Alliqua's board of directors also considered a variety of risks and other countervailing factors related to entering into the Merger, including:

- the substantial expenses to be incurred in connection with the Merger;

- the possible volatility, at least in the short term, of the trading price of the Alliqua common stock resulting from the Merger announcement;

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the risk that the merger might not be consummated in a timely manner or at all and the potential adverse effect of the public announcement of the merger or on the delay or failure to complete the merger on the reputation of Alliqua;

- the risk to Alliqua's business, operations and financial results in the event that the merger is not consummated;

- the strategic direction of the continuing entity following the completion of the Merger, which will be determined by a board of directors, a majority of which will initially designated entirely by Adynxx;

- the fact that the merger would give rise to substantial limitations on the utilization of Alliqua's NOLs; and

- various other risks associated with the combined organization and the merger, including those described in the section entitled "Risk Factors" in this proxy statement.

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The foregoing information and factors considered by Alliqua's board of directors are not intended to be exhaustive but are believed to include all of the material factors considered by Alliqua's board of directors. In view of the wide variety of factors considered in connection with its evaluation of the Merger and the complexity of these matters, Alliqua's board of directors did not find it useful to attempt, and did not attempt, to quantify, rank or otherwise assign relative weights to these factors. In considering the factors described above, individual members of Alliqua's board of directors may have given different weight to different factors. Alliqua's board of directors conducted an overall analysis of the factors described above, including thorough discussions with, and questioning of, Alliqua's management team and the legal and financial advisors of Alliqua, and considered the factors overall to be favorable to, and to support, its determination.

Recommendation of the Alliqua Board of Directors

Alliqua's board of directors has determined and believes that the Merger and the issuance of shares of Alliqua common stock pursuant to the Merger is in the best interests of, Alliqua and its stockholders and has approved such items. Alliqua's board of directors recommends that Alliqua stockholders vote "FOR" Proposal 1 to approve the Merger and the issuance of shares of Alliqua common stock in the Merger.

Alliqua's board of directors has determined and believes that it is advisable to, and in the best interests of, Alliqua and its stockholders to approve the amendment of the amended and restated certificate of incorporation of Alliqua effecting the proposed reverse stock split, as described in this proxy statement. Alliqua's board of directors recommends that Alliqua stockholders vote "FOR" Proposal 2 to approve the amendment of the amended and restated certificate of incorporation of Alliqua effecting the proposed reverse stock split, as described in this proxy statement.

Alliqua's board of directors has determined and believes that adjourning the Alliqua Special Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of Proposals 1 and 2 is advisable to, and in the best interests of, Alliqua and its stockholders and has approved and adopted the proposal. Alliqua's board of directors recommends that Alliqua stockholders vote "FOR" Proposal 3 to adjourn the Alliqua Special Meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of Proposals 1 and 2.

Opinion of Alliqua's Financial Advisor

The Alliqua board of directors retained Wainwright on October 3, 2018 to act as the exclusive financial advisor to Alliqua regarding a strategic review of one or more potential transactions and, if requested by the board of directors of Alliqua, to render an opinion as to the fairness of the consideration to be received by Alliqua or its stockholders in a transaction from a financial point of view.

On October 5, 2018, Wainwright rendered its oral opinion to the board of directors of Alliqua (which was subsequently confirmed in writing by delivery of Wainwright's written opinion dated the same date) to the effect that, based upon and subject to the assumptions, factors, qualifications and limitations set forth in the written opinion described herein, as of October 5, 2018, the Exchange Ratio was fair, from a financial point of view, to Alliqua. Wainwright's opinion was prepared solely for the information of the board of directors of Alliqua and only addressed the fairness, from a financial point of view, to Alliqua of the Exchange Ratio in the Merger Agreement. Wainwright was not requested to opine as to, and Wainwright's opinion does not address, the relative merits of the Merger or any alternatives to the Merger, Alliqua's underlying decision to proceed with or effect the Merger, or any other aspect of the Merger. Wainwright's opinion does not address the fairness of the Merger to the holders of any class of securities, creditors or other constituencies of Alliqua and is not a valuation of Alliqua or Adynxx or their respective assets or any class of their securities. Wainwright did not express an opinion about the fairness of the amount or nature of any compensation payable or to be paid to any of the officers, directors or employees, of Adynxx, whether or not relative to the Merger.

The summary of Wainwright's opinion in this proxy statement is qualified in its entirety by reference to the full text of its written opinion, which is included as Annex H to this proxy statement and sets forth the procedures followed, assumptions made, qualifications and limitations on the review undertaken and other

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matters considered by Wainwright in preparing its opinion. Wainwright's opinion was prepared solely for the information of the board of directors of Alliqua for its use in connection with its consideration of the Merger. Neither Wainwright's written opinion nor the summary of its opinion and the related analyses set forth in this proxy statement are intended to be, and they do not constitute, advice or a recommendation to any stockholder as to how such stockholder should act or vote with respect to any matter relating to the Merger or any other matter.

The terms of the Merger, the consideration to be paid in the Merger, and the related transactions were determined through arm's length negotiations between Alliqua and Adynxx and were approved unanimously by Alliqua's board of directors. Wainwright did not determine the consideration to be paid by Alliqua in connection with the Merger. Per the Merger Agreement, the former holders of Adynxx equity capital would own approximately 86% of the outstanding equity of Alliqua immediately following the Effective Time and the holders of the outstanding equity of Alliqua immediately prior to the Merger would own approximately 14% of the outstanding equity of Alliqua immediately following the Effective Time.

In connection with rendering the opinion described above and performing its related financial analyses, Wainwright, among other things:

- Reviewed a draft of the Merger Agreement dated October 3, 2018;
- Reviewed certain information, including financial forecasts, relating to the business, earnings, cash flow, assets, liabilities and prospects of Alliqua and Adynxx that were furnished to Wainwright by management of Alliqua and Adynxx, respectively;
- Conducted discussions with members of senior management and representatives of Alliqua and Adynxx concerning the matters described above;
- Reviewed publicly available information relating to the respective businesses of Alliqua and Adynxx;
- Reviewed the pro forma ownership structure of the combined entity resulting from the Merger;
- Discussed the past and current operations and financial condition and the prospects of Alliqua with members of senior management of Alliqua and of Adynxx, respectively;
- Reviewed the financial terms, to the extent publicly available, of certain acquisition and financing transactions that Wainwright determined relevant;
- Performed such other analyses and considered such other factors as we deemed appropriate for the purpose of rendering our opinion.

For purposes of its opinion, Wainwright assumed, with the approval of the board of directors of Alliqua, that (i) the Spin-off would not occur prior to the Effective Time, and (ii) the amount of the Cash Dividend payable to holders of Alliqua Common Stock will be $1.40 per share. However, the Cash Dividend, when declared by Alliqua's board of directors, may be less than $1.40 per share.

In arriving at its opinion, Wainwright assumed and relied upon, without verifying independently, the accuracy and completeness of all information that was publicly available or was furnished, or otherwise made available to

Wainwright, or discussed with or reviewed by or for Wainwright, and further assumed that the financial information provided to Wainwright had been prepared by the respective managements of Alliqua and Adynxx on a reasonable basis in accordance with industry practice, and that the managements of Alliqua and Adynxx were not aware of any information or facts that would make any information provided to Wainwright incomplete or misleading.

With respect to the financial forecasts, estimates and other forward-looking information reviewed by Wainwright, Wainwright assumed that such information had been reasonably prepared by the respective managements of Alliqua and Adynxx based on assumptions reflecting their best currently available estimates and judgments as to the expected future results of operations and financial condition of Alliqua and Adynxx, respectively. Wainwright was not engaged to assess the achievability of any such financial forecasts, estimates or forward-looking information or the assumptions on which they were based, and Wainwright expressed no opinion as to such information or assumptions.

In addition, Wainwright did not

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assume any responsibility for, and did not perform, any appraisals or valuation of any specific assets or liabilities (fixed, contingent or other) of Alliqua or Adynxx, nor was Wainwright furnished or provided with any such appraisals or valuations. Without limiting the generality of the foregoing, Wainwright was not engaged to, and did not undertake, any independent analysis of any pending or threatened litigation, regulatory action, possible unasserted claims or other contingent liabilities, to which Alliqua, Adynxx or any of their respective affiliates is a party or may be subject, and at the direction of Alliqua and with its consent, Wainwright's opinion made no assumption concerning, and did not consider, the possible assertion of claims, outcomes or damages arising out of any such matters.

Wainwright relied upon and assumed, without independent verification, that the representations and warranties of all parties set forth in the Merger Agreement and all related documents and instruments that are referred to therein are true and correct, that each party will fully and timely perform all of the covenants and agreements required to be performed by such party, that the Merger will be consummated pursuant to the terms of the Merger Agreement, without amendment thereto, and that all conditions to the consummation of the Merger will be satisfied without waiver by any party of any conditions or obligations thereunder. Wainwright further assumed that the Merger Agreement was in all material respects identical to the draft of the Merger Agreement provided to Wainwright. Finally, Wainwright also assumed that all the necessary regulatory approvals and consents required for the Merger, including the approval of the stockholders of Alliqua, will be obtained in a manner that will not adversely affect Alliqua or the contemplated benefits of the Merger.

In connection with its opinion, Wainwright assumed and relied upon, without independent verification, the accuracy and completeness of all of the financial, legal, regulatory, tax, accounting and other information provided to, discussed with or reviewed by it. Wainwright's opinion does not address any legal, regulatory, tax or accounting issues. Wainwright's fairness opinion was approved by its fairness opinion committee prior to delivering it to Alliqua. Wainwright's opinion is necessarily based upon the information available to Wainwright and facts and circumstances as they existed and were subject to evaluation as of October 5, 2018, which is the date of the Wainwright opinion. Although events occurring after the date of the Wainwright opinion could materially affect the assumptions used in preparing the opinion, Wainwright does not have any obligation to update, revise or reaffirm its opinion and Wainwright expressly disclaims any responsibility to do so. Wainwright did not express any opinion as to the value of the Merger consideration or the prices at which shares of Alliqua's common stock may trade following announcement of the Merger or at any future time.

The terms of the Merger, the consideration to be paid in the Merger, and the related transactions were determined through arm's length negotiations between Alliqua and Adynxx and were approved unanimously by Alliqua's board of directors. Wainwright did not determine the consideration to be paid by Alliqua in connection with the Merger. Wainwright's opinion and its presentation to Alliqua's board of directors was one of many factors taken into consideration by the board of directors of Alliqua in deciding to approve, adopt and authorize the Merger Agreement. Consequently, the analyses as described herein should not be viewed as determinative of the opinion of Alliqua's board of directors with respect to the consideration to be paid by Alliqua in the Merger or of whether Alliqua's board of directors would have been willing to agree to different consideration.

The following is a summary of the material financial analyses performed by Wainwright in connection with the preparation of its fairness opinion, which opinion was rendered orally to the board of directors of Alliqua (and subsequently confirmed in writing by delivery of Wainwright's written opinion dated the same date) on October 5, 2018. The preparation of analyses and a fairness opinion is a complex analytic process involving various determinations as to the most appropriate and relevant methods of financial analysis and the application of those methods to the particular circumstances and, therefore, such an opinion is not readily susceptible to summary description and this summary does not purport to be a complete description of the analyses performed by Wainwright or the delivery of Wainwright's opinion to the board of directors of Alliqua.

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This summary includes information presented in tabular format. In order to fully understand the financial analyses presented by Wainwright, the tables must be read together with the text of each analysis summary and considered as a whole. The tables alone do not constitute a complete summary of the financial analyses. Considering any portion of such analyses and of the factors considered, without considering all analyses and factors, could create a misleading or incomplete view of the process underlying Wainwright's opinion.

In furnishing its opinion, Wainwright did not attempt to combine the analyses described herein into one composite valuation range, nor did Wainwright assign any quantitative weight to any of the analyses or the other factors considered. Furthermore, in arriving at its opinion, Wainwright did not attribute any particular weight to any analysis or factor considered by it, but rather made qualitative judgments as to the significance and relevance of each analysis and factor in light of one another. Accordingly, Wainwright has stated that it believes that its analyses must be considered as a whole and that considering any portion of its analyses, without considering all of the analyses, could create a misleading or incomplete view of the process underlying its opinion or the conclusions to be drawn therefrom.

In conducting the analysis as to the fairness to Alliqua, from a financial point of view, of the Merger consideration to be paid by Adynxx pursuant to the terms of the Merger Agreement, Wainwright evaluated the stand-alone valuations of Alliqua and Adynxx. Wainwright then evaluated the potential valuation of New Adynxx and compared it to Alliqua's pro forma ownership of New Adynxx based on the Merger Agreement.

The results of the application by Wainwright of each of the valuation methodologies utilized in connection with its fairness opinion are summarized below.

Consideration to be paid in the Merger

As specified in the Merger Agreement, the former holders of Adynxx Capital Stock will own approximately 86% of the outstanding equity of Alliqua immediately following the Effective Time and the holders of the of the outstanding equity of Alliqua immediately prior to the Merger will own approximately 14% of the outstanding equity of Alliqua immediately following the Effective Time, subject to adjustment as described elsewhere in this proxy statement.

In analyzing the fairness, from a financial point of view, to Alliqua of the Merger consideration to be paid by Adynxx in the Merger, Wainwright evaluated the trading price of Alliqua stock on October 2, 2018 as $2.33. Wainwright then determined that after the payment of the Cash Dividend to holders of Alliqua capital stock prior to the Effective Time, Alliqua's share price would be $0.93 per share. Wainwright concluded that Alliqua's current implied value is $4.7 million.

Potential Valuation of New Adynxx

Wainwright evaluated the potential value of New Adynxx using the following valuation methodologies:

- Precedent Public M&A Transactions
- Precedent Private M&A Transactions
- Comparable Licensing Transactions
- Comparable IPOs
- Comparable Public Market Companies
- Valuation of Adynxx — Implied Valuation of New Adynxx
- Precedent Reverse Merger Transactions

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Precedent Public M&A Transactions

The precedent public M&A analysis uses data based on the values acquirors have previously placed on comparable companies in a merger or acquisition to develop a measure of current value for New Adynxx. Wainwright examined precedent transactions, from February 11, 2014 through October 14, 2015, involving pain management companies. Wainwright examined the data points set out in the table below for the selected precedent transactions. Selected pain management public M&A transactions indicated a median value of $170 million and a mean value of $422.9 million.

Precedent Public M&A Transactions

| Date | Acquirer | Target | Deal Value ($M) |
|---|---|---|---|
| 10/14/2015 | Taro Pharmaceutical Industries Ltd | Zalicus Pharmaceuticals Ltd. | $ 45.2 |
| 3/10/2015 | Pernix Therapeutics | Zogenix (Zohydro ER Business) | $ 383.5 |
| 3/9/2015 | Recro Pharma | Alkermes Pharma (IV/IM Meloxicam Product & cGMP Facility) | $ 170.0 |
| 1/15/2015 | DepoMed | Janssen (NUCYNTA Franchise) | $ 1,050.0 |
| 4/24/2014 | Endo International | Zogenix (Sumavel DosePro) | $ 105.0 |
| 2/12/2014 | Mayne Pharma Group | Forest Laboratories (4 Brands) | $ 12.0 |
| 2/11/2014 | Mallinckrodt | Cadence Pharmaceuticals | $ 1,194.4 |
| | | Median | $ 170.0 |
| | | Mean | $ 422.9 |

Excluded Transactions (Due to undisclosed transaction value)

| Date | Acquirer | Target | Deal Value |
|---|---|---|---|
| 5/14/2014 | Pernix Therapeutics Holdings | GSK (TREXIMET U.S. Rights) | n/a |
| 4/16/2014 | EPIRUS Biopharmaceuticals | Zalicus | n/a |

Precedent Private M&A Transactions

The precedent private M&A analysis uses data based on the values acquirors have previously placed on comparable companies in a merger or acquisition to develop a measure of current value for New Adynxx. Wainwright examined precedent transactions, from July 11, 2014 through August 8, 2016, involving pain management companies. Wainwright examined the data points set out in the table below for the selected precedent transactions. Selected pain management private M&A transactions indicated a median value of $200.0 million and a mean value of $228.9 million.

Precedent Private M&A Transactions

| Date | Acquirer | Target | Deal Value ($M) |
|---|---|---|---|
| 8/8/2016 | Scintilla Pharmaceuticals, Inc. | SCILEX Pharmaceuticals, Inc. | $ 70.0 |
| 11/18/2015 | Depomed | Grunenthal (US and Canadian Rights to Cebranopadol) | $ 25.0 |
| 9/8/2015 | Purdue Pharma; Mundipharma | VM Pharma (VM-902A) | $ 213.0 |
| 6/29/2015 | Novartis | Spinifex Pharmaceuticals | $ 200.0 |
| 6/16/2015 | Tribute Pharmaceuticals Canada | Medical Futures | $ 25.0 |
| 1/11/2015 | Biogen Idec | Convergence Pharmaceuticals | $ 675.0 |
| 7/11/2014 | ProStrakan Group | Archimedes Pharma | $ 394.1 |
| | | Median | $ 200.0 |

| | |
|---|---|
| Mean | $ 228.9 |

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Excluded Transactions (Due to undisclosed transaction value)

| Date | Acquirer | Target | Deal Value ($M) |
|---|---|---|---|
| 3/21/2016 | Ember therapeutics, Inc. | Migralex | n/a |
| 12/31/2015 | Signature Therapeutics | Ensysce Biosciences | n/a |
| 10/2/2015 | Ethypharm | DB Ashbourne | n/a |
| 2/4/2014 | Bioventus | Galderma (DUROLANE) | n/a |

Comparable Licensing Transactions

Wainwright reviewed financial terms, to the extent publicly available, of licensing transactions since 2016 for pain management assets from May 11, 2016 to May 8, 2017. Selected comparable licensing deals indicated a median value of $23.5 million and a mean value of $107.0 million.

Comparable Licensing Transactions

| Deal Date | Licensor | Licensee | Asset | Deal Value ($M) |
|---|---|---|---|---|
| 5/8/2017 | Novartis | Durect | Posimir | $ 293.0 |
| 7/12/2017 | Purdue Pharma | BioDelivery Sciences International | Belbuca | $ 4.5 |
| 5/11/2016 | Collegium Pharmaceutical | BioDelivery Sciences International | Breakyl | $ 23.5 |
| | | | Median | $ 23.5 |
| | | | Mean | $ 107.0 |

Comparable IPOs

Wainwright reviewed initial public offerings of pain management companies from February 5, 2014 to May 6, 2015. Selected comparable initial public offerings indicated a mean enterprise value of $113 .0 million and a median enterprise value of $121.5 million.

IPO Comparables

| Offer Date | Company Name | Offer Price | Amount Raised in IPO ($M) | Pre-Money Equity Value ($M) | IPO Step-up Multiple | Post IPO Market Value | Enterprise Value ($M) |
|---|---|---|---|---|---|---|---|
| 05/06/2015 | Collegium Pharmaceutical, Inc. | $ 12.00 | $ 80.0 | $ 156.5 | 1.5x | $ 236.5 | $ 140.7 |
| 04/15/2015 | KemPharm, Inc. | $ 11.00 | $ 64.4 | $ 83.7 | 1.8x | $ 148.1 | $ 102.7 |
| 01/30/2014 | Cara Therapeutics Inc | $ 11.00 | $ 63.3 | $ 177.0 | 1.6x | $ 240.3 | $ 175.1 |
| 03/06/2014 | Recro Pharma, Inc. | $ 8.00 | $ 34.5 | $ 22.7 | 0.8x | $ 57.2 | $ 24.8 |
| 02/05/2014 | Egalet Corporation | $ 12.00 | $ 58.0 | $ 117.9 | 2.6x | $ 175.9 | $ 121.5 |
| | | Median | $ 63.3 | $ 117.9 | 1.6x | $ 175.9 | $ 121.5 |
| | | Mean | $ 60.0 | $ 111.6 | 1.7x | $ 171.6 | $ 113.0 |

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Comparable Public Market Companies

Wainwright reviewed the total enterprise values of publicly traded pain management companies with no sales or less than $50.0 million per year in sales. Selected comparable public companies had a mean enterprise value of $96 .0 million and a median enterprise value of $104.3 million.

Public Market Pain Comparables

| Company Name | Ticker | Price | 52 Week High | 52 Week Low | Market Cap. ($M) | Enterprise Value ($M) |
|---|---|---|---|---|---|---|
| KemPharm Inc | KMPH | $ 4.25 | $ 8.40 | $ 3.44 | $ 77.0 | $ 109.5 |
| Recro Pharma Inc. | REPH | $ 7.11 | $ 13.05 | $ 4.78 | $ 147.3 | $ 165.5 |
| Egalet Corporation | EGLT | $ 0.12 | $ 1.57 | $ 0.08 | $ 7.0 | $ 42.7 |
| AcelRx Pharmaceuticals Inc | ACRX | $ 3.85 | $ 5.75 | $ 1.55 | $ 233.3 | $ 137.2 |
| Trevena Inc | TRVN | $ 2.12 | $ 2.64 | $ 1.34 | $ 161.3 | $ 57.2 |
| BioDelivery Systems | BDSI | $ 2.70 | $ 3.20 | $ 1.70 | $ 160.8 | $ 154.5 |
| Zynerba Pharmaceuticals Inc | ZYNE | $ 8.16 | $ 15.13 | $ 5.59 | $ 143.8 | $ 99.2 |
| Avenue Therapeutics Inc | ATXI | $ 2.82 | $ 5.90 | $ 2.38 | $ 29.8 | $ 2.2 |
| | | | | Median | $ 145.6 | $ 104.3 |
| | | | | Mean | $ 120.0 | $ 96.0 |

Valuation of Adynxx — Implied Valuation of New Adynxx

Wainwright calculated the implied enterprise valuation of New Adynxx to be within a range of $84.5 million to $88.8 million. Wainwright calculated the new company's valuation by determining that the implied enterprise value of Adynxx was $53.0 million. Wainwright then applied the step-up multiple from comparable IPO transactions of 1.7 to the implied enterprise value of $53.0 million, and added Alliqua's equity value of $4.7 million. After accounting for the net cash and debt position of the new company, Wainwright determined an enterprise valuation range of $84.5 million to $88.8 million.

| | |
|---|---|
| Adynxx Implied Valuation | |
| Series B Post Money Valuation | $ 46.0 |
| Convertible Notes | $ 10.0 |
| Convertible Notes Remaining | $ 7.0 |
| Implied Enterprise Value | $ 53.0 |
| Implied Equity Value | $ 46.0 |
| IPO Step-up Multiple of Pain Companies | |
| Mean | 1.7x |
| Median | 1.6x |
| Adynxx Implied Step-up Equity Valuation | |
| Mean | $ 77.1 |
| Median | $ 75.0 |

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Precedent Reverse Merger Transactions

Wainwright reviewed reverse merger transactions in the healthcare industry including targets with a market cap of under $30.0 million before the announcement of the reverse merger. The surviving entity of the selected transactions had a median enterprise value of $52.5 million and a mean enterprise value of $113.6 million.

Precedent Healthcare Reverse Mergers

| Announcement Date | Public Company | Private Company | Market Cap Target | Post Deal Ownership | Target Value | Enterprise Value ($M) |
|---|---|---|---|---|---|---|
| 10/17/2017 | Neothetics | Evofem Biosciences | $ 7.3 | 13% / 87% | $ 7.3 | $ 215.2 |
| 09/27/2017 | Alcobra | Arcturus Therapeutics | $ 29.8 | 40% / 60% | $ 29.8 | $ 105.8 |
| 09/12/2017 | Inotek Pharmaceuticals | Rocket Pharmaceuticals | $ 27.6 | 21% / 79% | $ 27.6 | $ 413.5 |
| 08/14/2017 | Galena Biopharma | Sellas Life Sciences | $ 20.9 | 33% / 68% | $ 20.9 | $ 12.0 |
| 07/24/2017 | Advanced Enviromental Petroleum | Oncolix | $ 14.9 | 31% / 69% | $ 14.9 | $ 6.0 |
| 07/03/2017 | Opexa Therapeutics | Acer Therapeutics | $ 4.5 | 11% / 89% | $ 4.5 | $ 7.4 |
| 07/03/2017 | Monster Digital | Innovate Biopharmaceuticals | $ 4.1 | 9% / 91% | $ 4.1 | $ 5.7 |
| 01/07/2017 | Mast Therapeutics | Savara | $ 20.7 | 23% / 77% | $ 20.7 | $ 132.0 |
| 12/22/2016 | Tokai Pharmaceuticals | Otic Pharma | $ 22.6 | 40% / 60% | $ 22.6 | $ 41.7 |
| 12/22/2016 | PLx Pharma | Dipexium Pharmaceuticals | $ 13.0 | 77% / 23% | $ 13.0 | $ 52.5 |
| 10/31/2016 | Signal Genetics | Miragen Therapeutics | $ 4.5 | 5% / 95% | $ 4.5 | $ 257.7 |
| | | | | Mean | $ 15.5 | $ 113.6 |
| | | | | Median | $ 14.9 | $ 52.5 |

General

Wainwright is a nationally recognized investment banking firm that provides financial advisory services and is continually engaged in the valuation of businesses and their securities in connection with mergers and acquisitions, negotiated underwritings, secondary distributions of listed and unlisted securities, private placements and valuations for estate, corporate and other purposes. The Alliqua board of directors retained Wainwright to render an opinion as to the fairness to Alliqua, from a financial point of view, of the Exchange Ratio in the Merger Agreement based upon the foregoing qualifications, experience and expertise.

Alliqua paid Wainwright a fee of $50,000 at the time of its engagement and a fee of $250,000 for rendering its fairness opinion delivered in connection with the Merger. Additional fees of $350,000 in cash, stock valued at $300,000 and warrants valued at $50,000 are contingent on the consummation of the Merger. The $250,000 opinion fee was not contingent in whole or in part on the success of the Merger, or on the results of Wainwright's evaluation and analysis or upon the conclusions reached in Wainwright's opinion. In addition, Alliqua agreed to reimburse Wainwright up to $50,000 for its reasonable, documented, out-of-pocket expenses, including reasonable fees and disbursements of its counsel. Alliqua has also agreed to indemnify Wainwright against certain liabilities and other items that may arise out of the Alliqua's engagement of Wainwright. Alliqua's board of directors did not limit Wainwright in any way in the investigations it made or the procedures it followed in rendering its opinion.

Wainwright in the past has provided and may in the future provide investment banking and other financial services to Alliqua and its affiliates for which Wainwright and its affiliates have received or may receive compensation. In

February 2017, Wainwright acted as a financial advisor to Alliqua in connection with a private placement of Alliqua Common Stock for which Wainwright received a financial advisory fee of approximately $160,000. In April 2017, Wainwright acted as the sole book-running manager of a public offering by Alliqua of Alliqua Common Stock for which Wainwright received fees of approximately $210,000. In March 2018, Wainwright was engaged by Alliqua in connection with a proposed offering that

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was never consummated and received reimbursement of $50,000 of legal fees. Except as described above, Wainwright had not had a material relationship with, nor otherwise received fees from, Alliqua, Adynxx or any other parties to the Merger during the two years preceding the date of Wainwright's opinion. In the future, Wainwright may provide financial advisory and investment banking services to Alliqua, Adynxx or their respective affiliates for which Wainwright would expect to receive compensation.

Consistent with applicable legal and regulatory requirements, Wainwright has adopted policies and procedures to establish and maintain the independence of its research departments and personnel. As a result, Wainwright's research analysts may hold views, make statements or investment recommendations and/or publish research reports with respect to Alliqua, Adynxx and/or the Merger that differ from the views of its investment banking personnel.

Interests of Alliqua's Directors and Executive Officers in the Merger

In considering the recommendation of Alliqua's board of directors that you vote to approve the proposal to adopt the Merger Agreement, you should be aware that Alliqua's directors and executive officers may have interests in the Merger that are different from, or in addition to, those of Alliqua's stockholders generally. Alliqua's board of directors was aware of and considered these interests, among other matters, in evaluating and negotiating the Merger Agreement and the Merger, and in recommending that the Merger Agreement be adopted by Alliqua's stockholders.

Severance and Change in Control Provisions of Employment Arrangements

In connection with the appointment of David Johnson as Chief Executive Officer, on February 4, 2013, Alliqua entered into an Executive Employment Agreement with Mr. Johnson, as amended on December 20, 2013 and August 29, 2017. As Mr. Johnson's service as Chief Executive Officer will be terminated without cause immediately prior to the Effective Time, pursuant to the terms of his employment agreement, and subject to compliance with the confidentiality, non-solicitation and non-disparagement requirements of the employment agreement and the execution of a release of claims, (i) Alliqua will pay Mr. Johnson $700,000, which is equal to 24 months of Mr. Johnson's base salary; (ii) $700,000, which is equal to two years of annual bonus to which Mr. Johnson would be entitled under his employment agreement; and (iii) $32,620, which is equal to the aggregate monthly premiums for Mr. Johnson's "COBRA" healthcare coverage for a period of 18 months following the Effective Time.

Stockholders' Rights

Both Alliqua and Adynxx are incorporated under the laws of the State of Delaware and, accordingly, the rights of the stockholders of Alliqua and Adynxx are currently, and will continue to be, governed by the DGCL. If the merger is completed, Adynxx stockholders will become stockholders of Alliqua, and their rights will be governed by the DGCL, the certificate of incorporation of Alliqua and the bylaws of Alliqua. The rights of Alliqua stockholders contained in the certificate of incorporation and bylaws of Alliqua will not materially change as a result of the Merger.

Federal Securities Law Consequences; Resale Restrictions

The issuance of Alliqua's common stock in the Merger to Adynxx stockholders will be effected by means of a private placement, which is exempt from registration under the Securities Act, in reliance on Section 4(a)(2) of the Securities Act and Rule 506 of Regulation D or Regulation S promulgated thereunder and such shares will be "restricted securities." The shares issued in connection with the Merger will not be registered under the Securities Act upon issuance and will not be freely transferable. Holders of such shares may not sell their respective shares unless the shares are registered under the Securities Act or an exemption is available under the Securities Act. The Merger Agreement provides that Alliqua will cooperate in a timely manner with the holders of such shares to remove any restrictive legends or similar transfer instructions from such shares upon the registration of such shares or in the event that such shares are otherwise transferable to an exemption from registration under the Securities Act.

Material U.S. Federal Income Tax Consequences of the Reverse Stock Split and the Merger

The following discussion summarizes the material U.S. federal income tax consequences of the reverse stock split and the merger that are expected to apply to each Alliqua stockholder. This summary is based

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upon current provisions of the Code, existing treasury regulations and current administrative rulings and court decisions, all in effect as of the date hereof and all of which are subject to change. Any change, which may be retroactive, could alter the tax consequences to Alliqua stockholders as described in this summary. No attempt has been made to comment on all of the U.S. federal income tax consequences of the reverse stock split and the merger that may be relevant to particular holders, including holders who do not hold their shares as capital assets; holders subject to special treatment under the Code such as dealers in securities; banks; insurance companies; other financial institutions; mutual funds; real estate investment trusts; tax-exempt organizations; investors in pass-through entities; stockholders who are subject to the alternative minimum tax provisions of the Code; stockholders who hold their shares as part of a hedge, wash sale, synthetic security, conversion transaction, or other integrated transaction; U.S. holders, as defined below, that have a functional currency other than the U.S. dollar; traders in securities who elect to apply a mark-to-market method of accounting; stockholders who acquired their shares of stock pursuant to the exercise of options or otherwise as compensation or through a tax-qualified retirement plan or through the exercise of a warrant; and certain expatriates or former long-term residents of the United States. Stockholders described in this paragraph are urged to consult their own tax advisors regarding the consequences to them of the reverse stock split and the merger.

In the case of a stockholder that is a partnership, the U.S. federal income tax treatment of a partner in the partnership will generally depend upon the status of the partner and the activities of the partnership. Partnerships that are holders of Alliqua capital stock and partners in such partnerships are urged to consult their own tax advisors regarding the consequences to them of the reverse stock split and the merger.

In addition, the following discussion does not address the tax consequences of the reverse stock split and the merger under state, local or non-U.S. tax laws or federal tax laws other than the income tax.

Reverse Stock Split

Alliqua stockholders generally will not recognize gain or loss as a result of the reverse stock split. The aggregate adjusted tax basis in the shares of Alliqua common stock received pursuant to the reverse stock split will equal the aggregate adjusted tax basis of the shares of Alliqua common stock exchanged therefor. In general, each Alliqua stockholder’s holding period for the shares of Alliqua common stock received pursuant to the reverse stock split will include the holding period in the shares of Alliqua common stock exchanged therefor. Alliqua’s stockholders that acquired Alliqua common stock on different dates and at different prices should consult their tax advisors regarding the allocation of the tax basis and holding period of such shares.

Merger

Adynxx and Alliqua intend the Merger to qualify as a reorganization within the meaning of Section 368(a) of the Code. Each of Adynxx and Alliqua will use its commercially reasonable efforts to cause the Merger to qualify as a reorganization within the meaning of Section 368(a) of the Code, and not to permit or cause any affiliate or any subsidiary of Adynxx or Alliqua to take any action or cause any action to be taken which would reasonably be expected to cause the Merger to fail to qualify as a reorganization under Section 368(a) of the Code. Alliqua stockholders will not sell, exchange or dispose of any shares of Alliqua common stock as a result of the Merger. Thus, there should be no material U.S. federal income tax consequences to Alliqua stockholders as a result of the Merger.

Anticipated Accounting Treatment

The merger will be treated by Alliqua as a reverse merger and recapitalization effected by a share exchange for financial accounting and reporting purposes since substantially all of Alliqua’s operations will be disposed of immediately prior to the consummation of the merger. Since Alliqua had no operations upon the merger taking place, Alliqua is not considered to be a business for accounting purposes. Accordingly, no goodwill or intangible assets will be recorded as a result of the merger.

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## THE MERGER AGREEMENT

The following is a summary of the material terms of the Merger Agreement. A copy of the Merger Agreement is attached as Annex A and Annex B to this proxy statement and is incorporated by reference into this proxy statement. The Merger Agreement has been attached to this proxy to provide you with information regarding its terms. It is not intended to provide any other factual information about Alliqua, Adynxx, or Merger Sub. The following description does not purport to be complete and is qualified in its entirety by reference to the Merger Agreement. You should refer to the full text of the Merger Agreement for details of the Merger and the terms and conditions of the Merger Agreement.

The Merger Agreement contains representations and warranties that Alliqua and Merger Sub, on the one hand, and Adynxx, on the other hand, have made to one another as of specific dates. These representations and warranties have been made for the benefit of the other parties to the Merger Agreement and may be intended not as statements of fact but rather as a way of allocating the risk to one of the parties if those statements prove to be incorrect. In addition, the assertions embodied in the representations and warranties are qualified by information in confidential disclosure schedules exchanged by the parties in connection with signing the Merger Agreement. While Alliqua and Adynxx do not believe that these disclosure schedules contain information required to be publicly disclosed under the applicable securities laws, other than information that has already been so disclosed, the disclosure schedules do contain information that modifies, qualifies and creates exceptions to the representations and warranties set forth in the attached Merger Agreement. Accordingly, you should not rely on the representations and warranties as current characterizations of factual information about Alliqua or Adynxx.

### General

Under the Merger Agreement, Merger Sub, a wholly owned subsidiary of Alliqua, will merge with and into Adynxx, with Adynxx surviving as a wholly owned subsidiary of the combined company.

### Merger Consideration

At the Effective Time of the Merger:

- each outstanding share of Adynxx common stock, on an as-converted basis taking into consideration all outstanding common stock, preferred stock, restricted stock and all other securities convertible or exercisable for Adynxx common stock, will be converted into the right to receive shares of Alliqua common stock at the Exchange Ratio as described below; and

- each outstanding Adynxx stock option, whether vested or unvested, and warrant that has not previously been exercised will be assumed by Alliqua and converted into a stock option or warrant, as the case may be, to purchase shares of Alliqua common stock.

### Exchange Ratio

The Exchange Ratio is equal to (i) the product of (1) 0.8625, as adjusted for any Permitted Financings as described below (the "Applicable Amount"), multiplied by (2) the total number of shares of Alliqua common stock outstanding immediately prior to the Effective Time on an as-converted basis divided by as the difference between one and the Applicable Amount, divided by (ii) the total number of shares of Adynxx common stock outstanding immediately prior to the Effective Time on an as-converted basis. Under the Exchange Ratio formula in the Merger Agreement, as of immediately after the Merger, but excluding the effect of certain financings (as further described in the Merger Agreement), Adynxx securityholders are expected to own approximately 86% of the aggregate number of shares of the combined company issued and outstanding following the consummation of the Merger and the stockholders of Alliqua as of immediately prior to the Merger are expected to own approximately 14% of the aggregate number of shares of the combined company issued and outstanding following the consummation of the Merger. The Exchange Ratio will be fixed immediately prior to the Effective Time to reflect Alliqua's and Adynxx's equity capitalization as of immediately prior to such time. In addition, to the extent Adynxx consummates a Permitted Financing, as specifically defined in the Merger Agreement and described below, in excess of $10.0 million dollars prior to the Effective Time, the Applicable Amount will be ratably adjusted upward on a sliding scale from 0.8625 to account for the excess

amount raised in the Permitted
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Financing. For example, if Adynxx raises $20.0 million in the Permitted Financing, the Applicable Amount shall be 0.9, reducing the percentage of the aggregate number of shares of the combined company held by stockholders of Alliqua as of immediately prior to the Merger.

This Exchange Ratio is an estimate only, and the final Exchange Ratio will be determined pursuant to a formula described in more detail in the Merger Agreement and in this proxy statement.

The Merger Agreement does not include a price-based termination right, so there will be no adjustment to the total number of shares of Alliqua common stock that Adynxx stockholders will be entitled to receive for changes in the market price of Alliqua common stock. Accordingly, the market value of the shares of Alliqua common stock issued pursuant to the Merger will depend on the market value of the shares of Alliqua common stock at the time the Merger closes, and could vary significantly from the market value on the date of this proxy statement.

No fractional shares of Alliqua common stock will be issuable pursuant to the Merger to Adynxx stockholders, and any fractional shares will be rounded down to the nearest whole share. Adynxx stockholders will not be entitled to any voting rights, rights to receive any dividends or distributions or other rights as a stockholder of Alliqua with respect to any such fraction of a share that would have otherwise been issued to such Adynxx stockholder.

The Merger Agreement provides that, at the Effective Time, Alliqua will cause to be deposited with an exchange agent acceptable to Alliqua and Adynxx registered book-entry interests in the shares of Alliqua common stock issuable to Adynxx stockholders.

The Merger Agreement provides that, as soon as reasonably practicable after the Effective Time, the exchange agent will mail to each record holder of Adynxx common stock a letter of transmittal and instructions for surrendering and exchanging the record holder's Adynxx stock certificates for shares of Alliqua common stock. Upon surrender of a Adynxx stock certificate for exchange to the exchange agent, together with a duly signed letter of transmittal and such other documents as the exchange agent or Alliqua may reasonably require, the Adynxx stock certificate surrendered will be cancelled and the holder of the Adynxx stock certificate will be entitled to receive non-certificated shares of Alliqua common stock represented by book-entry (via DRS) equal to the number of whole shares of Alliqua common stock that such holder has the right to receive pursuant to the provisions of the Merger Agreement.

At the Effective Time, all holders of certificates representing shares of Adynxx common stock that were outstanding immediately prior to the Effective Time will cease to have any rights as stockholders of Adynxx. In addition, no transfer of Adynxx common stock after the Effective Time will be registered on the stock transfer books of Adynxx.

If any Adynxx stock certificate has been lost, stolen or destroyed, Alliqua may, in its discretion, and as a condition precedent to the delivery of any shares of Alliqua common stock, require the owner of such lost, stolen or destroyed certificate to deliver an affidavit claiming such certificate has been lost, stolen or destroyed and post a bond indemnifying Alliqua against any claim suffered by Alliqua related to the lost, stolen or destroyed certificate or any Alliqua common stock issued in exchange for such certificate as Alliqua may reasonably request.

From and after the Effective Time, until it is surrendered, each certificate that previously evidenced Adynxx common stock will be deemed to represent only the right to receive shares of Alliqua common stock. Alliqua will not pay dividends or other distributions on any shares of Alliqua common stock to be issued in exchange for any unsurrendered Adynxx stock certificate until the Adynxx stock certificate is surrendered as provided in the Merger Agreement.

Treatment of Adynxx Stock Options

At the Effective Time, each stock option to acquire shares of Adynxx stock, whether vested or unvested, that has not previously been exercised will be assumed by Alliqua and converted into an option to purchase, on the same terms and conditions, a number of shares of Alliqua common stock equal to the product of (a) the number of shares of Adynxx common stock subject to such option, multiplied by (b) the Exchange Ratio, at an exercise price per share of Alliqua common stock equal to the quotient of (i) the exercise price per share of Adynxx common stock subject to such option divided by (ii) the Exchange Ratio.

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Treatment of Adynxx Warrants

At the Effective Time, each Adynxx warrant that is outstanding and unexercised immediately prior to the Effective Time, will be converted into and become a warrant to purchase Alliqua's common stock. All rights with respect to Adynxx common stock under Adynxx warrants assumed by Alliqua will thereupon be converted into rights with respect to Alliqua common stock. The replacement warrant shall be exercisable for a number of shares of common stock of the combined company equal to (a) the number of shares of Series A Preferred Stock of Adynxx that the existing warrant is exercisable for multiplied by (b) the Exchange Ratio, at a per share price equal to (i) the exercise price per share of Series A Preferred Stock of Adynxx under the existing warrant divided by (ii) the Exchange Ratio.

Directors and Executive Officers of the Combined Company Following the Merger

Pursuant to the Merger Agreement, the directors of Alliqua who will not serve as directors following the closing of the Merger will resign at or prior to the closing of the Merger. Effective as of the closing of the Merger, the combined company's board of directors will be fixed at eight members, seven of whom will be directors designated by Adynxx and one of whom will be directors designated by Alliqua. Designees to the board of directors are expected to satisfy the requisite independence requirements for Alliqua's board of directors, as well as the sophistication and independence requirements for committee members pursuant to Nasdaq listing requirements. It is anticipated that the Alliqua designee will be David I. Johnson and the Adynxx designees will be Dennis Podlesak, David Johnson, Eckard Weber, Stan Abel, Rick Orr, Julien Mamet, Joseph Leone and Jeffrey Sklar. Upon the closing of the Merger, the combined company's board of directors will appoint each of the following as officers of the combined company:

| Name | Title |
|---|---|
| Rick Orr | Chief Executive Officer |
| Donald Manning, M.D., Ph.D. | Chief Medical Officer |
| Julien Mamet, Ph.D. | Chief Scientific Officer |

Conditions to the Closing of the Merger

Each party's obligation to complete the Merger is subject to the satisfaction or waiver by each of the parties, at or prior to the closing of the Merger, of various conditions, which include, in addition to other customary closing conditions, the following:

- there shall not have been issued any temporary restraining order, preliminary or permanent injunction or other order preventing the closing of the Merger by any court of competent jurisdiction or other governmental entity of competent jurisdiction, and no law, statute, resolution, ordinance, code, rule, regulation, requirement, ruling or decree shall be in effect which has the effect of making the closing of the Merger illegal;

- (a) the holders of a majority of the shares of outstanding Adynxx common stock and outstanding Adynxx preferred stock, voting as a single class on an as converted to Adynxx common stock basis and (b) the holders of a majority of the shares of outstanding Adynxx preferred stock, voting as a separate class on an as converted to Adynxx common stock basis, shall have adopted and approved the Merger Agreement, the Merger and the transactions contemplated by the Merger Agreement, and the holders of a majority of the outstanding shares of Alliqua common stock entitled to vote at the Special Meeting shall have approved the reverse stock split and the affirmative vote of the majority of votes cast affirmatively or negatively at the Special Meeting shall have approved the issuance of shares of Alliqua common stock in the Merger;

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all waiting periods applicable to any filing under the Hart-Scott-Rodino Antitrust Improvements Act by Alliqua, Adynxx or any Adynxx st shall have expired or been terminated; and

- the shares of Alliqua's common stock to be issued in the Merger shall have been approved for listing on Nasdaq, subject to official notice of issuance.

In addition, the obligation of Alliqua to complete the Merger is further subject to the satisfaction or waiver of the following conditions:

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- certain fundamental representations and warranties of Adynxx shall have been true and correct in all respects on the date of the Merger Agreement and shall be true and correct on the closing date of the Merger with the same force and effect as if made on and as of the date on which the Merger is to be completed or, if such representations and warranties address matters as of a particular date, then such fundamental representations and warranties shall be true and correct as of that particular date;

- all other representations and warranties of Adynxx in the Merger Agreement shall have been true and correct as of the date of the Merger Agreement and shall be true and correct on the closing date of the Merger with the same force and effect as if made on the date on which the Merger is to be completed or, if such representations and warranties address matters as of a particular date, then such representations and warranties shall be true and correct as of that particular date, except where the failure of these representations and warranties to be true and correct, individually or in the aggregate, would not reasonably be expected to have a material adverse effect on the other party;

- Adynxx shall have performed or complied with in all material respects all of its covenants and agreements in the Merger Agreement required to be performed or complied with by it on or before the closing of the Merger;

- Adynxx shall have delivered certain certificates and other documents required under the Merger Agreement for the closing of the Merger;

- Alliqua shall have received a copy of the lock-up agreement from certain stockholders of Adynxx set forth on a schedule to the Merger Agreement and each executive officer and director of Adynxx who is elected or appointed as an executive officer and director of Alliqua as of immediately following the closing of the Merger;

- Adynxx shall have delivered to Alliqua written resignations of certain directors of Adynxx as listed in the Merger Agreement and in a form reasonably satisfactory to Alliqua;

- since the date of the Merger Agreement, there shall have been no effect, change, event, circumstance, or development that has had or would reasonably be expected to have had a material adverse effect on the business, condition (financial or otherwise), assets, liabilities, or results of operations of Adynxx and its subsidiaries, taken as a whole. The Merger Agreement provides that certain effects, changes, events, circumstances, or developments arising or resulting from the following shall not be considered a material adverse effect on Adynxx:

general conditions affecting the industry in which Adynxx operates;

changes generally affecting the United States or global economy or capital markets as a whole s;

any changes (after the date of the Merger Agreement) in GAAP or applicable law; or

any natural disaster or any acts of terrorism, sabotage, military action or war or any escalation or worsening thereof; and

- No holders of the shares of Adynxx capital stock (on an as-converted to Adynxx common stock basis) will have demanded appraisal rights.

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In addition, the obligation of Adynxx to complete the Merger is further subject to the satisfaction or waiver of the following conditions:

- certain fundamental representations and warranties of Alliqua shall have been true and correct in all respects on the date of the Merger Agreement and shall be true and correct on the closing date of the Merger with the same force and effect as if made on and as of the date on which the Merger is to be completed or, if such representations and warranties address matters as of a particular date, then such fundamental representations and warranties shall be true and correct as of that particular date;

- all other representations and warranties of Alliqua in the Merger Agreement shall have been true and correct as of the date of the Merger Agreement and shall be true and correct on the closing date of the Merger with the same force and effect as if made on the date on which the Merger is to be completed or, if such representations and warranties address matters as of a particular date, then such representations and warranties shall be true and correct as of that particular date, except where the failure of these representations and warranties to be true and correct, individually or in the aggregate, would not reasonably be expected to have a material adverse effect on the other party;

- Alliqua and Merger Sub shall have performed or complied with in all material respects all of its covenants and agreements in the Merger Agreement required to be performed or complied with by it on or before the closing of the Merger;

- Alliqua shall have delivered certain certificates and other documents required under the Merger Agreement for the closing of the Merger;

- Alliqua shall have delivered to Adynxx written resignations of the officers and directors of Alliqua who are not to continue as officers or directors of Alliqua pursuant to the terms of the Merger Agreement, in a form reasonably satisfactory to Alliqua;

- Adynxx shall have received a copy of the lock-up agreement from certain stockholders of Alliqua set forth on a schedule to the Merger Agreement and each executive officer and director of Alliqua who is elected or appointed as an executive officer and director of Alliqua as of immediately following the closing of the Merger;

- since the date of the Merger Agreement, there shall have been no effect, change, event, circumstance, or development that that has had or would reasonably be expected to have had a material adverse effect on the business, condition (financial or otherwise), assets, liabilities, or results of operations of Alliqua. The Merger Agreement provides that certain effects, changes, events, circumstances, or developments arising or resulting from the following shall not be considered a material adverse effect on Alliqua, including without limitation:

general conditions generally affecting the industry in which Alliqua operates;

any natural disaster or any acts of terrorism, sabotage, military action or war or any escalation or worsening thereof;

changes generally affecting the United States or global economy or capital markets as a whole;

any changes (after the date of the Merger Agreement) in GAAP or applicable law; or

any change in the stock price or trading volume of Alliqua stock (but not the underlying causes of such changes or failures);

- Adynxx will have received written acknowledgments pursuant to which Alliqua's outside legal counsel and any financial advisor, accountant or other person who performed services for or on behalf of Alliqua, or who is otherwise entitled to any compensation from Alliqua that in each case is owed transaction costs from Alliqua: (i) the total amount of transaction costs that are payable to such person; and (ii) that, upon receipt of the amount referred to in clause "(i)" above, such party will have been paid in full and is not (and will not be) owed any other transaction costs; and

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- Adynxx will have received evidence reasonably satisfactory to it as to compliance by Alliqua of its termination of employment of any employee of Alliqua as requested by Adynxx and any related provisions in the Merger Agreement.

Representations and Warranties

The Merger Agreement contains customary representations and warranties of Alliqua, Merger Sub, and Adynxx for a transaction of this type relating to, among other things:

- corporate organization, organizational and governing documents, and power, and similar corporate matters;
- subsidiaries;
- capitalization;
- financial statements and with respect to Alliqua, documents filed with the SEC and the accuracy of information contained in those documents;
- books and records with respect to Adynxx and the accuracy of information contained in those documents;
- absence of certain changes or events, with respect to Alliqua, between June 30, 2018 and the date of the Merger Agreement and with respect to Adynxx, between June 30, 2018 and the date of the Merger Agreement;
- title to assets;
- real property and leaseholds;
- intellectual property;
- the validity of material contracts to which the parties or their subsidiaries are a party and any violation, default or breach under such contracts;
- non-contravention and required consents;
- absence of undisclosed liabilities;
- regulatory compliance, permits and restrictions;

- tax matters;
- employee and labor matters and benefit plans;
- environmental matters;
- insurance;
- legal proceedings and orders;
- authority to enter into the Merger Agreement and the related agreements;
- compliance with anti-bribery laws;
- full disclosure;
- governmental authorization;
- transactions with affiliates;
- votes required for the closing of the Merger and approval of the proposals that will come before the Alliqua special meeting and that will be the subject of Adynxx stockholder approval;
- any brokerage or finder's fee or other fee or commission in connection with the Merger;
- with respect to Adynxx, labor matters;
- with respect to Alliqua, opinion of its financial advisor;

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- with respect to Alliqua, the valid issuance in the Merger of Alliqua common stock; and

- accuracy of the information supplied by Alliqua and Adynxx for inclusion in this proxy statement.

The representations and warranties are, in many respects, qualified by materiality and knowledge, and will not survive the Merger, but their accuracy forms the basis of some of the conditions to the obligations of Alliqua and Adynxx to complete the Merger.

Non-Solicitation

Each of Alliqua and Adynxx agreed that, subject to certain exceptions, Alliqua and Adynxx and any of their respective subsidiaries will not, and each party will use its reasonable best efforts to cause each of its officers, directors, employees, investment bankers, attorneys, accountants, representatives, consultants or other agents retained by it or any of its subsidiaries not to, directly or indirectly:

- solicit, initiate, knowingly encourage, induce or knowingly facilitate the communication, making, submission or announcement of, any "acquisition proposal" as defined below, or take any action that could reasonably be expected to lead to an acquisition proposal;

- furnish any non-public information with respect to it to any person in connection with or in response to an acquisition proposal or an acquisition inquiry;

- engage in discussions or negotiations with any person with respect to any acquisition proposal;

- subject to certain exceptions for Alliqua, approve, endorse or recommend an acquisition proposal;

- execute or enter into any letter of intent or similar document or any contract contemplating or otherwise relating to an "acquisition transaction," as defined below; or

- publicly propose to do any of the foregoing.

An "acquisition proposal" means any offer, proposal or indication of interest contemplating or which would reasonably be interpreted to be lead to the contemplation of an "acquisition transaction."

An "acquisition transaction" means the following:

- any merger, consolidation, amalgamation, share exchange, business combination, issuance or acquisition of securities, reorganization, recapitalization, tender offer, exchange offer or similar transaction in which Alliqua or Adynxx is a constituent corporation, in which any individual, entity, governmental entity or "group," as defined under applicable securities laws, directly or indirectly acquires beneficial or record ownership of securities representing more than 20% of the outstanding securities of any class of voting securities of Alliqua or Adynxx or any of their subsidiaries or in which Alliqua or Adynxx or any of their subsidiaries issues securities representing more than 20% of the outstanding securities of any class of voting securities of such party or any of its subsidiaries;

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any sale, lease, exchange, transfer, license, acquisition or disposition of any business or assets that constitute 20% or more of the consolidated book value or the fair market value of the assets of Alliqua or Adynxx and their subsidiaries, taken as a whole; and

- any liquidation or dissolution of any of Alliqua or Adynxx and their subsidiaries, taken as a whole.

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However, before obtaining the applicable Alliqua or Adynxx stockholder approvals required to consummate the Merger, Alliqua or Adynxx may furnish nonpublic information regarding Alliqua or Adynxx and its subsidiaries to, and may enter into discussions or negotiations with, any third-party in response to a bona fide written acquisition proposal made or received after the date of the Merger Agreement, which the Alliqua or Adynxx board of directors determines in good faith, after consultation with Alliqua's or Adynxx's outside financial advisors and outside legal counsel, constitutes or is reasonably likely to result in a "superior offer," as defined below, if:

- neither Alliqua or Adynxx nor any of Alliqua's or Adynxx's representatives has breached the non-solicitation provisions of the Merger Agreement described above;

- the Alliqua or Adynxx board of directors concludes in good faith, based on the advice of outside legal counsel, that the failure to take such action is reasonably likely to be inconsistent with the fiduciary duties of such board of directors under applicable law;

- such party receives from the third-party an executed confidentiality agreement containing provisions at least as favorable to such party as those contained in the confidentiality agreement between Alliqua and Adynxx; and

- substantially contemporaneously with furnishing of any such nonpublic information to a third-party, Alliqua or Adynxx furnishes the same information to the other party to the extent not previously furnished.

A "superior offer" means an unsolicited bona fide written acquisition proposal that: (a) was not obtained or made as a direct or indirect result of a breach of (or in violation of) the Merger Agreement; and (b) is on terms and conditions that Adynxx's board of directors determines in good faith, based on such matters that it deems relevant (including the likelihood of consummation thereof), as well as any written offer by the other party to the Merger Agreement to amend the terms of the Merger Agreement, and following consultation with its outside legal counsel and outside financial advisors, if any, are more favorable, from a financial point of view, to Alliqua stockholders or Adynxx stockholders, as applicable, than the terms of the transactions contemplated by the Merger Agreement.

Meetings of Stockholders

Alliqua is obligated under the Merger Agreement to use commercially reasonable efforts to take all action necessary to call, give notice of and hold a meeting of its stockholders for the purposes of voting on the issuance of shares of Alliqua common stock in the Merger and the reverse stock split.

Adynxx is obligated under the Merger Agreement to obtain written consents of its stockholders sufficient to adopt the Merger Agreement and approve the Merger and the others transactions contemplated thereby. The recommendation of the board of directors of Adynxx that Adynxx stockholders approve the Merger Agreement and the transactions contemplated thereby shall not be withdrawn or modified (and Adynxx's board of directors shall not publicly propose to withdraw or modify such recommendation) in a manner adverse to Alliqua, and no resolution by Adynxx's board of directors or any committee thereof to withdraw or Adynxx's board of directors in a manner adverse to Alliqua or to adopt, approve or recommend (or publicly propose to adopt, approve or recommend) any alternative acquisition proposal shall be adopted or proposed.

Covenants; Conduct of Business Pending the Merger

Alliqua has agreed that, except as permitted by the Merger Agreement, as required by law, or unless Adynxx shall have provided written consent, during the period commencing on the date of the Merger Agreement and continuing until the earlier to occur of the closing of the Merger and the termination of the Merger Agreement, Alliqua will conduct its business and operations in the ordinary course consistent with past practices and in compliance with all applicable laws, regulations and certain contracts. Alliqua has also agreed that, subject to certain limited exceptions, without the consent of Adynxx, it will not, during the period commencing on the date of the Merger Agreement and continuing until the earlier to occur of the closing of the Merger and the termination of the Merger Agreement:

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- except for the amendment to the certificate of incorporation in connection with the Merger, amend or otherwise change its certificate of incorporation or bylaws, or otherwise alter its corporate structure through merger, liquidation, reorganization or otherwise, or form any subsidiary;

- issue, sell, pledge, dispose of or encumber, or authorize the issuance, sale, pledge, disposition or encumbrance of, any shares of capital stock of any class, or any options, warrants, convertible securities or other rights of any kind to acquire any shares of capital stock, or any other ownership interest (including, without limitation, any phantom interest), other than the issuance of shares of common stock issuable pursuant to employee stock options under currently existing employee stock option plans or pursuant to currently outstanding warrants, as the case may be, which options, warrants or rights, as the case may be, are outstanding on the date hereof) to the extent such issuances comply with all applicable law;

- redeem, repurchase or otherwise acquire, directly or indirectly, any shares of Alliqua capital stock;

- incur any indebtedness or sell, pledge, dispose of or create an encumbrance over any assets (except for sales of assets in the ordinary course of business and in a manner consistent with past practice, and dispositions of obsolete or worthless assets);

- accelerate, amend or change the period (or permit any acceleration, amendment or change) of exercisability of options or warrants or authorize cash payments in exchange for any options, except as may be required under any Alliqua's stock option plan, contract or the Merger Agreement or as may be required by applicable law;

- except for the cash dividend as contemplated in the Merger Agreement, (i) declare, set aside, make or pay any dividend or other distribution (whether in cash, stock or property or any combination thereof) in respect of any of its capital stock; (ii) split, combine or reclassify any of its capital stock or issue or authorize or propose the issuance of any other securities in respect of, in lieu of or in substitution for shares of its capital stock or (iii) amend the terms of, repurchase, redeem or otherwise acquire, or permit any Subsidiary to repurchase, redeem or otherwise acquire, any of its securities or any securities of its Subsidiaries (except pursuant to any contract to which an Alliqua is a party as of the date of the Merger Agreement), or propose to do any of the foregoing;

- sell, assign, transfer, license, sublicense or otherwise dispose of any of Alliqua's intellectual property rights (other than non-exclusive licenses in the ordinary course of business consistent with past practice);

- (i) acquire (by merger, consolidation, or acquisition of stock or assets) any corporation, partnership or other business organization or division thereof or any other material property or assets, or allow any material property or assets to become subject to any encumbrance; (ii) enter into or amend any material terms of any contract, subject to certain exceptions or grant any release or relinquishment of any material rights under any contract, with new obligations or losses of rights in excess of $50,000 in the aggregate; (iii) authorize any capital expenditures or purchase of fixed assets which are, in the aggregate, in excess of $50,000, taken as a whole; or (iv) subject to certain exceptions, enter into or amend any contract, agreement, commitment or arrangement to effect any of the matters prohibited by this section;

- forgive any loans to any person, including its employees, officers, directors or affiliates;

- (i) increase the wages, salary, commissions, fringe benefits or other compensation or remuneration payable or to become payable to its directors, officers, employees or consultants; (ii) grant any severance or termination pay to, or enter into or amend any employment or severance agreement with, any director, officer, employee or consultant; (iii) establish, adopt, enter into, or amend any employee benefit plan, except, in each of the subsections (i) through (iii) for bonus awards in the ordinary course of business consistent with past practice or bonus awards contingent upon the completion of the transactions or payments, including any severance, termination or change of

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control payments, in compliance with any such agreements or plans existing as of the date of the Merger Agreement and the plans, agreements or terms of which were made available to Adynxx prior to the date hereof, or except as required by law;

- hire any directors, officers, employees or consultants or terminate any directors or officers, except in each case, in the ordinary course of business and in a manner consistent with past practice;

- take any action, other than as required by applicable law or GAAP, to change accounting policies or procedures;

- make or change any material tax election inconsistent with past practices, adopt or change any tax accounting method, or settle or compromise any material federal, state, local or foreign tax liability or agree to an extension of a statute of limitations for any assessment of any tax;

- pay, discharge, satisfy, modify or renegotiate any claims or liabilities, other than the payment, discharge or satisfaction of liabilities reflected or reserved against in the financial statements of Adynxx, or payments, discharges or satisfactions made in the ordinary course of business and consistent with past practice.

- enter into any material partnership arrangements, joint development agreements or strategic alliances;

- accelerate the collection of, or otherwise modify Alliqua's customary accounting or treatment of, any receivables outside the ordinary course of business consistent with past practice;

- initiate any litigation, action, suit, proceeding, claim or arbitration or settle or agree to settle any litigation, action, suit, proceeding, claim or arbitration, in each case where Alliqua is claiming, or would be reasonably likely to receive or become obligated for a liability, of more than $100,000 individually;

- dispose of any assets or otherwise take any actions other than in the ordinary course of business consistent with past practice;

- take any action that would cause Alliqua's common stock issued in the Merger to not be validly issued, fully paid or nonassessable;

- subject to certain exceptions, enter into or amend or modify any contract or any lease with respect to material real estate or any other contract or lease that, if in effect as of the date hereof would constitute a contract or lease with respect to material real estate hereunder;

- except to the extent expressly permitted by the Merger Agreement, take any action that is intended or that would reasonably be expected to, individually or in the aggregate, prevent, materially delay, or materially impede the consummation of the Merger, or related transactions; or

- agree, resolve or commit to do any of the foregoing.

Adynxx has agreed that, except as permitted by the Merger Agreement, as required by law, or unless Alliqua shall have provided written consent, during the period commencing on the date of the Merger Agreement and continuing until the earlier to occur of the closing of the Merger and the termination of the Merger Agreement, Adynxx will conduct its business and operations in the ordinary course consistent with past practices and in compliance with all applicable laws, regulations and certain contracts. Adynxx has also agreed that, subject to certain limited exceptions, without the consent of Alliqua, it will not, during the period commencing on the date of the Merger Agreement and continuing until the earlier to occur of the closing of the Merger and the termination of the Merger Agreement:

- amend or otherwise change its certificate of incorporation or bylaws, or otherwise alter its corporate structure through merger, liquidation, reorganization or otherwise, except in connection with the Permitted Financing;

- issue, sell, pledge, dispose of or encumber, or authorize the issuance, sale, pledge, disposition or encumbrance of, any shares of capital stock of any class, or any options, warrants, convertible securities or other rights of any kind to acquire any shares of capital stock, or any other

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ownership interest (including, without limitation, any phantom interest), except for (i) the issuance of shares of Adynxx capital stock issuable pursuant to employee stock options under currently existing employee stock option plans or pursuant to currently outstanding warrants or other rights to convert into or exercise for shares of Adynxx capital stock, as the case may be, which options, warrants or rights, as the case may be, are outstanding on the date hereof and (ii) in connection with the Permitted Financing;

- redeem, repurchase or otherwise acquire, directly or indirectly, any shares of Adynxx capital stock (other than pursuant a repurchase right in favor of Adynxx with respect to unvested shares at no more than cost);

- incur any Indebtedness or sell any debt securities or guarantee any debt securities or other obligations of others or sell, pledge, dispose of or create an encumbrance over any assets;

- (i) declare, set aside, make or pay any dividend or other distribution (whether in cash, stock or property or any combination thereof) in respect of any of its capital stock, except that a wholly owned subsidiary may declare and pay a dividend to its parent; (ii) split, combine or reclassify any of its capital stock or issue or authorize or propose the issuance of any other securities in respect of, in lieu of or in substitution for shares of its capital stock or (iii) amend the terms of, repurchase, redeem or otherwise acquire, or permit any Subsidiary to repurchase, redeem or otherwise acquire, any of its securities or any securities of its Subsidiaries (except pursuant to any contract to which an Alliqua is a party as of the date of the Merger Agreement), or propose to do any of the foregoing;

- accelerate, amend or change the period (or permit any acceleration, amendment or change) of exercisability of options or warrants or authorize cash payments in exchange for any options, except as may be required under any Adynxx stock option plan, contract or the Merger Agreement or as may be required by applicable law;

- sell, assign, transfer, license, sublicense or otherwise dispose of any intellectual property rights;

- (i) acquire (by merger, consolidation, or acquisition of stock or assets) any corporation, partnership or other business organization or division thereof or any other material property or assets, in each case with an individual value in excess of $50,000; (ii) enter into or amend any material terms of any contract or grant any release or relinquishment of any material rights under any contract, with new obligations or losses of rights in excess of $50,000; (iii) authorize any capital expenditures or purchase of fixed assets which are, in the aggregate, in excess of $50,000, taken as a whole or (iv) enter into or amend any contract, agreement, commitment or arrangement to effect any of the matters prohibited by this section;

- forgive any loans to any person, including its employees, officers, directors or affiliates;

- take any action, other than as required by applicable law or GAAP, to change accounting policies or procedures;

- (i) increase the wages, salary, commissions, fringe benefits or other compensation or remuneration payable or to become payable to its directors, officers, employees or consultants; (ii) grant any severance or termination pay to, or enter into or amend any employment or severance agreement with, any director, officer, employee or consultant; (iii) establish, adopt, enter into, or amend any employee benefit plan, except, in each of the subsections (i) through (iii) for

bonus awards in the ordinary course of business consistent with past practice or bonus awards contingent upon the completion of the transactions or payments, including any severance, termination or change of control payments, in compliance with any such agreements or plans existing as of the date of the Merger Agreement and the plans, agreements or terms of which were made available to Adynxx prior to the date hereof, or except as required by law;

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hire any directors, officers, employees or consultants or terminate any directors or officers, except in each case, in the ordinary course of business and in a manner consistent with past practice;

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- make or change any material tax election inconsistent with past practices, adopt or change any tax accounting method, or settle or compromise any material federal, state, local or foreign tax liability or agree to an extension of a statute of limitations for any assessment of any tax;

- pay, discharge or satisfy any claims, liabilities or obligations (absolute, accrued, asserted or unasserted, contingent or otherwise), other than the payment, discharge or satisfaction in the ordinary course of business and consistent with past practice;

- otherwise take any actions other than in the ordinary course of business consistent with past practice;

- enter into any material partnership arrangements, joint development agreements or strategic alliances;

- initiate any litigation, action, suit, proceeding, claim or arbitration or settle or agree to settle any litigation, action, suit, proceeding, claim or arbitration, in each case where Adynxx and its subsidiaries are claiming, or would be reasonably likely to receive or become obligated for a liability, of more than $100,000 individually;

- except to the extent expressly permitted by the Merger Agreement, take any action that is intended or that would reasonably be expected to, individually or in the aggregate, prevent, materially delay, or materially impede the consummation of the Merger, or related transactions; or

- agree, resolve or commit to do any of the foregoing.

Other Agreements

Each of Alliqua and Adynxx has agreed to use its commercially reasonable efforts to:

- file or otherwise submit all applications, notices, reports and other documents reasonably required to be filed with a governmental entity with respect to the Merger;

- take all actions necessary to satisfy the conditions precedent to the consummation of the transactions contemplated by the Merger Agreement;

- make all filings and other submissions and give all notices required to be made and given in connection with the Merger;

- provide the other party with reasonable access during normal business hours to such party’s personnel and assets and to all existing books, records, tax returns, work papers and other documents and information relating to such party and its subsidiaries;

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provide the other party with such copies of the existing books, records, tax returns, work papers, product data, and other documents and information relating to such party and its subsidiaries, and with such additional financial, operating and other data and information regarding such party and its subsidiaries as the other party may reasonably request;

- permit the other party's officers and other employees to meet, upon reasonable notice and during normal business hours, with the chief financial officer and other officers and managers of such party responsible for such party's financial statements and the internal controls of such party to discuss such matter as the other party may deem appropriate;

- obtain all consents, approvals or waivers reasonably required in connection with the transactions contemplated by the Merger Agreement;

- cause this proxy statement to comply with the rules and regulations promulgated by the SEC, to respond promptly to any comments of the SEC or its staff;

- cause this proxy statement to be mailed to Alliqua's stockholders as promptly as practicable after this proxy statement is declared effective; and

- lift any injunction prohibiting, or any other legal bar to, the Merger or other transactions contemplated by the Merger Agreement.

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Alliqua and Adynxx agreed that, among other things:

- Alliqua and Adynxx will use reasonable best efforts to file or otherwise submit all documents reasonable required to be filed with respect to the transactions contemplated by the Merger Agreement;

- Alliqua shall use commercially reasonable efforts to cause this proxy statement to comply with the rules and regulations promulgated by the SEC, to respond promptly to any comments of the SEC or its staff;

- Alliqua and Adynxx will confer to determine whether notification under the HSR Act by Alliqua or any Adynxx stockholder is required or advisable and if it is determined in good faith that such notification is required, Alliqua shall use its reasonable best efforts to obtain expiration or termination of all waiting periods under the HSR Act with respect to the transactions contemplated by the merger agreement as promptly as reasonably practicable;

- Alliqua and Adynxx will notify each other if either party becomes aware of any notice alleging that the consent of any person is required in connection with the Merger, of any legal proceeding against the other party, of any material inaccuracy in any representations or warranties made by such party, or the failure of such party to comply with any covenant or obligation under the Merger Agreement;

- For purposes of employee benefits provided under any benefit plans or arrangements after the closing of the Merger, each employee who continues to be employed by Alliqua, Adynxx or their subsidiaries immediately following such closing shall be credited with his/her years of service with Alliqua, Adynxx or their subsidiaries. In addition, Alliqua shall cause all pre-existing condition exclusions and actively at work requirements of any benefit plans in effect after closing to be waived for any such employee;

- Adynxx will use commercially reasonable efforts to deliver a letter from Adynxx’s independent accounting firm to Alliqua in a form customary in scope and substance for letters delivered by independent public accountants in connection with this proxy statement;

- Alliqua will use reasonable best efforts to maintain the listing of its common stock on Nasdaq;

- Alliqua shall use commercially reasonable efforts to prepare and submit to Nasdaq a notification form for the listing of the shares of Alliqua common stock to be issued pursuant to the Merger Agreement and to cause such shares to be approved for listing and shall, to the extent required by Nasdaq rules, to file an initial listing application for Alliqua common stock on Nasdaq and to cause such listing application to be conditionally approved prior to the Effective Time.

- for a period of six years after the closing of the Merger, Alliqua and Adynxx as the surviving corporation in the Merger will indemnify each of the directors and officers of Alliqua and Adynxx to the fullest extent permitted under applicable law; and

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Alliqua will maintain directors' and officers' liability insurance policies from and after the Effective Time and will also purchase a six-year prepaid "tail policy" for the non-cancellable extension of the directors' and officers' liability coverage of Alliqua's existing directors' and officers' insurance policies for a period of at least six years from the Effective Time.

The Spin-off

Prior to the Effective Time, pursuant to the Merger Agreement, Alliqua will use commercially reasonable efforts to consummate the divestiture of AquaMed Technologies, Inc. ("AquaMed"), a wholly owned subsidiary of Alliqua engaged in the custom hydrogel manufacturing business ("SpinCo"), in the form of a pro rata distribution of the common equity of SpinCo to Alliqua's stockholders. We refer to the divestiture transactions as the Spin-off. As part of the Spin-off, on November 27, 2018, AquaMed entered into the AquaMed Merger Agreement with TOP AQ Merger Sub, a wholly-owned subsidiary of AquaMed, whereby, among other transactions contemplated thereby, (1) Alliqua will undertake a series of internal transactions, following which AquaMed will own all of the assets and liabilities of the custom hydrogel and contract manufacturing business, (2) AquaMed will consummate the AquaMed Private Placement and

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(3) the parties will consummate the AquaMed Merger. Following the Spin-off, the AquaMed Private Placement and the AquaMed Merger, AquaMed is expected to be an independent, publicly-traded company, of which the former stockholders of Alliqua will own 10% of the outstanding equity and, before giving effect to any fees payable in equity to financial advisors or other intermediaries, the current members of TOP and the third-party investors that participate in the Private Placement are expected to hold approximately 90% of the total number of shares of AquaMed common stock outstanding (on a fully diluted basis) assuming a minimum of $10 million is raised in the AquaMed Private Placement. Alliqua will not retain any ownership interest in AquaMed. So long as Alliqua exercises commercially reasonable efforts to cause the Spin-off to occur concurrently with the Effective Time, the occurrence of the Spin-off is not a condition of Adynxx's obligations to the consummate the transactions contemplated by the Merger Agreement. The consummation of the Merger, however, is a condition to the closing of the Spin-off. In the event that Alliqua's stockholders do not approve Proposal 1 and the Merger is not consummated, then Alliqua may, in its discretion, determine not to effect the Spin-off, in which case, SpinCo will remain a wholly-owned subsidiary of Alliqua. In addition, the consummation of the AquaMed Merger and the Spin-off are subject to certain closing conditions that are described in a Form 8-K filed by Alliqua on November, 28, 2018. The consummation of the AquaMed Merger is subject to certain conditions, including, without limitation, (i) the effectiveness of the registration statement to be filed with the SEC and the approval for listing on the Nasdaq Capital Market of the shares of AquaMed common stock to be issued in the Spin-off, (ii) the accuracy of the parties' representations and warranties and the performance of their respective covenants contained in the AquaMed Merger Agreement, and (iii) consummation of the AquaMed Private Placement. The consummation of the Spin-off is subject to the foregoing conditions, plus certain additional conditions, including, without limitation (i) the Merger Agreement being in full force and effect and the Merger being consummated immediately following the Spin-off and (ii) Alliqua being satisfied that the Spin-off will not result in any material tax payable by Alliqua.

For U.S. federal income tax purposes, the distribution by Alliqua of the shares of AquaMed common stock will not be eligible for treatment as a tax-free distribution. Accordingly, each holder of Alliqua common stock who receives shares of AquaMed common stock in the Spin-off generally will be treated as if such stockholder received a taxable distribution in an amount equal to the fair market value of AquaMed common stock received (including any fractional share deemed to be received by and sold on behalf of the stockholder), which will result in: (a) a dividend to the extent of such stockholder's ratable share of Alliqua's current and accumulated earnings and profits; then (b) a reduction in such stockholder's basis in Alliqua's common stock (but not below zero) to the extent the amount received exceeds the amount referenced in clause (a); and then (c) gain from the sale or exchange of Alliqua common stock to the extent the amount received exceeds the sum of the amounts referenced in clauses (a) and (b). Each stockholder's basis in his, her or its AquaMed common stock will be equal to the fair market value of such stock at the time of the Spin-off. A stockholder's holding period for such shares will begin the day after the Spin-off date.

A corporate level U.S. federal income tax will be payable by the consolidated group of which Alliqua is the common parent if gain realized in the Spin-off exceeds any net operating losses that may be available to offset such gain. The tax would be based upon the gain, if any, computed as the difference between the fair market value of the AquaMed common stock and Alliqua's adjusted basis in such stock. Alliqua expects that it will have sufficient losses available to fully offset any gain realized as a result of the Spin-off.

Alliqua's earnings and profits generally will be increased by any gain Alliqua recognizes as a result of the contribution of assets to AquaMed and the subsequent Spin-off. Alliqua will not be able to advise stockholders of the amount of its earnings and profits until after the end of the tax year in which the Spin-off occurs.

In addition, Alliqua or other applicable withholding agents may be required or permitted to withhold at the applicable rate on all or a portion of the Spin-off distribution (including cash paid in lieu of fractional shares) payable to non-U.S. stockholders, and any such withholding would be satisfied by Alliqua or the other applicable withholding agent either withholding and selling a portion of our shares of common stock otherwise distributable to non-U.S. stockholders, or withholding such amount from any cash distribution otherwise payable to such non-U.S. stockholders. Any shares or cash so withheld shall be treated as if they were paid to such non-U.S. stockholders.

Although Alliqua will be ascribing a value to

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shares of AquaMed common stock it distributes for tax purposes, this valuation is not binding on the IRS or any other tax authority. These taxing authorities could ascribe a higher valuation to such shares, particularly if such shares trade at prices significantly above the value ascribed to them by Alliqua in the period following the distribution. Such a higher valuation may cause a larger reduction in the tax basis of a stockholder's shares of Alliqua common stock or may cause a stockholder to recognize additional dividend or capital gain income.

Termination of the Merger Agreement

The Merger Agreement may be terminated at any time before the closing of the Merger, whether before or after the required stockholder approvals to complete the Merger, issue additional Alliqua common stock and consummate the reverse stock split, as applicable, have been obtained, as set forth below:

- by mutual written consent of Adynxx and Alliqua duly authorized by each of their respective boards of directors;

- by either Alliqua or Adynxx if the Merger has not been consummated by the six months after the date of the Merger Agreement (the "End Date"); provided, however, in the event that the SEC has not concluded its review of the preliminary proxy statement by the date which is sixty (60) days prior to the End Date, then Alliqua shall be entitled to extend the End Date for an additional sixty (60) days;

- by either Alliqua or Adynxx if a court of competent jurisdiction or governmental, regulatory or administrative agency or commission will have issued a non-appealable final order, decree or ruling or taken any other action, in each case having the effect of permanently restraining, enjoining or otherwise prohibiting the Merger;

- by Alliqua if Adynxx stockholder approval was not obtained by the applicable deadline as set forth in the Merger Agreement, subject to certain exceptions;

- by Adynxx if Alliqua stockholder approval was not obtained by the applicable deadline as set forth in the Merger Agreement, subject to certain exceptions;

- by either Alliqua or Adynxx, if Alliqua's stockholder meeting was held and the stockholder approval contemplated by the Merger Agreement was not obtained thereat, subject to certain exceptions;

- by Alliqua if (i) Adynxx's board of directors has effected a change in its recommendation and (ii) Adynxx's stockholder approval was not obtained by the applicable deadline as set forth in the Merger Agreement;

- by Adynxx if (i) Alliqua's board of directors has effected a change in its recommendation and (ii) Alliqua's stockholder approval was not obtained by the applicable deadline as set forth in the Merger Agreement;

- by Alliqua upon breach of any of the representations, warranties, covenants or agreements on the part of Adynxx set forth in the Merger Agreement, or if any representation or warranty of Adynxx will have become inaccurate, in either case such that certain conditions in the Merger Agreement would not be satisfied as of the time of such breach or as of the time such representation or warranty will have become inaccurate; provided, however, if such breach or inaccuracy is curable by Adynxx, then the Merger Agreement will not terminate pursuant to this section as a result of such particular breach or inaccuracy unless the breach or inaccuracy remains uncured as of the tenth (10th) business

day following the date of written notice given by Alliqua to Adynxx of such breach or inaccuracy and its intention to terminate the agreement pursuant to this Section; provided, further that no termination may be made pursuant to this Section solely as a result of the failure of Adynxx to obtain Adynxx's stockholder approval;

- by Alliqua upon breach of any of the representations, warranties, covenants or agreements on the part of Adynxx or Merger Sub set forth in the Merger Agreement, or if any representation or warranty of Alliqua or Merger Sub will have become inaccurate, in either case such that certain conditions set forth in the Merger Agreement would not be satisfied as of the time of such breach

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or as of the time such representation or warranty will have become inaccurate; provided, however, if such breach or inaccuracy is curable by Alliqua or Merger Sub, then the Merger Agreement will not terminate pursuant to this section as a result of such particular breach or inaccuracy unless the breach or inaccuracy remains uncured as of the tenth (10th) business day following the date of written notice given by Adynxx to Alliqua of such breach or inaccuracy and its intention to terminate the agreement pursuant to this section; provided, further, that no termination may be made pursuant to this section solely as a result of the failure of Alliqua to obtain Alliqua's stockholder approval.

Termination Fees

Fee payable by Alliqua

Alliqua must pay Adynxx a termination fee of $249,000 thousand if the Merger Agreement was terminated:

- by Adynxx because Alliqua's stockholder approval was not obtained by the applicable deadline as set forth in the Merger Agreement, subject to certain exceptions;

- by Adynxx because Alliqua's stockholder meeting was held and the stockholder approval contemplated by the Merger Agreement was not obtained thereat, subject to certain exceptions; or

- by Adynxx because (i) Alliqua's board of directors has effected a change in its recommendation and (ii) Alliqua's stockholder approval was not obtained by the applicable deadline as set forth in the Merger Agreement.

Fee payable by Adynxx

Adynxx must pay Alliqua a termination fee of $249,000 if the Merger Agreement was terminated:

- by Alliqua because Adynxx's stockholder approval was not obtained by the applicable deadline as set forth in the Merger Agreement, subject to certain exceptions;

- by Alliqua because Alliqua's stockholder meeting was held and the stockholder approval contemplated by the Merger Agreement was not obtained thereat, subject to certain exceptions; or

- by Alliqua because (i) Adynxx's board of directors has effected a change in its recommendation and (ii) Adynxx's stockholder approval was not obtained by the applicable deadline as set forth in the Merger Agreement.

Amendment

The Merger Agreement may be amended by the parties at any time, except that after the Merger Agreement has been adopted and approved by the stockholders of Alliqua or Adynxx, no amendment which by law requires further approval by the stockholders of Alliqua or Adynxx, as the case may be, shall be made without such further approval.

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## AGREEMENTS RELATED TO THE MERGER

### Lock-up Agreements

#### Adynxx

As a condition to the closing of the Merger, Adynxx's directors, executive officers and certain stockholders, who beneficially held approximately 89.0% of Adynxx's capital stock on October 11, 2018, have entered into lock-up agreements, pursuant to which such parties have agreed not to, except in limited circumstances, transfer, grant an option with respect to, sell, exchange, pledge or otherwise dispose of, or encumber any shares of Alliqua capital stock prior to the closing of the Merger, and the combined company's common stock thereafter, for 180 days following the Effective Time.

#### Alliqua

As a condition to the closing of the Merger, Alliqua's directors and executive officers, who beneficially held approximately 10% of Alliqua's capital stock on October 11, 2018, have entered into lock-up agreements, pursuant to which such parties have agreed not to, except in limited circumstances, transfer, grant an option with respect to, sell, exchange, pledge or otherwise dispose of, or encumber any shares of Alliqua capital stock prior to the closing of the Merger, and the combined company's common stock thereafter, for 180 days following the Effective Time.

### Stockholder Voting Agreements

#### Adynxx

Certain Adynxx stockholders are party to voting agreements with Adynxx pursuant to which, among other things, each such stockholder agreed, solely in their capacity as an Adynxx stockholder, to execute and deliver to Adynxx an irrevocable written consent to approve the transactions contemplated by the Merger Agreement and, at any duly called meeting of Adynxx stockholders, to vote all of their shares of Adynxx capital stock in favor of the transactions contemplated by the Merger Agreement and against any actions that could adversely affect the consummation of the Merger. The voting agreements also place certain restrictions on the transfer of the shares of Adynxx held by the signatories thereto. The parties to these voting agreements are:

- Rick Orr
- Julien Mamet
- Dennis Podlesak
- Eckard Weber
- TPG Biotechnology Partners IV, L.P.

#### Alliqua

Certain Alliqua stockholders are party to voting agreements with Alliqua pursuant to which, among other things, each of such stockholders agreed, solely in their capacity as a stockholder, to vote all of their shares of Alliqua common stock in favor of the approval of the transactions contemplated by the Merger Agreement and against any actions that could adversely affect the consummation of the Merger. The voting agreements also place certain restrictions on the transfer of the shares of Alliqua held by the signatories thereto. The parties to these voting agreements are:

- David Johnson
- Mark Wagner

- Joseph Leone
- Gary Restani
- Jeffrey Sklar
- Joseph Warusz

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MATTERS BEING SUBMITTED TO A VOTE OF ALLIQUA STOCKHOLDERS

Proposal 1: Approval of the Issuance of Common Stock in the Merger

General

At the Special Meeting, Alliqua's stockholders will be asked to approve the issuance of Alliqua's common stock pursuant to the Merger Agreement and the resulting "change of control" of Alliqua under Nasdaq rules. Immediately following the Effective Time of the Merger, Adynxx's equityholders will own approximately 86% of the combined company and Alliqua's equityholders will own approximately 14% of the combined company, subject to adjustment of the Exchange Ratio as described in detail in this proxy statement. If Adynxx raises more than $10,000,000 in a financing (including the conversion of convertible promissory notes outstanding as of the date of the Merger Agreement) up to $20,000,000, then the Exchange Ratio will be ratably adjusted on a sliding scale such that Adynxx's stockholders immediately prior to the Merger will own up to approximately 90% of the outstanding equity of Alliqua immediately following the Effective Time and Alliqua's stockholders will own approximately 10% of the combined company. Without giving effect to the proposed reverse stock split of Alliqua common stock described elsewhere in this proxy statement and assuming that Adynxx does not raise more than $10,000,000 in such financing, and based on the foregoing percentages as of January 18, 2019 if such date were the closing date of the Merger, the Exchange Ratio for the Adynxx share capital would be approximately 0.22 shares of Alliqua common stock for each share of Adynxx share capital. See the section entitled "The Merger Agreement — Exchange Ratio" beginning on page 79 of this proxy statement. The terms of, reasons for and other aspects of the Merger Agreement and the issuance of Alliqua's common stock pursuant to the Merger Agreement are described in detail in the other sections of this proxy statement.

The full text of the Merger Agreement is attached to this proxy statement as Annex A and Annex B.

Required Vote; Recommendation of Board of Directors

The affirmative vote of the majority of votes cast affirmatively or negatively is required to approve Proposal 1. A failure to submit a proxy card or vote at the Special Meeting, or, assuming a quorum is met, an abstention or "broker non-vote" will have no effect on the outcome of Proposal 1.

ALLIQUA'S BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT ALLIQUA'S STOCKHOLDERS VOTE "FOR" PROPOSAL 1 TO APPROVE THE ISSUANCE OF ALLIQUA'S COMMON STOCK PURSUANT TO THE MERGER AGREEMENT AND THE RESULTING "CHANGE OF CONTROL" OF ALLIQUA UNDER NASDAQ RULES.

Proposal 2: Approval of the Reverse Stock Split

General

At the Special Meeting, Alliqua's stockholders will be asked to approve an amendment to Alliqua's amended and restated certificate of incorporation to effect a reverse stock split of the issued and outstanding shares of Alliqua's common stock. Upon the effectiveness of the amendment to Alliqua's amended and restated certificate of incorporation effecting the reverse stock split, the outstanding shares of Alliqua's common stock will be combined into a lesser number of shares such that one share of Alliqua's common stock will be issued for a specified number of shares, which shall be greater than and equal to or less than 20, of outstanding Alliqua common stock, with the exact number within the range to be mutually agreed upon by Alliqua and Adynxx prior to the Effective Time of such amendments and publicly announced by Alliqua. The board of directors of Alliqua intends to effect a reverse stock split of the shares of Alliqua common stock at a ratio of between one-for-two to one-for-twenty. The proposed amendment to the certificate of incorporation will effect the reverse stock split, as more fully described below, but will not change the number of authorized shares, or the par value, of Alliqua's common stock.

If Proposal 2 is approved, the reverse stock split would become effective as soon as reasonably practicable, provided Alliqua's board of directors still believes that a reverse stock split is in the best interests of Alliqua and its stockholders at such time. Only one reverse stock split may be effected in

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connection with this Proposal 2. Alliqua's and Adynxx's decision will be based on a number of factors, including market conditions, existing and expected trading prices for Alliqua's common stock and the listing requirements of Nasdaq. Even if the stockholders approve the reverse stock split, Alliqua reserves the right not to effect the reverse stock split if Alliqua's board of directors does not deem the reverse stock split to be in the best interests of Alliqua and its stockholders. Alliqua's board of directors may determine to effect the reverse stock split, if it is approved by the stockholders, even if the other proposals to be acted upon at the meeting are not approved, including the issuance of shares of Alliqua's common stock in the Merger and the resulting "change of control" of Alliqua under Nasdaq rules.

Nasdaq Requirements for Listing on Nasdaq

Alliqua's common stock is currently listed on Nasdaq under the symbol "ALQA."

According to Nasdaq rules, an issuer must, in a case such as this, apply for initial inclusion following a transaction whereby the issuer combines with a non-Nasdaq entity, resulting in a change of control of the issuer and potentially allowing the non-Nasdaq entity to obtain a Nasdaq listing. These are referred to as Nasdaq's "reverse merger" rules. Accordingly, the listing standards of Nasdaq will require Alliqua to have, among other things, a $4.00 per share (or, to the extent applicable, $3.00 per share) minimum bid price upon the Effective Time of the Merger. Because the current price of Alliqua common stock is less than the required minimum bid prices, the reverse stock split is necessary to obtain approval of the listing of the combined company and the shares of Alliqua common stock being issued in the Merger on either Nasdaq.

Additionally, Alliqua's board of directors believes that maintaining its listing on Nasdaq may provide a broader market for Alliqua's common stock and facilitate the use of Alliqua's common stock in financing and other transactions. Alliqua's board of directors believes the reverse stock split is a means of maintaining the share price of Alliqua's common stock following the Merger above $4.00 per share or, to the extent applicable, $3.00 per share.

One of the effects of the reverse stock split will be to effectively increase the proportion of authorized shares which are unissued relative to those which are issued. This could result in the combined company being able to issue more shares without further stockholder approval. Alliqua currently has no plans to issue shares, other than in connection with the Merger, and to satisfy obligations under Alliqua's employee stock options and warrants from time to time as these options and warrants are exercised. The reverse stock split will not affect the number of authorized shares of Alliqua's common stock, which will continue to be 120,000,000.

Principal Effects of the Reverse Stock Split

If the stockholders approve the proposal to implement the reverse stock split and Alliqua's board of directors implements the reverse stock split, Alliqua will amend Alliqua's amended and restated certificate of incorporation to effect the reverse stock split. The text of the form of the proposed amendment to Alliqua's certificate of incorporation is attached to this proxy statement as Annex L.

The reverse stock split will be effected simultaneously for all outstanding shares of Alliqua's common stock. The reverse stock split will affect all of Alliqua's stockholders uniformly and will not affect any stockholder's percentage ownership interests in Alliqua, except to the extent that the reverse stock split results in any of Alliqua's stockholders owning a fractional share. Common stock issued pursuant to the reverse stock split will remain fully paid and nonassessable. The reverse stock split will not affect Alliqua's continuing to be subject to the periodic reporting requirements of the Exchange Act.

As of the effective time of the reverse stock split, Alliqua will adjust and proportionately decrease the number of shares of Alliqua's common stock reserved for issuance upon exercise of, and adjust and proportionately increase the exercise price of, all options and warrants and other rights to acquire Alliqua's common stock. In addition, as of the effective time of the reverse stock split, Alliqua will adjust and proportionately decrease the total number of shares of Alliqua's common stock that may be the subject of the future grants under Alliqua's stock option plans.

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As an example, the following table illustrates the effects of a 10-for-1 and a 20-for-1 reverse stock split (without giving effect to the treatment of fractional shares) as of September 30, 2018:

| | Prior to Reverse Stock Split | After 10-for-1 Reverse Stock Split | After 20-for-1 Reverse Stock Split |
|---|---|---|---|
| Common stock outstanding | 5,005,210 | 500,521 | 250,260 |
| Common stock issuable pursuant to outstanding equity awards | 743,194 | 74,319 | 37,159 |

Procedure for Effecting Reverse Stock Split and Exchange of Stock Certificates

If Alliqua's stockholders approve the proposal to effect the reverse stock split, and if Alliqua's board of directors still believes that a reverse stock split is in the best interests of Alliqua and its stockholders, Alliqua and Adynxx will mutually determine the ratio of the reverse stock split to be implemented. Alliqua will file the certificate of amendment with the Secretary of State of the State of Delaware immediately prior to the Effective Time of the Merger. Alliqua's board of directors may delay effecting the reverse stock split without resoliciting stockholder approval. Beginning on the effective date of the reverse stock split, each certificate representing pre-split shares will be deemed for all corporate purposes to evidence ownership of post-split shares.

As soon as practicable after the effective date of the reverse stock split, stockholders will be notified that the reverse stock split has been effected. Alliqua expects that Alliqua's transfer agent will act as exchange agent for purposes of implementing the exchange of stock certificates. Holders of pre-split shares will be asked to surrender to the exchange agent certificates representing pre-split shares in exchange for certificates representing post-split shares in accordance with the procedures to be set forth in a letter of transmittal to be sent by Alliqua. No new certificates will be issued to a stockholder until such stockholder has surrendered such stockholder's outstanding certificate(s) together with the properly completed and executed letter of transmittal to the exchange agent. Any pre-split shares submitted for transfer, whether pursuant to a sale or other disposition, or otherwise, will automatically be exchanged for post-split shares. STOCKHOLDERS SHOULD NOT DESTROY ANY STOCK CERTIFICATE(S) AND SHOULD NOT SUBMIT ANY CERTIFICATE(S) UNLESS AND UNTIL REQUESTED TO DO SO.

Fractional Shares

No certificates or scrip representing fractional shares of Alliqua's common stock will be issued in connection with the reverse stock split. Each holder of Alliqua's common stock who would otherwise have been entitled to receive a fraction of a share of Alliqua's common stock shall be entitled to receive, in lieu thereof, upon surrender of such holder's certificate(s) representing such fractional shares of Alliqua's common stock, cash (without interest) in an amount equal to such fractional part of a share of Alliqua's common stock multiplied by the average last reported sales price of Alliqua's common stock at 4:00 p.m., Eastern time, end of regular trading hours on Nasdaq during the 10 consecutive trading days ending on the last trading day prior to the effective date of the Merger.

By authorizing the reverse stock split, stockholders will be approving the combination of any whole number of shares of common stock between and including a number that is greater than one and less than or equal to 20 into one share. The certificate of amendment filed with the Secretary of State of the State of Delaware effecting the reverse stock split will include only that number mutually agreed by Alliqua and Adynxx. In accordance with this resolution, the board of directors will not implement any amendment providing for a different split ratio.

Alliqua's stockholders should be aware that, under the escheat laws of the various jurisdictions where stockholders reside, where Alliqua is domiciled, and where the funds will be deposited, sums due for fractional interests that are not timely claimed after the effective date of the reverse stock split may be required to be paid to the designated agent for each such jurisdiction, unless correspondence has been received by Alliqua or the exchange agent concerning ownership of such funds within the time permitted in such jurisdiction. Thereafter, stockholders otherwise entitled to receive such funds will have to seek to obtain them directly from the state to which they were paid.

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Accounting Matters

The reverse stock split will not affect the common stock capital account on Alliqua's balance sheet. However, because the par value of Alliqua's common stock will remain unchanged on the effective date of the split, the components that make up the common stock capital account will change by offsetting amounts. Depending on the size of the reverse stock split the board of directors decides to implement, the stated capital component will be reduced and the additional paid-in capital component will be increased with the amount by which the stated capital is reduced. The per share net income or loss and net book value of Alliqua will be increased because there will be fewer shares of Alliqua's common stock outstanding. Prior periods' per share amounts will be restated to reflect the reverse stock split.

Potential Anti-Takeover Effect

Although the increased proportion of unissued authorized shares to issued shares could, under certain circumstances, have an anti-takeover effect, for example, by permitting issuances that would dilute the stock ownership of a person seeking to effect a change in the composition of Alliqua's board of directors or contemplating a tender offer or other transaction for the combination of Alliqua with another company, the reverse stock split proposal is not being proposed in response to any effort of which Alliqua is aware to accumulate shares of Alliqua's common stock or obtain control of Alliqua, other than in connection with the Merger with Adynxx, nor is it part of a plan by management to recommend a series of similar amendments to Alliqua's board of directors and stockholders. Other than the proposals being submitted to Alliqua's stockholders for their consideration at the Special Meeting, Alliqua's board of directors does not currently contemplate recommending the adoption of any other actions that could be construed to affect the ability of third parties to take over or change control of Alliqua.

No Appraisal Rights

Under DGCL, Alliqua's stockholders are not entitled to appraisal rights with respect to the reverse stock split, and Alliqua will not independently provide stockholders with any such right.

Material U.S. Federal Income Tax Consequences of the Reverse Stock Split

The following is a summary of certain material U.S. federal income tax consequences of the reverse stock split. It does not purport to be a complete discussion of all of the possible U.S. federal income tax consequences of the reverse stock split and is included for general information only. Further, it does not address any state, local or foreign income or other tax consequences. This discussion does not address the tax consequences to holders that are subject to special tax rules, such as banks, insurance companies, regulated investment companies, personal holding companies, foreign entities, nonresident alien individuals, broker-dealers and tax-exempt entities. The discussion is based on the provisions of the U.S. federal income tax law as of the date hereof, which are subject to change retroactively as well as prospectively. This summary also assumes that the shares of Alliqua's common stock held by stockholders before the reverse stock split were, and the shares of common stock held after the reverse stock split will be, held as "capital assets," as defined in the Code. The tax treatment of a stockholder may vary depending upon the particular facts and circumstances of such stockholder. Each stockholder is urged to consult with such stockholder's own tax advisor with respect to the tax consequences of the reverse stock split.

Alliqua stockholders generally will not recognize gain or loss as a result of the reverse stock split. The aggregate adjusted tax basis in the shares of Alliqua common stock received pursuant to the reverse stock split will equal the aggregate adjusted tax basis of the shares of Alliqua common stock exchanged therefor. In general, each Alliqua stockholder's holding period for the shares of Alliqua common stock received pursuant to the reverse stock split will include the holding period in the shares of Alliqua common stock exchanged therefor. Alliqua stockholders that acquired Alliqua common stock on different dates and at different prices should consult their tax advisors regarding the allocation of the tax basis and holding period of such shares.

This summary of certain material U.S. federal income tax consequence of the reverse stock split is not binding on the Internal Revenue Service or the courts. Accordingly, each stockholder should consult with his or her own tax advisor with respect to all of the potential tax consequences to him or her of the reverse stock split.

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Vote Required; Recommendation of Board of Directors

The affirmative vote of holders of a majority of the outstanding shares of Alliqua's common stock entitled to vote at the Special Meeting is required for approval of Proposal 2. A failure to submit a proxy card or to vote at the Special Meeting, or an abstention for Proposal 2 will have the same effect as a vote against the approval of Proposal 2.

ALLIQUA'S BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT ALLIQUA STOCKHOLDERS VOTE "FOR" PROPOSAL 2 TO AMEND ALLIQUA'S CERTIFICATE OF INCORPORATION TO EFFECT THE REVERSE STOCK SPLIT.

Proposal 3: Approval of Possible Adjournment of the Special Meeting

General

If there are insufficient votes at the time of the Special Meeting to approve Proposals 1 or 2, the Special Meeting may be adjourned to another time or place, if necessary or appropriate, to permit, among other things, further solicitation of proxies if necessary to obtain additional votes in favor of Proposals 1 and 2, as applicable. Alliqua currently does not intend to propose adjournment at the Special Meeting if there are sufficient votes to approve Proposals 1 and 2.

If, at the Special Meeting, the number of shares present or represented by proxy and voting in favor of Proposals 1 and 2 is insufficient to approve the corresponding proposal, Alliqua intends to move to adjourn or recess the Special Meeting in order to enable the board of directors to solicit additional proxies for approval of such proposal.

In Proposal 3, Alliqua is asking its stockholders to authorize the holder of any proxy solicited by the board of directors to vote in favor of granting discretionary authority to the proxy holders, and each of them individually, to adjourn the Special Meeting to another time and place for the purpose of soliciting additional proxies. If the stockholders approve Proposal 3, Alliqua could adjourn the Special Meeting and use the additional time to solicit additional proxies, including the solicitation of proxies from stockholders of Alliqua who have previously voted.

Vote Required; Recommendation of Board of Directors

The affirmative vote of the majority of votes cast affirmatively or negatively is required to approve the adjournment of the Special Meeting for the purpose of soliciting additional proxies to approve Proposals 1 or 2. A failure to submit a proxy card or vote at the Special Meeting, or an abstention will have no effect on the outcome of Proposal 3.

ALLIQUA'S BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT ALLIQUA'S STOCKHOLDERS VOTE "FOR" PROPOSAL 3 TO ADJOURN THE SPECIAL MEETING, IF NECESSARY, IF A QUORUM IS PRESENT, TO SOLICIT ADDITIONAL PROXIES IF THERE ARE NOT SUFFICIENT VOTES IN FAVOR OF PROPOSALS 1 OR 2.

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ALLIQUA BUSINESS

For a description of Alliqua's business, please refer to the section entitled "Item 1. Business" set forth in Alliqua's Annual Report on Form 10-K for the year ended December 31, 2017, included as Annex C and Annex D to this proxy statement, which section is incorporated by reference herein. For a description of legal proceedings Alliqua is party to, please refer to the section entitled "Item 3. Legal Proceedings" set forth in Alliqua's Annual Report on Form 10-K for the year ended December 31, 2017, included as Annex C to this proxy statement, and the section entitled "Item 1. Legal Proceedings" set forth in Alliqua's Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2018, June 30, 2018 and September 30, 2018, included as Annex E, Annex F and Annex G to this proxy statement, as filed with the SEC on May 14, 2018, August 10, 2018 and October 26, 2018, respectively, which sections are incorporated by reference herein.

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ADYNXX BUSINESS

Overview

Adynxx is a clinical stage biopharmaceutical company focused on bringing to market novel, disease-modifying products for the treatment of pain and inflammation. Since its founding in 2007, Adynxx has worked to discover and develop transcription factor decoys to modify the course of pain. Adynxx's resulting pipeline includes brivoligide, a Phase 2 drug candidate intended to address postoperative pain in a readily-identified group of patients with a greater risk of experiencing increased pain and elevated opioid use following surgery, and AYX2, a pre-clinical candidate intended to treat chronic syndromes of pain, including both inflammatory and neuropathic pain. Both programs were discovered by Adynxx and are part of the AYX decoy technology platform. Adynxx plans to continue development of brivoligide and AYX2, plans to collaborate with twoXAR to use twoXAR's artificial intelligence-driven drug discovery platform to identify endometriosis treatments, and also seeks to identify potential in-licensing opportunities to build a pipeline of complementary product candidates in pain and inflammation.

Brivoligide (formerly AYX1) is an intrathecally-administered, 23 base-pair, double-stranded DNA transcription factor decoy oligonucleotide. It inhibits the transcription factor EGR1 in the dorsal root ganglia ("DRG") and spinal cord at the time of surgery. EGR1 binds to the promoter regions of many genes associated with nociceptive sensitization and increased pain. EGR1 launches waves of gene regulation at the time of surgery that initiate and maintain neuronal sensitization. This sensitization may lead to increased and prolonged postoperative pain in certain patients, who are relatively insensitive to analgesics and may be at high risk for elevated use of rapidly acting opioids, the type most commonly associated with Opioid Use Disorder ("OUD"). These patients are readily identified using the PCS and represent approximately one third of the surgical population. To date, brivoligide has been evaluated in four clinical studies: a Phase 1 safety study in healthy volunteers (ADYX-001) and three Phase 2 studies in subjects undergoing unilateral TKA (ADYX-002, -003 and -004). A total of 264 subjects have received a single intrathecal administration of brivoligide injection in doses ranging from 1.25 mg/3 mL to 1100 mg/10 mL (Table 1). No safety concerns related to brivoligide have been identified following administration.

In the Phase 2 studies, brivoligide was administered once intrathecally immediately prior to surgery and subjects were followed for 42 days or 90 days, depending on the study. PCS scores were collected pre-surgery in all studies. In the ADYX-003 study, the primary endpoint of reduction of pain with walking (using the NRS) during the day seven to 28 period was met in the 660 mg/6 mL brivoligide treatment group.

In ADYX-004, the same 660 mg/6 mL dose of brivoligide was used, subject randomization was stratified by PCS score and certain analyses were pre-specified based on PCS including total opioid consumption and time to achieve mild pain. The same primary endpoint used in ADYX-003 was not met in the ADYX-004 study in the total study population but the endpoints pre-specified by PCS scores of greater than or equal to 20 (≥20) and less than 20 (<20) indicated that brivoligide effect was concentrated in subjects with high PCS scores. A retrospective analysis of subjects with high PCS score in ADYX-002 and ADYX-003 trials evidenced a similar, consistent effect of brivoligide concentrated in the high PCS scoring population. Whereas in the ADYX-004 study patient data were stratified in a pre-specified fashion based on PCS scores of ≥20, a meta-analysis of brivoligide data from each of the three Phase 2 studies conducted to date suggests that a wider range of responders to brivoligide can be identified with a PCS score of ≥16, a score commonly referenced in the literature as a threshold for high pain catastrophizing. Consistent with the targeted action of brivoligide, little beneficial effect was observed in subjects scoring below 16.

In December 2018, Adynxx received Notice of Award from NIDA, part of the NIH, for an award to support the clinical development of the company's lead product candidate, brivoligide. The funding opportunity (RFA-DA-19-002), titled "Development of Medications to Prevent and Treat Opioid Use Disorders and Overdose," is a UG3/UH3 Phase Innovation Awards Cooperative Agreement involving two phases. The UG3 phase is to support a project with specific milestones to be accomplished by the end of the two-year period. The UH3 phase is to provide funding for three years to a project that successfully completed the milestones set in the UG3 phase. Application budgets are limited to $3 million direct costs per year and UG3 projects that have met their milestones will be considered by NIDA and prioritized for transition to the UH3 phase, with the total funding currently expected to be available under both the UG3 and UH3 phases to be a maximum of $15 million in direct costs. The grant award will provide Adynxx with

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$5.7 million over the two-year UG3 phase to complete a Phase 2 study of brivoligide in patients undergoing mastectomy with immediate tissue expander or implant placement that score high on the Pain Catastrophizing Scale (PCS). Following completion of milestones related to the Phase 2 mastectomy study, Adynxx can receive an additional award of up to $9 million over three years for a Phase 3 study of brivoligide.

AYX2 is the second product candidate in Adynxx's pipeline originating from the AYX platform, and is a transcription factor decoy targeting the activity of Kruppel-like Factors ("KLF") 6, 9, and 15. It is developed for the treatment of chronic pain from multiple etiologies, including chronic neuropathic pain. Chronic pain is a dynamic state maintained at the genomic level by dynamic transcriptomes shaped by select transcription factors. Adynxx preclinical work showed that KLF6, KLF9, and KLF15 transcription factors are important to this process. The intrathecal administration of KLF decoys binding to KLF6, KLF9, and KLF15 can alleviate weeks of mechanical hypersensitivity in the spared nerve injury ("SNI") and chronic constriction injury ("CCI") models, which are well-understood rat models of chronic neuropathic pain. Specifically, the KLF decoys produced up to a 60% to 70% reduction in mechanical hypersensitivity in these models compared to animals treated with a vehicle solution, and the effect lasted several weeks until hypersensitivity was also resolving in control animals.

Adynxx believes that its transcription factor decoy technology can transform the treatment of pain, and going forward has the potential to be applied to additional disease states. Adynxx has a highly experienced management team whose members have, in the course of their prior employment, participated in bringing more than 10 product candidates through regulatory approval and into commercialization. Adynxx plans to leverage its management team's breadth and depth of experience in clinical and regulatory drug development as well as market development and commercialization to continue to develop existing product candidates, discover and develop additional product candidates in house using the AYX platform.

In June 2018, Adynxx entered into a collaboration with twoXAR, an artificial intelligence-driven drug discovery company, in order to identify product candidates for the treatment of endometriosis. Through this collaboration, Adynxx seeks to identify medical treatments with disease-modifying potential to treat or prevent the recurrence of endometriosis and associated symptoms and address the large unmet medical need of that therapeutic area. Through internal discovery and partnerships to identify externally developed product candidates, Adynxx intends to build a diverse pipeline with multiple opportunities to address unmet medical needs in pain and inflammation.

Business Model and Management Team

Adynxx plans to continue advancing its AYX platform programs while simultaneously evaluating in-licensing opportunities in order to expand its pipeline and leverage its business development, clinical development, regulatory and commercial expertise. Adynxx believes its management team has the capability and experience to continue to execute this model. Adynxx's management team has worked, in some cases together, in other private biotechnology companies such as Corthera, Cerexa, Calixa, NovaCardia, and Peninsula Pharmaceuticals, each of which was acquired by a larger pharmaceutical industry company. Adynxx's management also has previous work experience at public pharmaceutical companies, including Novartis, Celgene, Neurocrine, Shionogi, Alpharma, King Pharmaceuticals, and Forest Laboratories.

Adynxx's Strategy

Adynxx is a biotechnology company focused on developing disease-modifying products for the treatment of pain and inflammatory diseases. Adynxx's lead product candidate, brivoligide (formerly AYX1), is intended to reduce the duration and severity of postoperative pain in patients at risk for experiencing increased and prolonged pain and greater than average opioid utilization. Adynxx's second product candidate, AYX2, is intended to treat chronic syndromes of pain, including both inflammatory and neuropathic pain such as radiculitis (nerve inflammation) and radiculopathy (nerve deficit). Both programs were discovered by Adynxx and are part of the Adynxx AYX decoy technology platform. In addition to the continued development of brivoligide and AYX2, Adynxx is currently collaborating with twoXAR to use

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twoXAR's artificial intelligence-driven drug discovery platform to identify endometriosis treatments. Adynxx's goal is to be a leader in the development and commercialization of novel therapeutics for pain and inflammation. Adynxx's focus to achieve this goal will be to utilize its experience and capabilities to:

- Advance its existing product candidates through late-stage clinical trials, generating meaningful clinical results;
- Work with U.S. and international regulatory authorities for expeditious, efficient development pathways toward registration;
- Prepare for commercialization of each program;
- Use Adynxx's expertise in transcription factor decoy drug development to discover and develop additional transcription factor decoy product candidates targeting a range of inflammation- related diseases;
- Collaborate with twoXAR to use AI-driven drug discovery technology to identify novel drug candidates for the treatment of endometriosis;
- Use Adynxx's industry and academic relationships and experience to source, evaluate and in-license well-characterized product candidates to continue pipeline development; and
- Identify potential commercial or distribution partners for Adynxx's product candidates in relevant territories.

Transcription Factor Decoy Technology

Adynxx has expertise in the discovery and development of transcription factor decoy therapeutics through the AYX platform. Transcription factor decoys are small, synthetic, double-stranded DNA oligonucleotides that competitively inhibit transcription factor activity by binding to transcription factors and preventing their interaction with chromosomal DNA (Figure 1). Transcription factor decoys are a class of drugs developed specifically to inhibit transcription factors, a class of target otherwise difficult to address due to their remote location in the nuclei of cells. Using a high throughput transcription factor enzyme-linked immunosorbent assay, or ELISA, screening assay approach, Adynxx discovers and develops transcription factor decoys that are designed with specificity and affinity and size parameters suitable for clinical application.

Figure 1:

Transcription Factor Decoy Mechanism of Action

Transcription Factor Decoy Mechanism of Action. (A) A transcription factor ("TF") binds its response element along genomic DNA to trigger gene expression. (B) A TF decoy mimics the endogenous genomic DNA sequence normally

bound by its TF target. The mechanism of action is direct; by binding its TF target, the decoy prevents it from further binding to genomic DNA, and thus blocks gene expression.

The AYX platform drug candidates are currently focused on postoperative pain and pre-existing chronic pain. Adynxx plans to leverage its expertise in transcription factor decoy drug discovery and development to identify additional product candidates in inflammation related disease states including but not limited to organ fibrosis, myocardial infarction, and immuno-oncology.

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Adynxx's Product Candidates

Brivoligide for Postoperative Pain

Brivoligide is a transcription factor decoy oligonucleotide drug candidate specifically designed to inhibit EGR1 function. Adynxx proposes that the inhibition of EGR1 and of the EGR1-driven cascade of gene regulations and subsequent protein synthesis in the dorsal horn of the spinal cord and/or DRG by brivoligide in the critical perioperative period leads to a reduction in the severity and duration of acute postoperative pain and a suppression of the transition to persistent pain and nociceptive hypersensitivity normally associated with surgery. Brivoligide has been evaluated in four clinical studies: a Phase 1 dose-escalating safety study in healthy volunteers and three Phase 2 studies in subjects undergoing unilateral TKA. A total of 264 subjects have received a single intrathecal administration of brivoligide injection in doses ranging from 1.25 mg/3 mL to 1100 mg/10 mL. No safety concerns related to brivoligide have been identified following brivoligide administration.

In the Phase 2 studies, brivoligide was administered once intrathecally immediately prior to surgery and subjects were followed for 42 days or 90 days, depending on the study. PCS scores were collected prior to surgery in all studies. In the initial Phase 2 study, ADYX-002, brivoligide 330 mg/3 mL did not demonstrate a statistically significant difference from placebo for the primary endpoint of reduction in pain with walking from day seven to 28 after TKA surgery. In the subsequent Phase 2 study, ADYX-003, the primary endpoint of reduction of pain with walking (using the NRS) during the period from day seven to day 28 was met in the 660 mg/6 mL brivoligide treatment group.

In the most recently completed study, ADYX-004, the same 660 mg/6 mL dose of brivoligide was used, subject randomization was stratified by PCS score and certain analyses were pre-specified based on PCS including total opioid consumption and time to achieve mild pain. Although the same primary endpoint used in ADYX-003 was not met in the ADYX-004 study in the total study population, the endpoints pre-specified by PCS score (<20 and ≥20) indicated that brivoligide effect was concentrated in subjects with high PCS scores. A retrospective analysis of subjects with high PCS score in ADYX-002 and ADYX-003 trials evidenced a similar, consistent effect of brivoligide concentrated in the high PCS scoring population. Whereas in the ADYX-004 study, patient data were stratified in a pre-specified fashion based on PCS scores of ≥20, a meta-analysis of brivoligide data from each of the three Phase 2 studies conducted to date suggests that a wider range of responders to brivoligide can be identified with a PCS score of ≥16, a score commonly referenced in the literature as a threshold for high pain catastrophizing. Consistent with the targeted action of brivoligide, little beneficial effect was observed in subjects scoring below 16.

About Postoperative Pain and Pain Catastrophizing

Currently there are more than 50 million surgical procedures performed in the United States annually and postoperative pain remains a significant clinical problem compromising rehabilitation and health-related quality of life. There is significant heterogeneity in the experience and resolution of postoperative pain. The pain can be severe in 2% to 10% of patients, and the duration can vary, lasting from three to six months to years or even decades. In the days immediately following surgery, the more severe the pain is, the greater the likelihood that patients will experience prolonged pain. Severe postoperative pain can also result in increased opioid use, prolonged hospital stays, poorer prognosis, and even increased morbidity and mortality compared to people with less intense pain.

Although there is limited evidence characterizing the typical trajectory of pain following surgery, there is some evidence that the period between 10 and 21 days after surgery is the most common time to return to normal sensory processing. This may also be a critical time in the transition from acute to chronic pain. Sustained pain that continues beyond the postoperative recovery period is relatively common, but underacknowledged. It is difficult to know the exact prevalence of chronic postoperative pain, but estimates range between 10% and 50% and vary by the type of surgery performed. For thoracotomies, an invasive surgery that involves substantial nerve and tissue damage, chronic postoperative pain is estimated to occur approximately 50% of the time. For total knee replacements or TKA, chronic pain occurs in one in five patients or 20%. For mastectomies and breast lumpectomies, the prevalence appears to be higher; with chronic post-surgical pain reported in 25% to 60% of breast cancer survivors.

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Adynxx estimates that there are approximately 16 million surgical procedures performed annually in the United States that typically result in a sufficient duration and severity of postoperative pain to warrant brivoligide administration, as summarized in Table 1.

Table 1: Estimated annual procedures appropriate for brivilogide (HCUP 2013 data)

| Procedure classes | HCUP 2013 Inpatient Procedures | HCUP 2013 ASC/Outpatient Procedures |
|---|---|---|
| TKA (incl. revisions) | 734,370 | 80,220 |
| LEOS | 734,120 | 40,863 |
| Hip arthroplasty (incl. revisions and partial) | 491,155 | 14,991 |
| Spine/Back | 846,155 | 286,479 |
| Other Ortho | 1,359,795 | 894,014 |
| Thoractomy – Lob/Seg | 89,015 | 1,691 |
| Other Thoracotomy | 294,435 | 48,497 |
| Breast procedures | 89,145 | 791,253 |
| Abdominal | 531,960 | 659,205 |
| Cardiac | 444,145 | 40,320 |
| Genitourinary | 486,495 | 513,191 |
| Hernia | 174,355 | 821,862 |
| Lower Gastrointestinal | 625,390 | 121,835 |
| OB/Gyn | 849,015 | 818,288 |
| Upper Gastrointestinal | 429,975 | 107,409 |
| Vascular | 1,406,495 | 363,377 |
| Other | | 806,891 |
| Total | 9,586,020 | 6,410,382 |

Nociceptive system sensitization results from a specific form of plasticity in the DRG and the spinal cord that amplifies nociceptive signaling. Following a strong noxious stimulus such as surgery, the nociceptive system is activated in a sequential fashion starting with nociceptive C-fiber activation. This ultimately leads to persistent alterations in nociceptor phenotype driven by the engagement of new transcriptional programs. These long-term transcriptional changes also occur in spinal cord neurons and those combined alterations lead to synaptic hyperexcitability and long-term potentiation (“LTP”). The sensitized nociceptive system at the DRG-spinal cord level has an enhanced response to activation (hyperalgesia), lower activation with low intensity stimuli experienced as painful (allodynia), and spontaneous activity. In conjunction with sensitization, tissue injury also activates descending pain inhibitory systems (also referred to as conditioned pain modulation or diffuse noxious inhibitory controls) that limit the intensity and duration of pain hypersensitivity and lower the risk of developing persistent postoperative pain. In addition to the type of surgery, variability across individuals has also been found to be associated with the severity and duration of postoperative pain. A growing body of literature indicates that the psychological construct known as pain catastrophizing is also an important factor in predicting the onset, severity, and duration of the postoperative pain experience.

Pain catastrophizing is as an amplified, negative orientation toward pain stimuli and pain experience. It is a multi-dimensional construct comprising of: rumination (ruminative thoughts, anxious preoccupation with pain, and the inability to inhibit pain-related thoughts and fears); magnification (magnification of the unpleasantness of pain situations and expectations for negative outcomes); and a sense of helplessness (perceived inability to control painful situations and experiences). It likely reflects a specific underlying physiology of pain.

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The influence of descending pain inhibition is compromised in individuals expressing a high pain catastrophizing profile. A high degree of catastrophizing is associated with an enhanced response to painful stimuli, both in intensity and duration, as well as a relative insensitivity to analgesic therapies such as opioids, gabapentin and transcutaneous electrical stimulation ("TENS"). Pain catastrophizing has been suggested to moderate the relationship between the patient's pain experience and opioid use, with increased use of short-acting opioids for any given level of pain. There is evidence for heritability of this profile, as well as functional magnetic resonance imaging evidence of enhanced descending pain facilitation, enhanced neurohumoral response and enhanced temporal summation to experimental pain stimulation consistent with an altered pain inhibition system. The development of persistent postoperative pain in individuals with high pain catastrophizing can be considered both as a pain sensitization process and a failure to adjust appropriately the descending pain modulatory pathways in response to that sensitization.

The Role of the Pain Catastrophizing Scale in Identifying Patients Who May Benefit from Brivoligide

Catastrophizing is readily assessed by the PCS and elevated PCS scores identify patients with decreased inhibitory or conditioned pain modulation. The PCS contains 13 items covering the three components of pain catastrophizing: rumination, helplessness and magnification of pain, each of which are self-rated on a 5-point scale (from zero to 4) and the total score ranges from zero to 52. The PCS has been extensively validated and the relationship between PCS and pain has been established in over 100 studies. Traditionally PCS scores are analyzed as a continuous variable with higher scores associated with higher postoperative pain and reduced analgesic sensitivity. For patient selection purposes, the PCS can be dichotomized between low and high scores, with scores ≥16 or ≥20 predictive of altered pain and analgesic response after surgery. Results from the literature and from the brivoligide study data suggest that a cut-point of ≥16 may represent a clinically relevant threshold among TKA patients to predict positive response to brivoligide. Conversely, a PCS score below 16 is a predictor of lack of response to brivoligide. Elevated PCS scores are observed in up to one third of the people presenting for surgery.

The importance of patient phenotyping to predict the response to novel therapies has been identified and recognized by the FDA. The single page PCS completed by the patient and scored by summation of the responses allows results to be easily available before the determination of perioperative anesthetic or analgesic strategy. In Adynxx's initial discussions with physicians and hospital formulary decision makers, these parties have indicated that they would be willing to incorporate the PCS assessment in their preoperative screening protocol and use the score to guide treatment and reimbursement decisions.

Publications focused on the PCS suggest that 25% to 35% of people presenting for surgery express the underlying physiological phenotype characterized by high PCS scores. Based on this, Adynxx estimates that of the approximately 16 million surgeries performed in the United States annually that typically result in a sufficient duration and severity of pain to warrant brivoligide administration, 4 million to 5.5 million patients could be candidates for brivoligide treatment.

Current Therapy for Postoperative Pain

Postoperative pain management is currently largely opioid-based and supported by adjunctive therapies and techniques such as local anesthetic nerve blocks and infiltration, all of which only provide short-term relief. The proliferation of adjunctive and alternative therapies belies the fact that there are a considerable number of patients with inadequate relief of pain, especially movement-evoked pain that is particularly insensitive to opioids. Surgery is also an important stimulus for persistent opioid use, even among those who are opioid naïve, putting patients at increased risk of developing OUD. In particular, OUD may be precipitated or exacerbated by an escalation of opioid dosing in patients with an at-risk physiology characterized by enhanced pain facilitation and lowered sensitivity to the analgesic actions, but with maintained sensitivity to the reinforcing and adverse effects of opioids. A non-opioid approach to postoperative pain relief specifically targeting the development of nociceptive sensitization after surgery is urgently needed. Based on literature review, the use of NSAIDs, opioids, ketamine, gabapentinoids, steroids and many regional anesthetic techniques does not appear to produce such a preventive effect.

Mechanisms Underlying the Relationship between Pain Catastrophizing and Postoperative Pain

The transition from acute to chronic postoperative pain is the result of an interactive process involving peripheral sensitization, central sensitization, and the descending pain modulatory network, which may be

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driven by cognitive, emotional, physiological, and immunological factors. Pain catastrophizing is one variable that plays a role in this transition; however, due to the complex multi-faceted pain modulatory system, the specific mechanisms driving this relationship are not well delineated.

In recent years, the evidence supporting a relationship between pain catastrophizing and the postoperative pain experience has contributed to a proliferation of research studies designed to elucidate the mechanisms underlying this relationship, including:

- Peripheral mechanisms. Peripheral afferent sensitization occurs when there is an increased responsiveness to the nociceptive afferent nerves that travel to the central nervous system. Two studies were identified that indicated pain catastrophizing is associated with increased muscular activity at the site of injury in patients with chronic pain, suggesting that peripheral sensitization is one component that may contribute to sustained pain post-operatively.

- Neuroimmunologic mechanisms. Acute and chronic pain are associated with an immunological response, including the release of hormones and pro-inflammatory cytokines associated with pain pathways. Preliminary evidence supports a positive relationship between pain catastrophizing and interleukin-6 ("IL-6"), a pro-inflammatory cytokine that is upregulated in acute and chronic pain. Evidence also supports the relationship between pain catastrophizing and cortisol, an adrenal glucocorticoid hormone that plays a critical role in the stress response and is associated with inflammation. Additional research is ongoing to further elucidate the neuroimmunologic mechanisms underlying the relationship between the development of chronic pain and pain catastrophizing.

- Central sensitization. Central sensitization occurs when there is increased sensitivity in the cells of the spinal dorsal horn, such that peripheral nociceptive signals are amplified, resulting in a state of enhanced reactivity to both noxious (hyperalgesia) and typically non-noxious (allodynia) stimuli. A growing body of evidence indicates that markers of central sensitization are associated with pain catastrophizing in experimental models of pain, in patients who have developed postoperative sustained pain, and in patients with chronic pain.

- Descending pain modulation. Descending systems originating in the brainstem provide top-down modulation of nociceptive signals at the spinal level. This complex network includes pathways that are both pain-inhibitory and pain-facilitatory. Several studies have demonstrated that patients with a net pain inhibitory effect that is less efficient, as measured by the conditioned pain modulation ("CPM") test, have more adverse pain outcomes relative to pain-free individuals; however, results of studies examining the relationship between descending pain modulation and pain catastrophizing are mixed and inconclusive.

Adynxx's Solution: Brivoligide for Postoperative Pain in Patients Scoring ≥16 on the PCS

Adynxx proposes the use of an innovative approach to postoperative pain in the population scoring ≥16 on the PCS, by targeting the sensitization mechanisms responsible for the exacerbation of signaling in the DRG-spinal cord nociceptive system under the influence of altered descending modulatory pathways. Adynxx's lead compound, brivoligide, is a non-opioid, non-addictive agent given a single time prior to surgery and directed at core mechanisms of nociceptive sensitization in the high PCS scoring population. Uniquely in this population, brivoligide may reduce the intensity and duration of acute pain and consequently markedly reduce opioid utilization in the postoperative period.

Pharmacology of Brivoligide

EGR1 is transiently expressed in DRG and the spinal cord in response to trauma, but also in response to a wide range of other painful stimuli, including inflammatory and neuropathic insults. Knockout and antisense studies using complementary animal pain models revealed that EGR1 is a powerful molecular switch converting transient neuronal sensitization into sustained sensitization; in its absence, early sensitization occurs but is not sustained. At the DRG and spinal cord level, EGR1 activity results in the conversion of acute/transient pain into persistent pain. Mechanistically,

EGR1 initiates an early, broad set of gene regulation waves that produce and maintain neuronal sensitization. 108

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Brivoligide is an unmodified, 23 base-pair, double-stranded DNA transcription factor decoy composed of two overlapping EGR1 binding sites with high affinity for EGR1

Inhibition of EGR1 and the cascade of protein synthesis in the dorsal horn and/or DRG by brivoligide in the critical perioperative period may lead to a reduction in the severity and duration of acute postoperative pain and a suppression of the transition to persistent pain and hypersensitivity often associated with surgery in high PCS scoring patients.

Brivoligide Clinical Data

Brivoligide has been evaluated in four clinical studies: a Phase 1 dose-escalating safety study in healthy volunteers and three Phase 2 studies in subjects undergoing unilateral TKA. A total of 264 subjects have received a single intrathecal administration of brivoligide injection in doses ranging from 1.25 mg/3 mL to 1100 mg/10 mL (Table 2). Brivoligide was shown to be well tolerated by patients in clinical trials conducted to date. In the Phase 1 study in healthy volunteers, the study drug (highest dose of 330mg/3mL) was well tolerated by all 25 people that received it. All of the AEs that were reported are among those expected when an injection in the spinal canal is given (for example, headache, backache, and nausea). In three subsequently completed Phase 2 clinical studies in TKA evaluating doses of brivoligide up to 1100mg/ 10mL, there was no meaningful difference between the study drug and placebo groups in the rate of the complications that are typically seen in patients undergoing knee replacement surgery with spinal anesthetic and receiving analgesic medication.

Table 2: Brivoligide Doses Administered

| Study Number(s) | Dose | Number of Subjects Receiving Dose |
|---|---|---|
| ADYX-001 | 1.25 mg/3 mL | 5 |
| ADYX-001 | 5 mg/3 mL | 5 |
| ADYX-001 | 20 mg/3 mL | 5 |
| ADYX-001 | 80 mg/3 mL | 5 |
| ADYX-002 | 110 mg/3 mL | 13 |
| ADYX-001 and ADYX-002 | 330 mg/3 mL | 46 |
| ADYX-003 and ADYX-004 | 660 mg/6 mL | 147 |
| ADYX-003 | 1100 mg/10 mL | 38 |

ADYX-001: The first-in-human study, ADYX-001, was a Phase 1, single center, randomized, double-blind, placebo-controlled study to evaluate the safety and tolerability of ascending dose levels of a single intrathecal injection of brivoligide versus intrathecal placebo in healthy adult subjects. Single doses of intrathecal brivoligide versus placebo were evaluated in five sequential ascending dose cohorts: 1.25 mg/3 mL, 5 mg/3 mL, 20 mg/3 mL, 80 mg/3 mL, and 330 mg/3 mL; six subjects were randomized 5:1 to receive brivoligide injection or placebo in each cohort (total n=30).

All 30 subjects (11 Male/19 Female, 19 to 56 years old) received study drug (25 subjects received brivoligide injection and five subjects received placebo) and completed the in-house and 30-day follow-up visits. A total of 41 treatment emergent adverse events (“TEAEs”) were reported in 20 of the 30 study subjects. Most of the TEAEs were consistent with an IT route of administration (backache, headache and associated nausea). All AEs were transient and resolved completely. There were no serious adverse events (“SAEs”). In addition to the safety evaluations (physical/neurological exam, vital signs, ECG, clinical labs, and concomitant medication collection), a battery of cognitive assessments was performed to evaluate any potential effects of brivoligide on memory consolidation:

- Wechsler Memory Scale (“WMS-IV”), Logos I and II (visual memory)
- WMS-IV, Logical Memory I and II (verbal memory)
- Wechsler Adult Intelligence Scale (“WAIS-IV”), Letter-Number Sequence (working memory)

- WAIS-IV, Coding (problem solving)

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The cognitive assessments were performed at screening, baseline and after dosing at two hours, eight hours, 24 hours and on Day 3. No clinically significant changes in cognitive function from baseline were observed at any dose level.

ADYX-002: ADYX-002 was a Phase 2 randomized, double-blind, placebo-controlled, adaptive study to evaluate the safety and efficacy of a single intrathecal preoperative administration of brivoligide injection at two dose levels compared to placebo in patients undergoing unilateral TKA.

ADYX-002 assessed the effect of brivoligide on acute and persistent (subacute) pain at rest and with movement as well as effects on opioid requirements in subjects undergoing unilateral TKA.

The study population consisted of medically stable healthy male and female subjects between 40 and 80 years of age, inclusive, who were scheduled to undergo primary unilateral TKA for painful osteoarthritis without congenital knee pathology with an American Society of Anesthesiologists Physical Status Classification System of ≤3. Subjects randomized to the brivoligide treatment group received a single 3 mL intrathecal brivoligide injection (110 mg/3 mL or 330 mg/3 mL) as a slow bolus just before administration of spinal anesthesia using the same needle. Subjects participated in the study for 42 days (± 5 days).

The following assessments were used to evaluate efficacy: 11-point NRS pain assessment at rest; NRS pain assessment before removal of intravenous patient controlled analgesia ("IV PCA") and before administration of opioid medication in hospital; a defined distance walk (5 meters inpatient, 15 meters outpatient) with NRS pain assessment before and after; range of motion ("ROM") with NRS pain assessments; Brief Pain Inventory ("BPI") questionnaire daily through Day 28 and at Day 42; and the collection of analgesic medication data through Day 42.

Safety profile assessments consisted of the collection of AEs and SAEs, clinical laboratory assessments, vital signs, and physical/neurological examination.

Out of 100 subjects randomized (100 subjects dosed), six withdrew and 94 completed the study post dosing. As prospectively designed in order to evaluate the appropriateness of the 330 mg/3 mL dose, after initial dosing of 30 patients randomized 1:1:1 between 3 mL placebo, 110 mg/3 mL brivoligide and 330 mg/3 mL brivoligide, the Data Monitoring Committee reviewed the data. The brivoligide 110 mg/3 mL dose arm was dropped based on a lack of safety signals in the 330 mg/3 mL group and no superiority of 110 mg/3 mL over 330 mg/3 mL for response rate and the remaining subjects were randomized to brivoligide 330 mg/3 mL or placebo 3 mL (sponsor and site personnel remained blinded to the dose arm discontinued until database lock).

Safety

Overall, 44 subjects treated with placebo, 13 subjects treated with brivoligide 110 mg/3 mL and 40 subjects treated with brivoligide 330 mg/3 mL groups reported at least one TEAE. The vast majority of the TEAEs were not considered severe. There was no evidence of brivoligide-induced AEs and none of the changes in clinical laboratory test results or vital signs signaled any tolerability concerns. Four SAEs in three subjects were reported in the brivoligide group and two SAEs in two subjects were reported in the placebo group. All SAEs were considered not related to study drug. In summary, brivoligide was shown to be well tolerated in patients.

Efficacy

For pain with walking, at rest, and with joint range of motion, as well as total use of opioid medications, either during the hospital stay or following discharge, no clinically meaningful differences between brivoligide 330 mg/3 mL and placebo 3 mL treated groups were observed in the modified intent-to-treat ("mITT") population. (mITT is defined as all subjects who received study drug and had at least one assessment of the primary endpoint.)

Although the results of this study demonstrated small differences between the brivoligide 330 mg/3 mL group and placebo for the primary efficacy endpoints, post hoc analysis based upon the spinal segment of injection, injections of brivoligide 330 mg/3 mL performed at spinal level L4/5 (n=10) demonstrated sustained clinically significant reductions in postoperative movement-evoked pain compared to placebo. Injections of brivoligide 330 mg/3 mL performed at spinal level L3/4 (n=30) or other sites gave small

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reductions in postoperative pain compared to placebo. These data were interpreted as demonstrating that the 330 mg/3 mL dose was at the lowest end of the dose-response curve and that attention should be focused on the anatomically-relevant dorsal root ganglion as well as the dorsal horn of the spinal cord itself. Higher doses in larger volumes were expected to provide broader distribution, greater magnitude of effect and possibly widen the range of endpoints showing beneficial results as well as potentially overcoming the preferential effects related to spinal level of injection.

ADYX-003: The second Phase 2 study, ADYX-003, was a randomized, double-blind, placebo-controlled, two-stage study to evaluate the safety and efficacy of two dose/volume levels of brivoligide injection administered intrathecally at one of two potential lumbar spinal interspace injection sites before surgery in patients undergoing primary unilateral TKA.

The total subject population was 120 subjects distributed over two dose/volumes, and two injection levels within each dose, with a brivoligide to placebo control ratio of 2:1 in each group:

- Brivoligide (660 mg in 6 mL) injected at L4/5; n= 20
- Placebo (vehicle control 6 mL) injected at L4/5; n= 10
- Brivoligide (660 mg in 6 mL) injected at L3/4; n=20
- Placebo (vehicle control 6 mL) injected at L3/4; n=10
- Brivoligide (1100 mg in 10 mL) injected at L4/5; n=20
- Placebo (vehicle control 10 mL) injected at L4/5; n=10
- Brivoligide (1100 mg in 10 mL) injected at L3/4; n=20
- Placebo (vehicle control 10mL) injected at L3/4; n=10

The following assessments were used to evaluate efficacy: 11-point NRS pain assessment at rest; a defined distance walk (5 meters inpatient, 15 meters outpatient), with NRS for pain upon standing for the walk and pain during the walk; range of motion with NRS pain assessments; and collection of analgesic medication data through Day 42. Safety assessments consisted of the collection of AEs and SAEs, clinical laboratory assessments, vital signs, and physical/neurological examination.

Safety

Overall 100% of subjects in the brivoligide 660 mg/6 mL and brivoligide 1100 mg/10 mL groups, and 95% of subjects in the placebo 6 mL and placebo 10 mL groups reported at least one TEAE. The overall AE profile was 90% mild to moderate with no AE clearly associated with brivoligide. No subject withdrew in association with an AE. Ten SAEs in nine subjects were reported in the brivoligide group and three SAEs in two subjects were reported in the placebo group. All SAEs were considered not related to study drug.

Efficacy

For the inpatient primary endpoint, neither dose of brivoligide gave statistically significant reduction of pain with walking (5 meters) during the 0-48 hour period. By contrast, for the outpatient primary endpoint, brivoligide 660 mg/6

mL significantly reduced pain with walking (15 meters) during the Day 7 – 28 period (2.0 ± 0.2 vs. 2.9 ± 0.3, p=0.026) as illustrated in Figure 2, whereas the 1100 mg/10 mL dose did not show statistical significance compared with placebo 10 mL (2.4 ± 0.2 vs. 2.7 ± 0.4, p=0.423). The time dependent nature of observed activity is consistent with the mechanism of brivoligide involving inhibition of surgery induced transcriptional events.

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A p-value is a statistical measure of the probability that the difference in two values could have occurred by chance. The smaller the p-value, the greater the statistical significance and confidence in the result. Typically, results are considered statistically significant if they have a p-value less than 0.05, meaning that there is less than a one-in-20 likelihood that the observed results occurred by chance.

Figure 2:

ADYX-003 NRS during the 5 and 15-Meter Walk Test — Least Squares Mean Across Injection Site Levels (Imputation Method 1, mITT Population) (Brivoligide 660 mg/6 mL and Placebo 6 mL) (S.E.M.)

Note: Imputation 1: If the walk test was not completed due to pain or the entire distance was not completed due to pain, the worst possible pain score (10) was used.

Brivoligide 660 mg/6 mL also significantly reduced pain scores at rest during the outpatient period (Day 7 – 28) when compared to placebo 6 mL across injection groups (LS Mean 1.5 ± 0.2 vs. 2.4 ± 0.3, p=0.033) (Figure 3). Brivoligide 660 mg/6 mL had no statistically significant effect on pain scores at rest during the inpatient period.

NRS pain scores with brivoligide 1100 mg/10 mL, although lower than placebo 10 mL during the outpatient period, did not show statistical significance compared with placebo 10 mL for pain scores at rest during either the inpatient or outpatient periods.

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Figure 3:
ADYX-003 Least Squares Means Estimate for NRS Pain at Rest (mITT Population)

Both brivoligide 660 mg/6 mL and brivoligide 1100 mg/10 mL demonstrated similar differences in pain reduction between injection sites (L3/4 vs. L4/5) when compared to their respective combined placebo groups.

Opioid utilization was similar between the brivoligide 660 mg/6 mL and 1100 mg/10 mL and placebo groups during the 0 – 48 hour inpatient and Day 7 – 28 outpatient periods. Of note, opioid analgesic use was collected to evaluate possible confounds to pain assessments from potential differential opioid use and not to assess opioid sparing; surgeons were allowed to prescribe scheduled opioid intake per standard of care. No clinically important difference was noted for range of motion assessments in either time period.

Pain ratings in the 1100 mg/10 mL dose volume group showed a reduction relative to placebo only at the earliest timepoints. This is consistent with enhanced metabolism at this concentration and production of potentially transport inhibiting metabolites. The 1100 mg/10 mL dose did not display any dose related safety concerns and was not superior to 660 mg/6 mL for efficacy so by the preponderance of evidence 660 mg/6 mL was the dose selected for use in subsequent studies. Further, this study demonstrated that the effect of brivoligide was not dependent upon lumbar interspace injection site for the dose volumes administered.

ADYX-004: ADYX-004 was a multicenter, Phase 2, randomized, double-blind, placebo-controlled study to evaluate the safety and efficacy of brivoligide injection 660 mg/6 mL compared to placebo 6 mL administered intrathecally before surgery in patients undergoing primary unilateral TKA.

Post-hoc analysis of the PCS score distribution in the ADYX-003 study (not presented herein) revealed an imbalance with a greater percentage of subjects with high PCS scores in the placebo group compared to the brivoligide group; therefore, an association between brivoligide efficacy and PCS score could not be drawn. ADYX-004 was designed to assure a balance in the high PCS scoring subjects by using PCS scores ≥20/ <20 as a stratification factor for randomization.

Protocol changes relative to ADYX-003 included: allowance of NSAIDs from the perioperative period and beyond; allowance of intra-articular local anesthetic mixtures; lengthened follow up to 90 days post-surgery; use of an eDiary to collect daily pain ratings for least, average and worst pain as well as daily collection of opioid use out to 90 days; and postoperative and outpatient opioid dosing was to be pro re nata (“PRN”) or “as needed” and not administered on a fixed schedule.

The following assessments were used to evaluate efficacy: 11-point NRS pain assessment at rest; a defined distance

walk (5 meters inpatient, 15 meters outpatient), with NRS for pain during the walk; NRS
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pain assessment with rising from a seated position and worst, least and average pain over the last 24 hours (collected by subjects daily via eDiary); and collection of analgesic medication data through Day 90.

Safety assessments consisted of physical examination, vital signs, clinical laboratory assessments, and collection of AEs and SAEs. AEs were monitored from the time of randomization through Day 28 and SAEs were monitored from the time of consent through Day 28.

The primary efficacy endpoint was the mean pain rating (NRS) with walking during the 15-meter distance walk Day 7 to Day 28.

The secondary efficacy endpoints included:

- Mean pain rating (NRS) at rest Day 7 to Day 28
- Total use of postoperative opioid medications (morphine equivalents) 48 hours to Day 90 (analyzed for mITT and for PCS ≥20/<20)
- Total use of postoperative opioid medications (morphine equivalents) 0 to 48 hours (analyzed for mITT and for PCS ≥20/<20)
- Time to achieve an NRS pain score of ≤3 for worst pain (analyzed for mITT and for PCS ≥20/<20).

A total of 210 subjects were dosed with either brivoligide 660 mg/6 mL (108 subjects) or placebo (102 subjects) and 17 subjects prematurely discontinued from the study (five subjects prior to dosing and 12 subjects after dosing): nine subjects in the brivoligide treatment group (two prior to dosing) and eight subjects in the placebo group (three prior to dosing). One subject was randomized to placebo but incorrectly received brivoligide and was incorporated into the brivoligide group only for the safety analyses. A total of 198 subjects completed the study.

Safety

No subject withdrew because of an AE and no tolerability signals were identified following dosing of brivoligide 660 mg/6 mL. The overall AE profile was primarily mild to moderate with no AE clearly associated with brivoligide. There were no deaths during the study, and no subjects were discontinued from the study due to TEAEs. Five SAEs in five subjects were reported in the brivoligide group and eight SAEs in six subjects were reported in the placebo group. All SAEs were considered not related to study drug except for one SAE in the placebo group that was considered possibly related.

Efficacy

For the primary endpoint, brivoligide did not provide a statistically significant reduction of pain with walking (15 meters) during the 7 to 28 day period in the mITT population. No significant difference was observed between the brivoligide 660 mg/6 mL and placebo 6 mL treated groups. The results of the analyses of the secondary and additional endpoints in the total mITT population also did not show a clinically relevant effect of brivoligide 660 mg/6 mL vs. placebo 6 mL.

Although results of the analyses in the mITT population were not clinically relevant, several prespecified secondary and additional endpoints based on the stratification factor of PCS score ≥20 vs. <20 within the mITT population suggested efficacy of brivoligide when compared with placebo in subjects with PCS score ≥20. These endpoints included time to achieve an NRS pain score ≤3 for worst pain over the previous 24 hours and opioid utilization over the period of 48 hours to Day 90.

A Kaplan-Meier analysis of time to achieve an NRS pain score of ≤3 for worst pain is presented in Table 3.

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Table 3:

ADYX-004 Time to NRS Pain Score ≤3 for Worst Pain — Kaplan Meier Analysis (mITT and Sub Populations)

| | PCS Score ≥20 | | PCS Score <20 | | Overall | |
|---|---|---|---|---|---|---|
| Endpoint Statistic | Brivoligide 660 mg/6 mL (N=25) | Placebo 6 mL (N=27) | Brivoligide 660 mg/6 mL (N=82) | Placebo 6 mL (N=76) | Brivoligide 660 mg/6 mL (N=107) | Placebo 6 mL (N=103) |
| N | 25 | 27 | 82 | 76 | 107 | 103 |
| N of Censored | 4 | 4 | 18 | 13 | 22 | 17 |
| Days to NRS pain score ≤3 for derived worst pain | | | | | | |
| 25th Percentile | 8.0 | 24.0 | 14.0 | 13.0 | 13.0 | 14.0 |
| Median | 15.0 | 41.0 | 31.0 | 29.0 | 27.0 | 31.0 |
| 75th Percentile | 47.0 | 70.0 | 62.0 | 48.0 | 59.0 | 62.0 |
| P-value(1) | | 0.184 | | 0.432 | | 0.542 |

Abbreviations: NRS = Numeric Rating Scale, PCS = Pain Catastrophizing Scale, NE = Not Estimable.
Note: An event is defined as 3 consecutive pain scores ≤3 over a 4-day period (allows for one missing eDiary entry). Time to event (days) is defined as the date of the first pain score ≤3 that starts the event — the end date of surgery. Subjects who reach Day 90 or withdraw from the study before an event are censored on the date of the last NRS score assessed or Day 90 if the last score is collected after Day 90. Subjects who do not have any eDiary pain scores for an assessment are censored on the day of surgery.
Derived worst pain is the higher score (of the reported worst/least scores) reported in the eDiary.
(1)
P-value is obtained from the log rank test within each PCS stratum and the log rank test (stratified by Screening PCS) for the overall treatment groups.

Total postoperative opioid utilization 48 hours to Day 90 is presented in Table 4. If an eDiary day was missing, the dosage for the opioid medications were imputed with the mean morphine equivalent from the previous two days with recordings. Indications of no opioid use for a day were counted as zero. The results of these analyses without imputation were similar.

Table 4:

ADYX-004 Total Postoperative Opioid Medication Use 48 Hours to Day 90 — IV Morphine Equivalents (mg) (mITT Postoperative Opioid Use Population)

| | PCS Score ≥20 | | PCS Score <20 | | Overall | |
|---|---|---|---|---|---|---|
| Postoperative Duration Statistic | Brivoligide 660 mg/6 mL (N=25) | Placebo 6 mL (N=27) | Brivoligide 660 mg/6 mL (N=82) | Placebo 6 mL (N=75) | Brivoligide 660 mg/6 mL (N=107) | Placebo 6 mL (N=102) |
| 48 Hours to Day 90 (with imputation)(2) | | | | | | |
| n | 25 | 27 | 82 | 75 | 107 | 102 |
| Mean (SD) | 225.16 (235.911) | 371.39 (340.927) | 376.08 (463.543) | 317.20 (291.180) | 340.82 (425.338) | 331.54 (304.333) |

| | | | | | | |
|---|---|---|---|---|---|---|
| Median | 172.50 | 228.75 | 189.58 | 212.92 | 176.25 | 220.21 |
| (Min, Max) | (5.2, 1148.2) | (22.5, 1202.5) | (0.0, 2431.7) | (1.7, 1138.8) | (0.0, 2431.7) | (1.7, 1202.5) |
| P-value(1) | | 0.105 | | 0.915 | | 0.366 |
| 48 Hours to Day 90 (no imputation) | | | | | | |
| n | 25 | 27 | 82 | 75 | 107 | 102 |
| Mean (SD) | 213.66 (229.409) | 352.17 (329.340) | 355.79 (440.461) | 305.66 (281.431) | 322.58 (404.743) | 317.97 (293.900) |
| Median | 150.00 | 228.75 | 181.25 | 182.50 | 170.83 | 213.13 |
| (Min, Max) | (5.2, 1118.2) | (22.5, 1202.5) | (0.0, 2375.4) | (1.7, 1135.1) | (0.0, 2375.4) | (1.7, 1202.5) |
| P-value(1) | | 0.115 | | 0.936 | | 0.391 |

Abbreviation: PCS = Pain Catastrophizing Scale.
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(1)
P-value is obtained from a Wilcoxon Rank Sum test within each PCS stratum and the Van Elteren test (stratified by actual Screening PCS) for the overall treatment groups.

(2)
For 48 Hours to Day 90, morphine equivalents for missing eDiary dates are imputed with the mean of the previous two days.

Post-hoc Analysis

A suggestion of efficacy was observed for the brivoligide 660 mg/6 mL treatment group when compared with the placebo 6 mL group in the endpoints prespecified to be analyzed by PCS score ≥20 as discussed above. Further investigation was then undertaken by post hoc analysis, including mixed effects analysis of pain with walking, pain at rest, analysis of worst pain, time to NRS pain score ≤3 for worst pain, and opioid utilization. Post-hoc analyses also included investigation of these analyses using a PCS cut-point of ≥16. This PCS cutoff value was the alternative considered in the planning of the study.

A post-hoc mixed effects analysis of NRS pain score with walking during the 15-meter distance walk from Days 7 to 28 by baseline PCS score is presented in Table 5. Similar post-hoc analyses of NRS pain score at rest from Days 7 to 28 by baseline PCS score, worst pain over the last 24 hours from the patient diary by baseline PCS for the additional time period of Day 3 to 28 and Day 7 to 28, time to NRS pain score ≤3 for worst pain by baseline PCS score, and total postoperative opioid utilization by baseline PCS score are not presented herein but consistently suggest that a PCS score ≥16 represents an appropriate cut point.

Table 5:
ADYX-004 Mixed Effects Analysis of NRS Pain Score with Walking During the 15-Meter Walk Test Days 7 to 28 by Baseline PCS Score (mITT — 15-Meter Walk Population)

| Visit<br>Mixed Effects Results(1) | Brivoligide<br>660 mg/6 mL | Difference<br>Brivoligide – Placebo | Placebo<br>6 mL |
|---|---|---|---|
| PCS < 20 | 79 | | 72 |
| Day 7 to Day 28 (Overall Treatment Effect) | | | |
| LSmean (95% CI) | 2.73 (1.29, 3.16) | | 2.56 (2.10, 3.01) |
| Difference in LSmeans | | 0.17 | |
| 95% CI for Difference | | -0.46, 0.80 | |
| P-value | | 0.595 | |
| PCS ≥ 20 | 24 | | 26 |
| Day 7 to Day 28 (Overall Treatment Effect) | | | |
| LSmean (95% CI) | 2.61 (1.82, 3.40) | | 3.52 (2.76, 4.29) |
| Difference in LSmeans | | -0.91 | |
| 95% CI for Difference | | -2.01, 0.19 | |
| P-value | | 0.106 | |
| PCS ≥ 16 | 30 | | 33 |
| Day 7 to Day 28 (Overall Treatment Effect) | | | |
| LSmean (95% CI) | 2.53 (1.83, 3.23) | | 3.61 (2.94, 4.28) |
| Difference in LSmeans | | -1.08 | |
| 95% CI for Difference | | -2.05, -0.11 | |
| P-value | | 0.029 | |

Abbreviations: NRS = Numeric Rating Scale, LS = Least Square, CI = Confidence Interval, PCS = Pain Catastrophizing Scale.
Note: The worst rating (score of 10) is imputed if missing due to pain.
(1)
Results are obtained from a mixed effects model with terms for treatment, actual Screening PCS and treatment by Screening PCS interaction as fixed effects. Actual days since surgery (date of 15-Meter Walk − date of surgery + 1) is included as a continuous covariate. Subject is included as a random effect using a compound symmetry covariance matrix structure.

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ADYX-003 and ADYX-004 Data Combination and Meta-analysis by PCS

Due to the similar study design and brivoligide dose used in studies ADYX-003 and ADYX-004, these studies were combined and analyzed for consistency of PCS score effect on brivoligide efficacy. Data for the combined studies were analyzed by PCS ≥16 and ≥20. The results, not presented herein, showed a consistent effect of brivoligide in the high PCS scoring population (≥16 or ≥20). Analysis of the AUC for individual subjects by baseline PCS score confirmed the choice of either ≥16 or ≥20 as a cutoff for high PCS scores with ≥16 encompassing a larger percentage of the surgical population.

In summary, high scores on the preoperative PCS help identify people that may benefit from brivoligide administration before surgery. Based on the post-hoc results from the ADYX-004 study brivoligide allows normalization of the post-surgical pain response course to that observed in the majority of people with low PCS scores. The implications of these findings are important clinically as the efficacy appears to be high in the preoperatively identifiable group scoring ≥16 on the PCS which represents a group of patients experiencing poor pain control with current therapies. Future studies will enrich the enrolled population for subjects scoring ≥16 on the PCS which may represent 25-35% of the general population. Pre-study identification of brivoligide responders will allow focused therapy for those subjects most likely to show a beneficial response after surgery.

Brivoligide Development Plan and Registration Strategy

Adynxx plans to conduct a study in subjects undergoing TKA with prospective enrichment of the study population with patients scoring ≥16 on the PCS to confirm the efficacy observed in the prior Phase 2 studies in TKA in the proposed target population. Adynxx also plans to conduct a Phase 2 study in subjects undergoing mastectomy with immediate tissue expander or implant placement that score high on the Pain Catastrophizing Scale (PCS). Adynxx has received a grant award from NIDA/NIH for $5.7M to support the conduct of the Phase 2 mastectomy study. The Phase 2 studies of brivoligide will be followed by Phase 3 pivotal studies in both TKA and mastectomy. The design and size of the Phase 3 studies will be determined after completion of the respective Phase 2 studies. Following completion of milestones related to the Phase 2 mastectomy study, Adynxx can receive an additional award over three years for the Phase 3 mastectomy study.

Adynxx proposes to use a predictive enrichment strategy and only enroll subjects with PCS scores ≥16 in the Phase 3 studies of brivoligide. The rationale for this approach is as follows:

- Post-hoc analyses of Phase 2 studies ADYX-003 and ADYX-004 suggest that patients with PCS scores of ≥16 are more likely to respond to brivoligide treatment, while analyses of those with PCS <16 do not show meaningful evidence of efficacy;

- The PCS is an easy to administer assessment and can be incorporated into clinical practice to identify patients who are more likely to respond to brivoligide treatment;

- Adequate data has been generated from the 180 subjects with PCS <16 (104 brivoligide vs. 76 placebo) in studies ADYX-003 and ADYX-004, to suggest that this patient population is unlikely to derive a benefit from brivoligide treatment, and continuing to enroll subjects in this patient population would be medically inappropriate; and

- Predictive enrichment of the Phase 3 studies will support an indication of reduction of postoperative pain in patients that score ≥16 on the PCS.

FDA's draft guidance for enrichment strategies "Enrichment Strategies for Clinical Trials to Support Approval of Human Drugs and Biological Products" (December 2012), outlines the ways a clinical development program can enrich randomized controlled trials to make detection of a treatment effect more likely. Enrichment is defined as "the prospective use of any patient characteristic to select a study population in which detection of a drug effect (if one is in fact present) is more likely than it would be in an unselected population." One such enrichment strategy is predictive

enrichment, in which patients are chosen who are more likely to respond to the drug treatment than other patients with the condition being treated. Adynxx proposes to use the PCS as the tool for predictive enrichment in the Phase 3 studies of brivoligide.

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Developing a drug specifically for the patient population that will likely derive the greatest benefit is important, and FDA states that it "is very interested in targeting treatments to the people who can benefit from them." When considering use of a predictive enrichment strategy an important factor is how much, if any, data needs to be collected on the marker-negative, or non-enrichment, population. FDA guidance states that it is "usually desirable" to have data on the marker-negative population, but that "the data need not be obtained in the controlled trials supporting effectiveness but could be obtained in earlier studies." Additionally, the FDA guidance states that "FDA is prepared to approve drugs studied primarily or even solely in enriched populations…"

The data generated to-date in the brivoligide development program supports the hypothesis that efficacy of brivoligide is focused in those that score ≥16 on the PCS, while those scoring <16 do not derive meaningful benefit from brivoligide treatment.

The dose of brivoligide selected for further clinical development (660 mg/6 mL) is supported by the results of the Phase 2 studies; ADYX-002, ADYX-003 and ADYX-004.

Four doses of brivoligide have been used in clinical efficacy studies. No evidence has been obtained for efficacy of the 110 mg/3 mL dose; the 330 mg/3 mL dose produced an effect numerically similar to the 660 mg/6 mL dose but was dependent upon the site of injection as the distribution of the injectate was limited and apparently did not cover the full range of spinal segments and/or DRG levels involved in post TKA pain. The 660 mg/6 mL dose volume produced efficacy regardless of brivoligide injection site in the lumbar region of the spine. The 1100 mg/10 mL dose had a suggestion of efficacy in the very early postoperative period but that was not sustained into the outpatient period. This result is consistent with the known dose response pattern of brivoligide that is impacted by nuclease-driven metabolism at certain dose levels (Mamet J, Harris S, Klulinov M, Yeomans DC, Donahue RR, Taylor BK, Eddinger K, Yaksh T, Manning DC. "Pharmacology, pharmacokinetics and metabolism of the DNA-decoy AYX1 for the prevention of acute and chronic post-surgical pain." Molecular Pain. 2017; 13:1-16).

Study ADYX-005 is a planned Phase 2 randomized double-blind, placebo-controlled study to evaluate the efficacy and safety of a single intrathecal preoperative administration of brivoligide injection in patients with a PCS score ≥16 undergoing unilateral TKA.

Approximately 122 subjects will be enrolled in the study in two treatment groups (brivoligide injection 660 mg/6 mL and placebo 6 mL). Subjects will be randomized in a 1:1 ratio to brivoligide injection or placebo, with randomization stratified by study center.

The objectives of the study are to evaluate the safety and postoperative pain reducing efficacy of a single preoperative intrathecal administration of brivoligide injection in patients with a PCS score of ≥16 undergoing unilateral TKA.

Potential subjects will be prescreened for PCS scores of 16 or greater with the patient's verbal permission (or other as agreed by the site's institutional review board or "IRB") either via phone with a copy of the PCS sent to the patient in advance, or in the office on the paper form; pre-qualified patients will be invited to the investigative site for informed consent and full screening within 30 days of randomization. Patients that are not invited for screening or do not provide full informed consent for the study will have the pre-screening PCS data destroyed by the site. The PCS will be repeated during the screening visit by all consented patients on the paper form; the score obtained at screening will be used for the study. Patients providing informed consent and meeting all study eligibility criteria will be enrolled in the study on the day of surgery (Day 1).

Subjects will receive study drug just prior to administration of spinal anesthesia, via the same needle.

AEs will be recorded from the time of randomization and SAEs will be recorded from the time of consent; AEs and SAEs will be recorded through Day 28. Physical examination findings will be recorded at screening and on Day 7, vital signs will be recorded through Day 2, and laboratory assessments will be recorded through Day 28. Concomitant medications will be collected through Day 28; analgesic medications will be collected through Day 42.

Pain at rest and with walking will be recorded by study staff postoperatively at follow-up visits. Daily ratings of worst pain over the previous 24 hours will be collected via electronic diary ("eDiary") by subjects every evening from Day 1 until the Day 42 visit. Analgesic medication use will be collected via

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eDiary by subjects daily after discharge until the Day 42 visit. Follow-up visits will occur on Days 7, 14, 21, 28 (± 2 days), and 42 (± 5 days). The primary endpoint will be reduction in with walking from Day 7 to Day 28 as measured using the NRS.

Study ADYX-006 is a planned Phase 2 randomized double-blind, placebo-controlled study to evaluate the efficacy and safety of a single intrathecal preoperative administration of brivoligide injection in patients with a PCS score ≥16 undergoing mastectomy with immediate tissue expander or implant placement. Approximately 126 subjects will be enrolled in the study in two treatment groups (brivoligide injection 660 mg/6 mL and placebo 6 mL). Subjects will be randomized in a one-to-one ratio to brivoligide injection or placebo, with randomization stratified by unilateral or bilateral mastectomy. The objectives of the study are to evaluate the safety and postoperative pain reducing efficacy of a single preoperative intrathecal administration of brivoligide injection in patients with a PCS score of ≥16 undergoing mastectomy with immediate tissue expander or implant placement.

Potential subjects will be prescreened for PCS scores of 16 or greater with the patient's verbal permission (or other as agreed by the site's IRB) either via phone with a copy of the PCS sent to the patient in advance, or in the office on the paper form; pre-qualified patients will be invited to the investigative site for informed consent and full screening within 30 days of randomization. Patients that are not invited for screening or do not provide full informed consent for the study will have the pre-screening PCS data destroyed by the site. The PCS will be repeated during the screening visit by all consented patients on the paper form; the score obtained at screening will be used for the study. Patients providing informed consent and meeting all study eligibility criteria will be enrolled in the study on the day of surgery (Day 1). Subjects will receive a single 6 mL intrathecal administration of study drug or placebo while in the lateral decubitus position at lumbar interspace L3/4 or higher. After injection subjects will be placed supine in a 15-degree head down tilt (Trendelenburg position) for five minutes and then returned to supine horizontal for surgery.

AEs will be recorded from the time of randomization and SAEs will be recorded from the time of consent; AEs and SAEs will be recorded through Day 35. Physical examination findings and vital signs will be recorded through Day 3, and laboratory assessments will be recorded through Day 28. Concomitant medications will be collected through Day 28; analgesic medications will be collected through Day 35.

Assessment of episodic memory with the Face Name Associative Memory Exam ("FNAME") tool will be performed at screening, Day 3 and Day 28. The FNAME presents a series of facial photos and names to the subject who is asked to remember the face-name pair and is presented on an iPad-like device. Subject learning requires less than 5 minutes and assessment is performed after a 15-minute delay and also takes less than 5 minutes. The entire presentation and assessment can therefore be completed in a single visit and other study assessments can be done during the waiting period. The FNAME is available in both English and Spanish and in three distinct versions allowing three distinct presentations.

Pain at rest will be recorded by study staff postoperatively at follow-up visits. Daily ratings of pain with deep full inspiration and forceful effective cough, worst pain over the previous 24 hours and pain with general activity will be collected via electronic diary ("eDiary") by subjects every evening from Day 1 until the Day 35 visit. Analgesic medication use will be collected via eDiary by subjects daily after discharge until the Day 35 visit. Follow-up visits will occur on Days 7, 14, 21, 28, and 35 (± 2 days). The primary endpoint will be mean pain rating with deep full inspiration and forceful effective cough Day 3 to Day 14 using the NRS.

AYX2 for Chronic Pain

Chronic focal neuropathic pain, which includes pain etiologies such as radiculopathy and radiculitis, focal peripheral neuropathies, and low back pain, affects as many as 25 million patients annually in the United States. Chronic focal neuropathic pain is maintained by genome-wide, cyclical transcription regulation in the dorsal root ganglia / spinal cord network. The transcription factors driving this regulation include KLF6, 9 and 15, and constitute a promising class of targets that can potentially alter the course of pain with a single or short-term treatment.

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AYX2 is a unique inhibitor of KLF6, 9 and 15, transcription factors that are involved in complementary neuronal and glial functions. A single administration of AYX2 produces a robust and long-lasting suppression of chronic pain. By addressing the genomic roots of chronic pain, AYX2 can suppress it without the side-effects and abuse potential of analgesic standard-of-care. AYX2 is in pre-clinical development.

Pharmacology of AYX2

Pain is a dynamic state maintained at the genomic level by dynamic transcriptomes. A group of transcription factors with the potential to control these transcriptomes was selected based on their known functions and gene promoter's analysis. Adynxx conducted impartial screening of decoys designed against those factors and identified two decoys that bind to KLF6, 9 and 15 that significantly reduced chronic pain following a single administration in the SNI and CCI models of pain.

Results demonstrated that a one-time administration of decoys binding to KLFs 6, 9, and 15 produces a significant and weeks-long reduction in mechanical hypersensitivity compared to controls. In the SNI model, a decoy efficacy was correlated to its capacity to bind KLF15 and KLF9 at a specific ratio, while in the CCI model, efficacy was correlated to the combined binding capacity to KLF6 and KLF9. AYX2, an 18-bp DNA base-pair transcription factor decoy binding KLF6, KLF9, and KLF15, was optimized for clinical development, and it demonstrated significant efficacy in these preclinical models of pain.

A pilot (non-GLP) toxicology study was performed to determine potential toxicity and tolerability of single and repeated AYX2 intrathecal injection(s) in Sprague Dawley rats. The study included 30 rats total, five per testing condition with three dose groups, with Single and repeat dosing up to maximum feasible dose (Day 1, Day 8, Day 15) and a 2-week recovery period. Clinical observations, clinical pathology, spinal & brain histopathology hematoxylin eosin and glial fibrillary acidic protein staining) were conducted. Single and repeated AYX2 injections were well tolerated and the NOAEL was considered the maximum feasible dose.

AYX2 Development Path

Based on the non-clinical data generated to date, AYX2 has the potential to be developed as a one-time or short-course treatment for focal neuropathic pain.

Prior to IND submission Adynxx may consider protecting AYX2 against metabolism, possibly via the introduction of structural modifications of its DNA backbone and/or via the use of nucleic acid analogs and will conduct an IND-enabling GLP toxicology program. Phase 1 is planned to be a single ascending dose study design, using healthy subjects with a sentinel dosing paradigm and six dose levels, randomized 5:1 or 8:2 AYX2: placebo. An initial Phase 2 proof-of-concept is planned in radiculopathy (nerve deficit) and radiculitis (nerve inflammation). The study is planned to be a randomized, placebo-controlled, safety and efficacy study of single administration AYX2 or placebo. Subjects with radiculopathy will be stratified as to radiculopathy versus radiculitis. The study will evaluate a single dose paradigm with two initial dose levels versus placebo, and one dose carried forward based external review of safety and efficacy of the initial 30 subjects. Observations will be taken four hours after dosing then 1, 2, 3, 7, 14, 28, 56 and 84 days after, with key assessments including NRS pain with straight leg raise, NRS pain with walking, BPI pain and activity scales.

twoXAR Collaboration

AI-based platforms, such as twoXAR's, are helping create portfolios of drug programs more efficiently through faster, more predictive models than traditional approaches. Such technology can accelerate the entire drug development process, decrease risk and substantially reduce overall costs. Adynxx is seeking to identify product candidates with the potential to address the core mechanisms of endometriosis and significantly differentiate from standard of care, using twoXAR's proprietary AI-driven platform, which has demonstrated in vivo success rates significantly greater than those of traditional approaches across therapeutic areas including diseases such as liver cancer, rheumatoid arthritis, and type 2 diabetes.

Under the agreement, twoXAR will use its proprietary AI technology to identify a set of medical treatments with the potential to treat or prevent the recurrence of endometriosis and associated symptoms. Adynxx will select product candidate(s) from this set to test for efficacy in in vivo models of endometriosis

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based on predetermined criteria. Following identification of one or more candidate compounds based on those evaluated in vivo, Adynxx intends to conduct preclinical characterization work, IND-enabling work and clinical development. If currently approved compounds are identified, Adynxx could potentially employ the 505(b)(2) regulatory pathway to efficiently develop this indication.

Approximately 4.4 million women suffer from endometriosis in the United States, with 150,000 new diagnoses annually. Symptoms of endometriosis include chronic pelvic pain, dysmenorrhea, dyspareunia, subfertility and/or hyperalgesia. Endometriosis is characterized by a variable presentation, as severity of symptoms increases with age, yet symptom severity is not always correlated with extent of disease. The natural progression of the disease is characterized by an increase in disease in 31% of patients, no change in disease in 31% of patients, and a decrease in disease in 38% of patients. These variable changes in severity may reflect menstrual cycling, and the disease has a high recurrence rate. Over time, endometriosis may be associated with pain-related adhesions and fibrosis from chronic inflammation and in some cases malignant transformation.

Initial diagnosis of endometriosis is based on clinical presentation, with definitive diagnosis requiring laparoscopy with histologic confirmation. There is no accepted screening or preoperative diagnostic test, and because symptoms may be vague, and because diagnosis is invasive and carries a small risk of complications, diagnosis can be delayed for more than six years. Endometriosis is classified using the American Society for Reproductive Medicine, or ASRM, scoring system, with the stages as follows: minimal (stage I), mild (stage II), moderate (stage III), severe (stage IV). First line treatment includes NSAIDs and combination oral contraceptives in the absence of contraindications. Second line treatment includes continuous combination oral contraceptives for three to six months or implantation of a levonorgestrel IUD. Third line treatment includes GnRH agonist therapy with “add-back therapy” of aromatase inhibitors in the case of resistant disease. Third line therapy can be associated with significant bone mineral loss especially in this young female population and therefore is not appropriate as first line therapy. Surgical intervention is considered definitive treatment. New treatments addressing the underlying pathology of endometriosis are sought to address the unmet need associated with standard of care.

twoXAR retains all intellectual property rights to its computational methods and disease models and grants Adynxx a non-exclusive license to use intellectual property rights solely for the development of its selected product candidates for the treatment of endometriosis. Adynxx owns all intellectual property developed following selection of the selected product candidates, twoXAR will assign all residual right, title and interests to such intellectual property to Adynxx. Under the agreement, Adynxx controls prosecution, defense and enforcement of such intellectual property rights relating to selected product candidates, and twoXAR has backup rights to prosecution, defense and enforcement with respect to such intellectual property for which Adynxx elects not to exercise such rights.

The agreement with twoXAR will remain in effect until expiration of the applicable royalty term unless terminated by Adynxx upon 60 days prior written notice to twoXAR or upon certain events of material breach. Upon termination, all licenses granted under the agreement will terminate.

Competition

The biopharmaceutical industry is highly competitive. Adynxx faces competition from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide. Given the significant unmet medical need for novel therapies to treat pain, as well as the ongoing public health crisis associated with OUD in the United States, many public and private universities and research organizations are actively engaged in the discovery, research and development of product candidates. As a result, there are and will likely continue to be extensive resources invested in the discovery and development of new products to treat these unmet medical needs. Adynxx anticipates facing intense and increasing competition as new products enter the market and advanced technologies become available.

In addition, there are numerous multinational pharmaceutical companies and large biotechnology companies currently marketing or pursuing the development of products or product candidates targeting the same indications as Adynxx’s product candidates. Many of Adynxx’s competitors, either alone or with strategic partners, have or will have substantially greater financial, technical and human resources than

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Adynxx. Accordingly, Adynxx's competitors may be more successful than Adynxx in developing or marketing products and technologies that are more effective, safer or less costly. Additionally, Adynxx's competitors may obtain regulatory approval for their products more rapidly and may achieve more widespread market acceptance. Accelerated mergers and acquisitions activity in the biotechnology and pharmaceutical industries may result in even more resources being concentrated among a smaller number of Adynxx's competitors. These companies also compete with Adynxx in recruiting and retaining qualified scientific and management personnel, establishing clinical study sites and patient registration for clinical studies and acquiring technologies complementary to, or necessary for, Adynxx's programs. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

While brivoligide has a novel therapeutic profile, competing non-opioid products and product candidates for postoperative pain include, but are not limited to:

- EXPAREL (bupivacaine liposome injectable suspension, marketed by Pacira Pharmaceuticals, Inc.);
- Ofirmev (intravenous acetaminophen, marketed by Mallinckrodt Pharmaceuticals);
- HTX-011 (bupivacaine and meloxicam, in development by Heron Therapeutics, NDA submitted to FDA in 2018); and
- CA-008 (injectable capsaicin prodrug, in Phase 2 development by Concentric Analgesics)

Additional competitive products that comprise current multi-modal analgesic standard of care include oral, injectable, sublingual and buccal opioids, and oral and topical NSAIDs.

Potential competitive products or product candidates for AYX2 include including oral, injectable, sublingual and buccal opioids, oral and topical NSAIDs, oral gabapentinoids, and steroid injections.

Adynxx believes that the key competitive factors that will affect the development and commercial success of its product candidates are efficacy, safety and tolerability profile, duration of effect, product labeling, cost-effectiveness, price, the level of generic competition, hospital formulary access, and the availability of reimbursement from the government and other third-parties. Adynxx's commercial opportunity could be reduced or eliminated for any of its products if its competitors have products that are approved earlier than Adynxx's product candidates or are superior compared to Adynxx's product candidates or if Adynxx's product candidates do not result in an improvement in condition compared to those other products.

Manufacturing

Adynxx currently contracts with third parties for the manufacturing of its product candidates for preclinical and clinical studies and intends to do so in the future. Adynxx does not own or operate manufacturing facilities for the production of clinical trial quantities of its product candidates and does not plan to build its own clinical or commercial scale manufacturing capabilities. Although Adynxx relies on contract manufacturers, Adynxx has extensive experience overseeing contract manufacturing organizations ("CMO").

Adynxx contracts drug substance for preclinical studies from several suppliers in the US. For IND-enabling and for clinical studies, Adynxx contracts with the largest manufacturer of GMP oligonucleotide worldwide. Alternate GMP manufacturers exist for oligonucleotide product candidates but they do not currently have the production scale of Adynxx current supplier. Drug product manufacturing is contracted by a separate CMO with syringe filling capacities. To date, Adynxx's CMOs have met the manufacturing requirements for producing its product candidates. Adynxx expects its current drug substance manufacturer to be capable of providing sufficient quantities of its product candidates to meet anticipated full-scale commercial demand. However, while preliminary feasibility assessments have been conducted with the manufacturer, Adynxx cannot be certain that full commercial scale production can be successful, cost effective, or completed on a timely basis without significant delay in the development or commercialization of its product candidates.

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Brivoligide

Brivoligide drug substance for all clinical studies was manufactured by Avecia and brivoligide drug product is currently manufactured by Corden. Adynxx has sufficient drug substance available to conduct its next Phase 2 trial and is in the process of manufacturing brivoligide drug product. Drug substance and drug product for additional studies requires manufacturing of both new drug substance and new drug product.

AYX2

AYX2 drug substance for preclinical studies was manufactured by Avecia, TriLink BioTechnologies, Inc., and Invitrogen Corporation. Adynxx currently plans to use the same CMOs for drug substance and drug product for AYX2 GMP manufacturing as currently used for brivoligide.

Intellectual Property

Adynxx is dedicated to protecting its proprietary technologies that are core to its business. Adynxx seeks and maintains, where available, patent protection for its product candidates including but not limited to composition of matter, method(s) of use and/or formulation. Adynxx plans to continue to expand its intellectual property portfolio by filing patent applications on new dosage or formulation forms, methods of treatment, and compositions of matter for its product candidates as appropriate. Adynxx files and prosecutes patent applications in the United States and Europe, and when appropriate, additional countries, including Canada, Australia, Japan, Brazil, Russia, India or China.

Adynxx's success will depend significantly upon its ability to: (i) obtain and maintain patents and other available exclusivity protections for commercially important technology, inventions and know-how related to its business; (ii) prosecute its patent applications to issue as patents and defend and enforce its patents; (iii) maintain its licenses to use intellectual property owned by others; (iv) preserve the confidentiality of its trade secrets, and (v) operate without infringing the valid and enforceable patents and other proprietary rights of others. In addition to maintaining its existing proprietary assets, Adynxx seeks to strengthen its proprietary positions when economically reasonable to do so. Adynxx's ability to augment its proprietary position relies on its: (i) know-how; (ii) ability to access technological innovations, and (iii) ability to in-license technology when appropriate.

The patent positions of pharmaceutical/biotechnology companies like Adynxx are generally uncertain and involve complex legal, scientific, and factual issues. In addition, the scope claimed in a patent application can be significantly reduced before any patent issues. After issuance of a patent application, if the issued patent is challenged, then the courts can redefine the scope of the patent, including by invalidating it or rendering it unenforceable in its entirety. Consequently, Adynxx does not know with certainty whether patents will issue in each country where it or its licensor's file patent applications, or if those patent applications, if ever issued, will issue with claims that cover Adynxx's product candidates, or, even if they do whether the patent or its relevant claims will remain enforceable upon challenge. Accordingly, Adynxx cannot predict with certainty whether the patent applications it is currently pursuing will issue as patents in a particular jurisdiction or whether the claims of any issued patents will provide sufficient proprietary protection from potential competitors to make any of Adynxx's products commercially successful. Any of Adynxx's patents, including already issued in-licensed patents or any patents that may issue to Adynxx or its licensors in the future could potentially be challenged, narrowed, circumvented, or invalidated by third parties.

Because newly filed patent applications in the United States Patent and Trademark Office, or the USPTO, and certain other patent offices are maintained in secrecy for a minimum of 18 months, and because publications of discoveries in the scientific or patent literature often lag far behind the actual discoveries themselves, Adynxx cannot be certain of the priority of its inventions covered by pending patent applications. Moreover, Adynxx may have to participate in interference proceedings declared by the USPTO to determine priority of invention, although patent applications filed after 2013 are given priority based on first to file in the U.S. The date of an invention is typically not publicly disclosed. Also, while Adynxx is not currently participating in any interferences or post-grant challenge proceedings, such as patent oppositions and patent litigation, that seek to invalidate the patentability of patents before or after they issue, respectively, Adynxx may have to participate in such proceedings in the future. Such proceedings could result in substantial cost, even if the eventual outcome is favorable to Adynxx.

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The term of individual patents depends upon the legal term of the patents in the countries where they are issued. In most countries, the standard patent term for inventions relating to human drugs and their formulation and use is 20 years from the date of filing the first non-provisional patent or international application under the Patent Cooperation Treaty of 1970 ("PCT").

Adynxx has received a grant award from NIDA/NIH for the development of brivoligide in the mastectomy model of postoperative pain. Intellectual property may be generated through the use of this U.S. government funding and would therefore be subject to certain federal regulations. As a result, the U.S. government may in the future have certain rights to intellectual property embodied in our current or future product candidates pursuant to the Bayh-Dole Act. These U.S. government rights in certain inventions developed under a government-funded program include a non-exclusive, non-transferable, irrevocable worldwide license to use inventions for any governmental purpose. In addition, the U.S. government has the right, under certain limited circumstances, to require Adynxx to grant exclusive, partially exclusive, or non-exclusive licenses to any of these inventions to a third party if it determines that: (i) adequate steps have not been taken to commercialize the invention; (ii) government action is necessary to meet public health or safety needs; or (iii) government action is necessary to meet requirements for public use under federal regulations (also referred to as "march-in rights"). The U.S. government also has the right to take title to these inventions if Adynxx fails to disclose the invention to the government or fails to file an application to register the intellectual property within specified time limits. Intellectual property generated under a government funded program is also subject to certain reporting requirements, compliance with which may require Adynxx to expend substantial resources. In addition, the U.S. government requires that any products embodying the subject invention or produced through the use of the subject invention be manufactured substantially in the United States. The manufacturing preference requirement can be waived if the owner of the intellectual property can show that reasonable but unsuccessful efforts have been made to grant licenses on similar terms to potential licensees that would be likely to manufacture substantially in the United States or that under the circumstances domestic manufacture is not commercially feasible.

Patent Protection of Adynxx's Product Candidates

Adynxx fully-owns the patents and patent applications protecting its oligonucleotide product candidates.

Brivoligide

The patent and patent applications protecting brivoligide encompass composition of matter, method of use, formulation, dosage and target patient populations. Composition of matter and method of use for brivoligide and closely related compounds patents have issued in the United States and additional geographies. Those patents will expire in 2027 and could be subject to extension. The brivoligide formulation patent has also issued in the United States and is under prosecution in additional geographies. It will expire in 2032 and could be subject to extension. A dosing regimen patent application is under prosecution in the United States with an expiration date, if issued, of 2036 that could be subject to extension. A provisional patent application pertaining to the brivoligide target patient population was filed in February, 2018. Adynxx anticipates prosecuting this application at least in the United States, Europe, Canada, Japan, Australia, Brazil, Russia, India and China. If issued, this application would be valid until 2038 and could be subject to extension. The final list of countries to prosecute this application under will be decided at the time of conversion of the current provisional application into a PCT application in the first half of 2019.

AYX2

A patent application covering AYX2 composition of matter and method of use is under prosecution in the United States, Europe, Japan, Canada, Australia, Brazil, Russia, India and China. If issued, it will expire in 2034 and could be subject to extension.

Patent Term

In the United States, the patent term for an FDA-approved drug may be eligible for a patent term extension, or a PTE. The Hatch-Waxman Act of 1984 permits restoration of a portion of the patent term of a U.S. patent as compensation for the patent term lost during product development and the FDA

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regulatory review process if approval of the application for the product is the first permitted commercial marketing of a drug or biological product containing the active ingredient. The length of the PTE is based on the length of time it takes for the drug to complete the pre-market regulatory approval requirements. A credit of 50% of the time spent in development is credited up to a maximum five-year extension and the PTE cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval. Only one patent per approved drug may be extended and a patent can only be extended once; thus, even if a single patent is applicable to multiple products, it can only be extended based on one product. Similar provisions may be available in Europe and certain other foreign jurisdictions to extend the term of a patent that covers an approved drug. In Europe, through the European Medicines Agency, there is a period of ten years of regulatory data exclusivity from the time of approval if the centralized procedure is used, however under the centralized procedure this term would run concurrently with period of exclusivity provided by the patent. When possible, depending upon the length of clinical trials and other factors involved in the filing of NDAs for its products, Adynxx expects to apply for PTEs for patents covering its product candidates and their methods of use both in the United States and any foreign jurisdiction where available. There is no guarantee, however, that the applicable authorities will agree to grant extensions, and if granted, what the length of those extensions will be.

Other Proprietary Rights and Processes

Adynxx also relies on trade secret protection for some of its confidential and proprietary information. Although Adynxx takes steps to protect its proprietary information and trade secrets, including through contractual means with its employees and consultants, third parties may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to Adynxx's trade secrets and disclose its technology. If these events happen, Adynxx may not be able to meaningfully protect its trade secrets. It is Adynxx's policy to require its employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with Adynxx. These agreements provide that all confidential information concerning Adynxx's business, scientific, development or financial affairs that are either developed or made known to the individual during the course of the individual's relationship with Adynxx are to be kept confidential and not disclosed to third parties except in specific circumstances. Adynxx's agreements with employees also provide that all inventions conceived by the employee in the course of employment with Adynxx or based on the employee's use of Adynxx's confidential information are Adynxx's exclusive property or that Adynxx has an exclusive royalty free license to use such technology.

Government Regulations and Product Approvals

Government authorities in the United States, at the federal, state and local level, and in other countries extensively regulate, among other things, the research, development, testing, manufacture, packaging, storage, recordkeeping, labeling, advertising, promotion, distribution, marketing, import and export of pharmaceutical products such as those Adynxx is developing. The processes for obtaining regulatory approvals in the United States and in foreign countries, along with subsequent compliance with applicable statutes and regulations, require the expenditure of substantial time and financial resources.

FDA Approval Process

All of Adynxx's current product candidates are subject to regulation in the United States by the FDA under the Federal Food, Drug, and Cosmetic Act, or FDC Act, and its implementing regulations. The FDA subjects drugs to extensive pre and post market regulation. Failure to comply with the FDC Act and other federal and state statutes and regulations may subject a company to a variety of administrative or judicial sanctions, such as FDA refusal to approve pending NDAs, withdrawal of approvals, clinical holds, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties or criminal penalties.

FDA approval is required before any new unapproved drug or dosage form, including a new use of a previously approved drug, can be marketed in the United States. The process required by the FDA before a new drug may be marketed in the United States is long, expensive, and inherently uncertain. Drug development in the United States typically involves completion of preclinical laboratory and animal tests,

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submission to the FDA of an Investigational New Drug application, or IND, which must become effective before clinical testing may commence, approval by an IRB, at each clinical site before each trial may be initiated, performance of adequate and well controlled clinical trials to establish the safety and effectiveness of the drug for each indication for which FDA approval is sought, submission to the FDA of an NDA, satisfactory completion of an FDA inspection of the manufacturing facility or facilities at which the product is produced, and FDA review and approval of the NDA. Developing the data to satisfy FDA pre-market approval requirements typically takes many years and the actual time required may vary substantially based upon the type, complexity, and novelty of the product, disease or indication.

Preclinical tests include laboratory evaluation of the product's chemistry, formulation, and toxicity, as well as animal studies to characterize and assess the potential safety and efficacy of the product. The conduct of the preclinical tests must comply with federal regulations and requirements, including good laboratory practice, or GLP, regulations. These preclinical results are submitted to the FDA as part of an IND along with other information, including information about the product's chemistry, manufacturing and controls, and a proposed clinical trial protocol. Long term preclinical studies including reproductive toxicity and carcinogenicity may be initiated or continue after the IND is submitted.

An IND must become effective before United States clinical trials may begin. A 30-day waiting period after the submission of each IND is required prior to the commencement of clinical testing in humans. If the FDA has neither commented on nor questioned the IND within this 30-day period, the IND automatically becomes effective and the clinical trial proposed in the IND may begin. If the FDA does raise any concerns or questions and places the clinical trial on a clinical hold, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. As a result, a submission of an IND may not result in FDA authorization to commence a clinical trial. A separate submission to an existing IND must also be made for each successive clinical trial conducted during product development.

Clinical trials involve the administration of the investigational new drug to human subjects under the supervision of a qualified investigator. Clinical trials must be conducted: (i) in compliance with federal regulations, including GCP requirements for conducting, monitoring, recording and reporting the results of clinical trials, in order to ensure that the data and results are scientifically credible and accurate and that the trial subjects are adequately informed of the potential risks of participating in clinical trials; and (ii) with protocols that detail, among other things, the objectives of the trial, the parameters to be used in monitoring safety, and the effectiveness criteria to be evaluated. Each protocol involving testing on U.S. patients and subsequent protocol amendments must be submitted to the FDA as part of the IND.

The FDA may order the temporary, or permanent, discontinuation of a clinical trial at any time, or impose other sanctions, if it believes that the clinical trial either is not being conducted in accordance with FDA requirements or presents an unacceptable risk to the clinical trial patients. The study protocol and informed consent information for patients in clinical trials must also be submitted to and approved by an IRB at each study site before the study commences at that site and the IRB must monitor the clinical trial until it is completed. An IRB may also require the clinical trial at that site to be halted, either temporarily or permanently, for failure to comply with the IRB's requirements or if the drug candidate has been associated with unexpected serious harm to patients, or the IRB may impose other conditions. The study sponsor or the FDA may also suspend or discontinue a clinical trial at any time on various grounds, including a determination that the subjects are being exposed to an unacceptable health risk.

Clinical trials to support an NDA for marketing approval are typically conducted in three sequential phases, although there is leeway to overlap or combine these phases.

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Phase 1. The drug candidate is initially introduced into healthy human subjects or patients with the target disease or condition, and is tested to assess safety, dosage tolerance, pharmacokinetics and pharmacological activity, and, when possible, to ascertain evidence of efficacy. The drug candidate may also be tested in patients with severe or life-threatening diseases to gain an early indication of its effectiveness.

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Phase 2. The trials are conducted using a limited patient population for the purposes of preliminarily determining the effectiveness of the drug in that particular indication, ascertaining dosage tolerance, discerning the optimal dosage, and identifying possible adverse effects and safety risks.

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Phase 3. If a compound demonstrates evidence of efficacy and has an acceptable safety profile in the Phase 2 clinical trials, then Phase 3 clinical trials are undertaken to obtain additional information from an expanded and diverse patient population, at multiple, geographically dispersed clinical trial sites, in randomized controlled studies often with a double-blind design to maximize the reproducibility of the study results. Typically, a minimum of two positive Phase 3 clinical trials are submitted to support the product's marketing application. These Phase 3 clinical trials are intended to provide sufficient data demonstrating evidence of the efficacy and safety of the drug such that the FDA can evaluate the overall benefit-risk of the drug and provide adequate information for the labeling and package insert for the drug. Trials conducted outside of the United States under similar, GCP-compliant conditions in accordance with local applicable laws may also be acceptable to FDA in support of product approval.

Sponsors of clinical trials for investigational drugs must publicly disclose certain clinical trial information, including detailed trial design. These requirements are subject to specific timelines and apply to most Phase 3 clinical trials of FDA-regulated products.

In some cases, FDA may condition approval of an NDA for a product candidate on the sponsor's agreement to conduct additional clinical trials after NDA approval. In other cases, a sponsor may voluntarily conduct additional clinical trials post approval to gain more information about the drug. Such post approval trials are typically referred to as Phase 4 clinical trials.

Progress reports detailing the results of the clinical trials must be submitted at least annually to the FDA and more frequently if SAEs occur. Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board or committee. This group provides authorization for whether or not a trial may move forward at designated check points based on access to certain data from the study. Phase 1, Phase 2, Phase 3 and Phase 4 clinical trials may not be completed successfully within any specified period, or at all.

Concurrent with clinical trials, companies usually finalize a process for manufacturing the drug in commercial quantities in accordance with current good manufacturing practice, or cGMP, requirements. The manufacturing process must be capable of consistently producing quality batches of the drug candidate and, among other things, the manufacturer must develop methods for testing the identity, strength, quality and purity of the final drug product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the drug candidate does not undergo unacceptable deterioration over its shelf life.

After completion of the required clinical testing, an NDA is prepared and submitted to the FDA requesting approval to market the drug for one or more specified indications. FDA review and approval of the NDA is required before marketing of the product may begin in the United States. The NDA must include the results of all preclinical, clinical, and other testing, including negative or ambiguous results as well as positive findings, together with other detailed information including compilation of data relating to the product's pharmacology, chemistry, manufacture, and controls. The NDA must also contain extensive manufacturing information. The FDA reviews an NDA to determine, among other things, whether a drug is safe and effective for its intended use. The cost of preparing and submitting an NDA is substantial. Under federal law, the submission of most NDAs is subject to both a substantial application user fee and annual product and establishment user fees. The sum of these fees may total several million dollars and they are typically increased annually.

The FDA has 60 days from its receipt of an NDA to determine whether the application will be accepted for filing based on the agency's threshold determination that the application is sufficiently complete to permit substantive review. The FDA may request additional information rather than accept an NDA for filing. In this event, the application must be resubmitted with the additional information. Once the submission is accepted for filing, the FDA begins an in-depth review.

Under the Prescription Drug User Fee Act ("PDUFA"), guidelines that are currently in effect, the FDA has agreed to certain performance goals in the review of NDAs. Standard NDAs are generally reviewed within ten months of filing, or twelve months from submission. Although FDA often meets its user fee performance goals, the FDA can extend these timelines if necessary, and FDA review may not

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occur on a timely basis. The FDA usually refers applications for novel drugs, or drugs that present difficult questions of safety or efficacy, to an advisory committee — a panel of independent experts, typically including clinicians and other scientific experts — for review, evaluation, and a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendation of the advisory committee, but it generally follows its recommendations. Before approving an NDA, the FDA will typically inspect one, or more, clinical sites to assure compliance with GCP. Additionally, the FDA will inspect the facility or the facilities at which the drug is manufactured. The FDA will not approve an application unless it verifies that compliance with cGMP requirements is satisfactory and that the manufacturing processes and facilities are adequate to assure consistent production of the product within required specifications. The FDA will not approve a drug unless the application contains data showing substantial evidence that it is safe and effective in the indication studied.

After the FDA evaluates the NDA and conducts its inspections, it issues either an approval letter or a complete response letter. A complete response letter generally outlines the deficiencies contained in the submission and may require substantial additional testing or information in order for the FDA to reconsider the application, including potentially significant, expensive and time-consuming requirements related to clinical trials, nonclinical studies or manufacturing. Even if such data are submitted, the FDA may ultimately decide that the NDA does not satisfy the criteria for approval. Data from clinical trials are not always conclusive, and the FDA may interpret data differently than Adynxx does. If and when those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the application, the FDA will typically issue an approval letter. The FDA has committed to reviewing such resubmissions in two or six months depending on the type of additional information requested. FDA approval is never guaranteed. The FDA may refuse to approve an NDA if applicable regulatory criteria are not satisfied.

An approval letter authorizes commercial marketing of the drug with specific prescribing information for specific indications. The approval for a drug may be significantly more limited than requested in the application, including limitations on the specific diseases and dosages or the indications for use, which could restrict the commercial value of the product. The FDA may also require that certain contraindications, warnings, or precautions be included in the product's package insert, or labeling.

In addition, as a condition of approval, the FDA may require a REMS, to help ensure that the benefits of the drug outweigh the potential risks. REMS can include medication guidelines, communication plans for healthcare professionals, and elements to assure safe use ("ETASU"). ETASU can include, but are not limited to, special training or certification for prescribing or dispensing-including dispensing only under certain circumstances, special monitoring, and the use of patient registries. The requirement for a REMS or use of a companion diagnostic with a drug can materially affect the potential market and profitability of the drug. Moreover, product approval may require, as a condition of approval, substantial post-approval testing and surveillance to monitor the drug's safety or efficacy. The FDA may also condition approval on, among other things, changes to proposed labeling or development of adequate controls and specifications.

Once granted, product approvals may be withdrawn if compliance with regulatory standards are not maintained or problems are identified following initial marketing. In addition, after approval, some types of changes to the approved product, such as adding new indications, manufacturing changes, and additional labeling claims, are subject to further testing requirements and FDA review and approval. There also are continuing, annual user fee requirements for any marketed products and the establishments at which such products are manufactured, as well as new application fees for supplemental applications with clinical data.

Advertising and Promotion

Drugs manufactured or distributed pursuant to FDA approvals are subject to pervasive and continuing post-approval regulatory requirements. For instance, the FDA closely regulates the post-approval marketing, labeling, advertising and promotion of drugs, including standards and regulations for direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities and promotional activities involving the Internet. Failure to comply with these requirements can result in adverse publicity as well as significant penalties, including the issuance of warning letters directing a company to correct any deviations from the FDA's standards. The FDA may also impose a requirement that future advertising and promotional materials be pre-cleared by the FDA, and Adynxx may face federal and/or state civil and criminal investigations and prosecutions.

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Drugs may be marketed only for the approved indications and in accordance with the provisions of the approved labeling. Changes to some of the conditions established in an approved application, including changes in indications, labeling, or manufacturing processes or facilities, require submission and FDA approval of a new NDA or NDA supplement before the change can be implemented. An NDA supplement for a new indication typically requires clinical data similar to that in the original application, and the FDA uses the same procedures and actions in reviewing NDA supplements as it does in reviewing NDAs. Obtaining new indication is an important part of managing the life cycle of the drug.

AE Reporting and cGMP Compliance

Recordkeeping, AE reporting and the submission of periodic reports are required following the FDA's approval of an NDA. The FDA also may require post-marketing testing or Phase 4 clinical trials, REMS, or surveillance to monitor the effects of an approved drug. In addition, the FDA may place conditions on an approval that could restrict the distribution or use of the product. Furthermore, manufacture, packaging, labeling, storage and distribution procedures must continue to conform to cGMPs after approval. Manufacturers and certain of their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies to assess compliance with ongoing regulatory requirements, including cGMPs. Changes to the manufacturing process are strictly regulated and often require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMP requirements and impose reporting and documentation requirements upon the sponsor and any third-party manufacturers that the sponsor may decide to use. Accordingly, manufacturers must continue to expend time, money, and effort in the areas of production and quality control to maintain compliance with cGMPs. Failure to comply with the statutory and regulatory requirements can subject a manufacturer to possible legal or regulatory action, such as warning letters, suspension of manufacturing, seizure of product, injunctive action or possible civil penalties. Adynxx cannot be certain that it or its present or future third-party manufacturers or suppliers will be able to comply with the cGMP regulations and other ongoing FDA regulatory requirements. If Adynxx or its present or future third-party manufacturers or suppliers are not able to comply with these requirements, the FDA may halt Adynxx's clinical trials, require Adynxx to recall a drug from distribution or withdraw approval of the NDA for that drug. Regulatory authorities may also withdraw product approvals, request product recalls, or impose marketing restrictions through labeling changes or product removals upon discovery of previously unknown problems with a product, including AEs of unanticipated severity or frequency, or with manufacturing processes.

Other Healthcare Laws and Compliance Requirements

In the United States, Adynxx's activities are potentially subject to regulation by federal, state, and local authorities in addition to the FDA. These other agencies include, without limitation, the Centers for Medicare and Medicaid Services, other divisions of the U.S. Department of Health and Human Services, the U.S. Department of Justice and individual U.S. Attorney offices within the Department of Justice, as well as state and local governments. Such agencies enforce a variety of laws, including without limitation, anti-kickback and false claims laws, data privacy and security laws, and physician payment transparency laws.

The federal Anti-Kickback Statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving any remuneration (including any kickback, bribe or rebate), directly or indirectly, overtly or covertly, to induce or in return for purchasing, leasing, ordering or arranging for or recommending the purchase, lease or order of any good, facility, item or service reimbursable, in whole or in part, under Medicare, Medicaid or other federal healthcare programs. The term "remuneration" has been broadly interpreted to include anything of value. The Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on one hand and prescribers, purchasers and formulary managers on the other. Although there are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution, the exceptions and safe harbors are drawn narrowly. Practices that involve remuneration that may be alleged to be intended to induce prescribing, purchases or recommendations may be subject to scrutiny if they do not qualify for an exception or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the Anti-Kickback Statute. Instead, the legality

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of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all of its facts and circumstances. Several courts have interpreted the statute's intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of federal healthcare covered business, the Anti-Kickback Statute has been violated.

Additionally, the intent standard under the Anti-Kickback Statute was amended by the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010 (the "ACA"), to a stricter standard such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, ACA codified case law that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal civil False Claims Act.

The federal civil False Claims Act prohibits, among other things, any person or entity from knowingly presenting, or causing to be presented, a false or fraudulent claim for payment to or approval by the federal government or knowingly making, using or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government. A claim includes "any request or demand" for money or property presented to the U.S. government. Several pharmaceutical and other healthcare companies have been prosecuted under these laws for, among other things, allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. Other companies have been prosecuted for causing false claims to be submitted because of the companies' marketing of products for unapproved, and thus non-reimbursable, uses. In addition, the civil monetary penalties statute imposes penalties against any person or entity that, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent. HIPAA, created new federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payors and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Like the Anti-Kickback Statute, ACA broadened the reach of certain criminal healthcare fraud statutes created under HIPAA by amending the intent requirement such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

Also, many states have similar fraud and abuse statutes or regulations that may be broader in scope and may apply regardless of payor, in addition to items and services reimbursed under Medicaid and other state programs.

Adynxx may be subject to data privacy and security regulation by both the federal government and the states in which Adynxx conducts its business. HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act ("HITECH"), and their respective implementing regulations, including the final Omnibus Rule published on January 25, 2013, imposes specified requirements relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH makes HIPAA's security standards directly applicable to business associates, defined as service providers of covered entities that create, receive, maintain or transmit protected health information in connection with providing a service for or on behalf of a covered entity. HITECH also created four new tiers of civil monetary penalties and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions. In addition, many state laws govern the privacy and security of health information in certain circumstances, many of which differ from HIPAA and each other in significant ways and may not have the same effect, thus complicating compliance efforts.

In addition, there has been a recent trend of increased federal and state regulation of payments made to physicians and other healthcare providers. ACA imposed, among other things, new annual reporting requirements for covered manufacturers for certain payments and "transfers of value" provided to physicians and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Failure to submit timely, accurately and completely the required information

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for all payments, transfers of value and ownership or investment interests may result in civil monetary penalties of up to an aggregate of $150,000 per year and up to an aggregate of $1 million per year for "knowing failures." Covered manufacturers were required to begin collecting data on August 1, 2013 and submit reports on aggregate payment data to the government for the first reporting period (August 1, 2013 — December 31, 2013) by March 31, 2014, and were required to report detailed payment data for the first reporting period and submit legal attestation to the completeness and accuracy of such data by June 30, 2014. Thereafter, covered manufacturers must submit reports by the 90th day of each subsequent calendar year. In addition, certain states require implementation of commercial compliance programs and compliance with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government, impose restrictions on marketing practices, and/or tracking and reporting of gifts, compensation and other remuneration or items of value provided to physicians and other healthcare professionals and entities.

If Adynxx's operations are found to be in violation of any of the health regulatory laws described above or any other laws that apply to it, Adynxx may be subject to penalties, including potentially significant criminal, civil and/or administrative penalties, damages, fines, disgorgement, exclusion from participation in government healthcare programs, contractual damages, reputational harm, administrative burdens, diminished profits and future earnings, and the curtailment or restructuring of its operations, any of which could adversely affect Adynxx's ability to operate its business and its results of operations.

International Regulation

In addition to regulations in the United States, a variety of foreign regulations govern clinical trials, commercial sales, and distribution of drugs. Whether or not Adynxx obtains FDA approval for a drug, Adynxx or its collaborators must obtain approval of the drug by the comparable regulatory authorities of foreign countries before commencing clinical trials or marketing of the drug in those countries. The approval process varies from country to country and the time to approve may be longer or shorter than that required for FDA approval. Further, to the extent that any of Adynxx's products are sold in a foreign country, Adynxx may be subject to additional foreign laws and regulations, which may include, for instance, applicable post-marketing requirements, including safety surveillance, anti-fraud and abuse laws and implementation of corporate compliance programs and reporting of payments or transfers of value to healthcare professionals.

Pharmaceutical Coverage, Pricing and Reimbursement

In the United States and other countries, patients who are prescribed treatments for their conditions and providers performing the prescribed services generally rely on third-party payors to reimburse all or part of the associated healthcare costs. Patients are unlikely to use Adynxx's products unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of its products. Sales of any products for which Adynxx receives regulatory approval for commercial sale will therefore depend in part on the availability of reimbursement from third-party payors, including government health administrative authorities, managed care providers, private health insurers, and other organizations.

Generally, if brivoligide obtains FDA approval, before Adynxx can attempt to sell brivoligide in a hospital, brivoligide must be approved for addition to that hospital's list of approved drugs, or formulary list, by the hospital's P&T committee. A hospital's P&T committee typically governs all matters pertaining to the use of medications within the institution, including the review of medication formulary data and recommendations for the appropriate use of drugs within the institution to the medical staff. The frequency of P&T committee meetings at hospitals varies considerably, and P&T committees often require additional information to aid in their decision-making process. Adynxx may experience substantial delays in obtaining formulary approvals, and hospital pharmacists may be concerned that the cost of acquiring brivoligide for use in their institutions will adversely impact their overall pharmacy budgets, which could cause pharmacists to resist efforts to add brivoligide to the formulary, or to implement restrictions on the usage of brivoligide in order to control costs.

The process for determining whether a third-party payor will provide coverage for a drug product typically is separate from the process for setting the price of a drug product or for establishing the reimbursement rate that the payor will pay for the drug product once coverage is approved. Third-party

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payors may limit coverage to specific drug products on an approved list, also known as a formulary, which might not include all of the FDA-approved drugs for a particular indication. A decision by a third-party payor not to cover Adynxx's product candidates could reduce physician utilization of Adynxx's products once approved and have a material adverse effect on Adynxx's sales, results of operations and financial condition. Moreover, a third-party payor's decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Adequate third-party reimbursement may not be available to enable Adynxx to maintain price levels sufficient to realize an appropriate return on Adynxx's investment in product development. Additionally, coverage and reimbursement for drug products can differ significantly from payor to payor. One third-party payor's decision to cover a particular medical product or service does not ensure that other payors will also provide coverage for the medical product or service, or will provide coverage at an adequate reimbursement rate. As a result, the coverage determination process will require Adynxx to provide scientific and clinical support for the use of its products to each payor separately and will be a time-consuming process.

The containment of healthcare costs has become a priority of federal, state and foreign governments, and the prices of drugs have been a focus in this effort. Third-party payors are increasingly challenging the prices charged for medical products and services, examining the medical necessity and reviewing the cost-effectiveness of drug products and medical services, in addition to questioning safety and efficacy. If these third-party payors do not consider Adynxx's products to be cost-effective compared to other available therapies, they may not cover Adynxx's products after FDA approval or, if they do, the level of payment may not be sufficient to allow Adynxx to sell its products at a profit.

In addition, the U.S. government, state legislatures and foreign governments have continued implementing cost-containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. By way of example, in the United States, ACA contains provisions that may reduce the profitability of drug products. The ACA, among other things, increased the minimum Medicaid rebates owed by most manufacturers under the Medicaid Drug Rebate Program, extended the Medicaid Drug Rebate Program to utilization of prescriptions for individuals enrolled in Medicaid managed care plans, imposed mandatory discounts for certain Medicare Part D beneficiaries and subjected manufacturers to new annual fees based on pharmaceutical companies' share of sales to federal healthcare programs. Adynxx expects that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for Adynxx's products once approved or additional pricing pressures.

Other legislative changes have been proposed and adopted since ACA was enacted. On August 2, 2011, the President signed into law the Budget Control Act of 2011, which, among other things, created the Joint Select Committee on Deficit Reduction to recommend to Congress proposals in spending reductions. The Joint Select Committee did not recommend and Congress did not enact legislation to reduce the deficit by at least $1.2 trillion for the years 2013 through 2021, triggering the legislation's automatic reduction to several government programs. This includes reductions to Medicare payments to providers of 2% per fiscal year, which went into effect on April 1, 2013 and will remain in effect through 2024 unless additional Congressional action is taken. On January 2, 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, further reduced Medicare payments to several providers, including hospitals, imaging centers and cancer treatment centers.

Adynxx expects that additional state and federal healthcare reform measures will be adopted in the future, any of which could limit the amounts that federal and state governments will pay for healthcare products and services, which could result in reduced demand for Adynxx's products once approved or additional pricing pressures.

Legal Proceedings

Adynxx is not currently a party to any material legal proceedings.

Facilities

As of September 30, 2018, Adynxx conducted all of its operations, other than its outsourced operations, at its 3,659 square foot office space located at 100 Pine Street, Suite 500, San Francisco,

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CA 94111. This office space is subleased from REC Americas, LLC, and the term of the lease is for 62 months and expires on December 31, 2019.

Employees

As of September 30, 2018, Adynxx had a total of six full-time employees in the United States, three of whom were primarily engaged in research and development activities and three of whom were engaged in general management and administration. Two of Adynxx's employees have either an M.D. or a Ph.D. None of Adynxx's employees are represented by a labor union or subject to a collective bargaining agreement. Adynxx has never experienced any work stoppage and considers its relations with its employees to be good.

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ALLIQUA'S MANAGEMENT'S DISCUSSION AND ANALYSIS OF
FINANCIAL CONDITION AND RESULTS OF OPERATIONS

For Alliqua's management's discussion and analysis of financial condition and results of operations, please refer to the section entitled "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" set forth in Alliqua's Annual Report on Form 10-K for the year ended December 31, 2017, included as Annex C and Annex D to this proxy statement, and the section entitled "Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations" set forth in Alliqua's Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2018, June 30, 2018 and September 30, 2018, included as Annex E, Annex F and Annex G to this proxy statement, as filed with the SEC on May 14, 2018, August 10, 2018 and October 26, 2018, respectively, which sections are incorporated by reference herein.

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QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT
ALLIQUA'S MARKET RISK

For Alliqua's quantitative and qualitative disclosures about Alliqua's market risk, please refer to the section entitled "Item 7A. Quantitative and Qualitative Disclosures About Market Risk" set forth in Alliqua's Annual Report on Form 10-K for the year ended December 31, 2017, as Annex C and Annex D to this proxy statement, and the section entitled "Item 3. Quantitative and Qualitative Disclosures About Market Risk" set forth in Alliqua's Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2018, June 30, 2018 and September 30, 2018, included as Annex E, Annex F and Annex G to this proxy statement, as filed with the SEC on May 14, 2018, August 10, 2018 and October 26, 2018, respectively, which sections are incorporated by reference herein.

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## ADYNXX'S MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of Adynxx's financial condition and results of operations together with Adynxx's financial statements and related notes included elsewhere in this proxy statement. This discussion and other parts of this proxy statement contain forward-looking statements that involve risks and uncertainties, such as its plans, objectives, expectations, intentions and beliefs. Adynxx's actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in the section entitled "Risk Factors" included elsewhere in this proxy statement.

### Overview

Adynxx is a clinical stage biopharmaceutical company focused on bringing to market novel, disease-modifying products for the treatment of pain. Since its founding in 2007, Adynxx has worked to discover and develop transcription factor decoys to modify the course of pain. Adynxx's resulting pipeline includes brivoligide, a Phase 2 drug candidate intended to address postoperative pain in a readily-identified group of patients with the greatest risk of experiencing increased pain and elevated opioid use following surgery, and AYX2, a pre-clinical candidate intended to resolve chronic syndromes of pain, including both inflammatory and neuropathic pain. Both programs were developed by Adynxx as part of the AYX decoy technology platform. Adynxx plans to continue development of brivoligide and AYX2 and also seeks to identify potential in-licensing opportunities to build a pipeline of complementary product candidates in pain and inflammation.

Adynxx has no products approved for commercial sale and has not generated any revenue from product sales. From inception to September 30, 2018, Adynxx has raised net cash proceeds of approximately $56.5 million, primarily through the sale of equity securities, payments associated with strategic collaborations, secured debt and the issuance of convertible promissory notes.

Adynxx has incurred operating losses in each year since inception, with the exception of 2014, when Adynxx received a $20.0 million option payment as part of a strategic collaboration. Adynxx's net losses were $6.7 million, $11.6 million and $4.4 million for the years ended December 31, 2016 and 2017 and for the nine months ended September 30, 2018, respectively. As of September 30, 2018, Adynxx had an accumulated deficit of $35.7 million. Substantially all of its operating losses resulted from expenses incurred in connection with its research and development programs and from general and administrative costs associated with its operations.

Adynxx expects to incur significant expenses and increasing operating losses for at least the next several years as it initiates and continues the clinical development of, and seeks regulatory approval for, its product candidates and adds personnel necessary to operate as a public company with an advanced clinical pipeline of products. In addition, operating as a publicly traded company would involve the hiring of additional financial and other personnel, upgrading its financial information systems and incurring costs associated with operating as a public company. Adynxx expects that its operating losses will fluctuate significantly from quarter to quarter and year to year due to timing of clinical development programs and efforts to achieve regulatory approval of any of Adynxx's product candidates.

As of September 30, 2018, Adynxx had cash and cash equivalents of $1.8 million. In March 2018, Adynxx received $1.5 million from the issuance of convertible promissory notes (the "March 2018 Notes") to its current investors. The March 2018 Notes accrue interest at 8.0% per annum and all principal and interest is due and payable, upon request of the holders of at least a majority of the outstanding unpaid principal amount of the notes, on or after March 29, 2019. In September 2018, Adynxx received an additional $1.5 million from the issuance of convertible promissory notes (the "September 2018 Notes") to its current investors. The September 2018 Notes accrue interest at 8.0% per annum and all principal and interest is due and payable, upon request of the holders of at least a majority of the outstanding unpaid principal amount of the notes, on or after September 27, 2019.

Adynxx's current capital resources are insufficient to fund its planned operations for a 12-month period, and therefore, raise substantial doubt about its ability to continue as a going concern. Adynxx will continue to require substantial additional capital to continue its clinical development and potential

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commercialization activities. Accordingly, Adynxx will need to raise substantial additional capital to continue to fund its operations. The amount and timing of its future funding requirements will depend on many factors, including the pace and results of its clinical development efforts. Failure to raise capital as and when needed, on favorable terms or at all, would have a negative impact on its financial condition and its ability to develop its product candidates.

Recent Developments

On March 29, 2018, Adynxx entered into a $1.5 million convertible promissory note agreement with its investors. The note accrues simple interest on the outstanding principal amount at the rate of 8.0% per annum and matures on March 29, 2019.

On September 27, 2018, Adynxx entered into a $1.5 million convertible promissory note agreement with its investors. The note accrues simple interest on the outstanding principal amount at the rate of 8.0% per annum and matures on September 27, 2019.

In the event that Adynxx issues and sells shares of its preferred stock to the investors on or before the maturity dates, in a preferred stock financing, then the outstanding principal amount of this convertible promissory note and any unpaid accrued interest will automatically convert in whole into equity securities sold in the qualified financing at a conversion price equal to 80% of the cash price paid per share for equity securities by the investors in the qualified financing. In October 2018, the convertible notes were modified to provide that in the event Adynxx consummates a reverse merger on or before the maturity dates, and prior to a preferred stock financing, then the principal amount of the Notes and unpaid accrued interest will automatically convert in whole into shares of Adynxx's Series B preferred stock at a conversion price equal to $0.3133 per share immediately prior to the closing of the reverse merger.

On October 11, 2018, Adynxx entered into the Merger Agreement, with Alliqua, pursuant to which, among other things, subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, a wholly owned subsidiary of Alliqua will merge with and into Adynxx, with Adynxx remaining as the surviving corporation of the Merger. At the closing of the Merger, Alliqua equity holders are expected to own approximately 14% of the outstanding capital stock of the combined company with Adynxx's preexisting equity holders expected to own approximately 86%.

Basis of Presentation

Research and Development Expenses

Research and development expenses represent costs incurred to conduct research and development, such as the development of Adynxx's product candidates. Adynxx recognizes all research and development costs as they are incurred. Research and development expenses consist primarily of the following:

- expenses incurred under agreements with consultants and clinical trial sites that conduct research and development activities on its behalf;
- laboratory and vendor expenses related to the execution of clinical trials;
- contract manufacturing expenses, primarily for the production of clinical supplies; and
- internal costs that are associated with activities performed by Adynxx's research and development organization. These costs are not separately allocated by product candidate as Adynxx typically uses its employee resources across various research and development activities. Unallocated internal research and development costs consist primarily of:

personnel costs, which include salaries, benefits and stock-based compensation expense; and

regulatory expense related to development activities.

The largest component of Adynxx's operating expenses has historically been the investment in research and development activities. However, Adynxx does not allocate internal research and development costs, such as salaries, benefits, stock-based compensation expense and indirect costs to product candidates on a program-specific basis. The following table shows Adynxx's research and development expenses for the years ended December 31, 2017 and 2016 and for the nine months ended September 30, 2018 and 2017:

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| | Year Ended December 31, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2018 | 2017 |
| | (in thousands) | | | |
| Direct research and development expenses by program: | | | | |
| ADYX-004 TKA | $ 6,201 | $ 1,149 | $ 92 | $ 5,149 |
| AYX Platform | 607 | 687 | 120 | 159 |
| ADYX-003 TKA | 1 | 25 | 1 | 1 |
| Internal research and development costs | 1,913 | 1,925 | 1,580 | 1,463 |
| Total research and development expenses | $ 8,722 | $ 3,786 | $ 1,793 | $ 6,772 |

Adynxx expects research and development expenses will increase in the future as Adynxx advances its product candidates into and through clinical trials and pursues regulatory approvals, which will require a significant investment in regulatory support and contract manufacturing. In addition, Adynxx continues to evaluate opportunities to acquire or in-license other product candidates and technologies, which may result in higher research and development expenses due to license fees and/or milestone payments.

The process of conducting clinical trials necessary to obtain regulatory approval is costly and time consuming. Adynxx may never succeed in timely developing and achieving regulatory approval for its product candidates. The probability of success of Adynxx's product candidates may be affected by numerous factors, including clinical data, competition, intellectual property rights, manufacturing capability and commercial viability. As a result, Adynxx is unable to determine the duration and completion costs of Adynxx's development projects or when and to what extent Adynxx will generate revenue from the commercialization and sale of any of its product candidates.

General and Administrative Expenses

General and administrative expenses consist of personnel costs, facilities expenses and expenses for outside professional services, including legal, audit and accounting services. Personnel costs consist of salaries, benefits and stock-based compensation. Adynxx expects to incur additional expenses as a result of becoming a public company following completion of the merger, including expenses related to compliance with the rules and regulations of the SEC and Nasdaq, additional insurance, legal expenses, investor relations and other administrative expenses and professional services.

Interest Expense and Other Income

Other income (expense), net consists primarily of interest expense and gains and losses resulting from revaluation of Adynxx's preferred stock warrant liabilities and convertible debt derivative liabilities.

Interest expense consists of cash interest expense on term loans with Oxford and non-cash interest expense and amortization of debt issuance and debt discount costs related to Oxford term loans and Adynxx's convertible notes. Adynxx's preferred stock warrants related to the term loans are revalued at each balance sheet date and any change in fair value is recognized as a component of other income or expense. Concurrent with the issuance of the convertible notes, the fair value of convertible debt derivatives is recorded as a liability with an offsetting amount recorded as debt discount, which offsets the carrying amount of the debt. The debt discount is accreted to interest expense over the debt borrowing term. The convertible debt derivative liability is revalued at the end of each reporting period and any change in fair value is recorded as a component of other income or expense.

Adynxx will continue to record adjustments to the estimated fair value of the preferred stock warrants until they are exercised, expire or convert into warrants to purchase shares of common stock upon the closing of the Merger. Adynxx will continue to record adjustments to the fair value of the convertible debt derivative liability until the notes are repaid or convert into shares of preferred stock immediately prior to the closing of the Merger.

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Income Taxes

As of December 31, 2017, no tax benefit has been recorded because Adynxx has a history of operating losses and believes it is more likely than not the deferred tax asset will not be realized and a full valuation has been provided. During 2017, Adynxx corrected the balance of Net Operating Losses and Research and Development Credits and the associated Valuation Allowance in connection with Adynxx's determination of nexus in an additional state which was previously not identified correctly. The correction of such error did not have any impact on Adynxx's financial position and results of operations for any period presented or any prior period results. Adynxx has corrected the gross amount of deferred tax assets and the valuation allowance for 2016 to correct the error.

As of December 31, 2017, Adynxx had federal net operating loss carryforwards of approximately $29.3 million, which begin to expire in 2033. As of December 31, 2017, Adynxx had federal and California research and development tax credit carryforwards of approximately $1.4 million and $0.3 million, respectively. The federal research and development tax credit carryforwards will begin to expire in 2031. The California research and development tax credit carryforwards are available indefinitely until utilized.

Internal Revenue Code ("IRC") Section 382 and similar California rules place a limitation on the amount of taxable income that can be offset by net operating loss and credit carryforwards after a change in control. Generally after a control change, a corporation cannot deduct net operating loss or credit carryforwards in excess of the Section 382 limitations. Due to these provisions, utilization of the net operating loss and tax credit carryforwards may be subjected to annual limitations regarding their utilization against taxable income in future periods.

Summary of Significant Accounting Policies and Estimates

Use of Estimates

Adynxx's management's discussion and analysis of financial condition and results of operations is based on its financial statements, which have been prepared in accordance with GAAP. The preparation of these financial statements requires Adynxx to make estimates and judgments that affect the reported amounts of assets, liabilities and expenses. On an ongoing basis, Adynxx evaluates these estimates and judgments. Adynxx bases its estimates on historical experience and on various assumptions that Adynxx believes to be reasonable under the circumstances. These estimates and assumptions form the basis for making judgments about the carrying values of assets and liabilities and the recording of expenses that are not readily apparent from other sources. Actual results may differ materially from these estimates. Adynxx believes that the accounting policies discussed below are critical to understanding its historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates.

Accrued Research and Development Expenses

Adynxx records accrued expenses for estimated costs of its research and development activities conducted by external service providers. Adynxx recognizes external development costs based on patient enrollment and related costs at clinical investigator sites as well as for the services received and efforts expended pursuant to contracts with multiple research institutions and clinical research organizations that conduct and manage clinical trials on Adynxx's behalf. This process involves reviewing contracts with service providers, identifying services that have been performed on Adynxx's behalf, confirming the level of service performed are aligned with the contract, expected remaining period of performance and the associated cost incurred for the service when Adynxx has not yet been invoiced or otherwise notified of actual cost. Adynxx estimates its accrued research and development expenses as of the date of each of its balance sheets. Expenses that are paid in advance of performance are deferred as a prepaid expense and expensed as the services are provided. Adynxx makes significant judgments and estimates in determining the accrued balance in each reporting period. As actual costs become known, Adynxx adjusts their accrued estimates. To date, Adynxx has had no significant adjustments to accrued clinical trial expense.

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Stock-based Compensation

Adynxx recognizes stock-based awards to employees and directors, including stock options, based on the fair value on the grant date using the Black-Scholes option pricing model. The related stock-based compensation is recognized as expense on a straight line-basis over the employee's or director's requisite service period (generally the vesting period). Noncash stock compensation expense is based on awards ultimately expected to vest and forfeitures are accounted for as they occur.

Adynxx accounts for stock-based compensation arrangements with non-employees using a fair value approach. The fair value of options granted to non-employees is measured using the Black-Scholes option pricing model reflecting similar assumptions for employees except that the expected term is based on the options' remaining contractual term instead of the simplified method in each of the reported periods. The compensation costs of these arrangements are subject to revaluation over the vesting terms as earned.

Adynxx recorded stock-based compensation expense related to options granted to employees of $0.01 million and $0.3 million for 2016 and 2017, respectively, and $0.2 million and $0.2 million for the nine months ended September 30, 2017 and 2018, respectively. As of September 30, 2018, Adynxx had $0.7 million of total unrecognized stock-based compensation costs which Adynxx expects to recognize over a weighted-average period of 2 years. In determining the fair value of the stock-based awards, Adynxx uses the Black-Scholes option-pricing model which requires the input of highly subjective assumptions, including (a) a risk-free interest rate, (b) the expected price volatility of Adynxx stock, (c) the expected term of the award and (d) an expected dividend yield. Due to the lack of a public market for the trading of Adynxx's common stock and a lack of company specific historical and implied volatility data, Adynxx has based its estimate of expected volatility on the historical volatility of a group of similar companies whose shares are publicly traded. For these analyses, Adynxx has selected biopharmaceutical companies with comparable characteristics to it including the stage of development of their product candidates, risk profiles, position within the industry, and with historical share price information sufficient to meet the expected life of the stock-based awards. Adynxx computes the historical volatility data using the daily closing prices for the selected companies' shares during the equivalent period of the calculated expected term of its stock-based awards. Adynxx has estimated the expected term of its employee stock options using the "simplified" method, whereby the expected life equals the average of the vesting term and the original contractual term of the option. The risk-free interest rates for periods within the expected life of the option are based on the yields of zero-coupon U.S. Treasury securities with maturities similar to those of the expected term of the award being valued. Adynxx accounts for forfeitures as they occur. Because Adynxx's employee stock options have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect fair value estimates, in management's opinion, the existing model may not provide a reliable single measure of the fair value of Adynxx's stock options.

The fair values of the shares of common stock underlying Adynxx's share-based awards were estimated on each grant date by its board of directors. In order to determine the fair value of its common stock underlying option grants, its board of directors considered, among other things, prior and recent valuations of its common stock prepared by an unrelated third-party valuation firm in accordance with the guidance outlined in the American Institute of Certified Public Accountants Practice Aid, Valuation of Privately-Held-Company Equity Securities Issued as Compensation. Given the absence of a public trading market for its common stock, its board of directors exercised reasonable judgment and considered a number of objective and subjective factors to determine the best estimate of the fair value of its common stock, including its stage of development; progress of its research and development efforts; the rights, preferences and privileges of its preferred stock relative to those of its common stock; equity market conditions affecting comparable public companies and the lack of marketability of its common stock.

In determining a fair value for its common stock, Adynxx estimated the enterprise and equity value of its business using the prior sale of company stock market approach. This market approach uses prices of actual transactions in a company's own securities to infer the value of the security being valued. There may be adjustments needed to deal with differences in the securities (e.g. preferred stock instead of common stock), standard of value (e.g. control vs. non-control or marketable vs. non-marketable), and the passage of time. The equity value is then allocated to the Common Stock and other securities using the Black-Scholes implementation of the Option Pricing Method (OPM).

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The value per share of Common Stock was then reduced by a discount for lack of marketability to put it on a minority, non-marketable basis.

Convertible Preferred Stock Warrants

Freestanding warrants are classified as liabilities on Adynxx's balance sheet. Warrants are subject to re-measurement at fair value at each balance sheet date, and any change in fair value is recognized as a component of other income or expense. Adynxx will continue to adjust the carrying values of freestanding warrants classified as liabilities for changes in fair value until the earlier of the exercise or expiration of the warrants or the completion of a liquidation event, including the completion of an initial public offering.

Derivative Instruments

Adynxx evaluates its convertible debt to determine if those contracts or embedded components of those contracts qualify as derivatives to be separately accounted for in accordance with ASC 815. The result of this accounting treatment is that the fair value of the bifurcated derivative is marked-to-market each balance sheet date and recorded as a liability. In the event that the fair value is recorded as a liability, the change in fair value is recorded in the Statement of Operations as other income or expense. Upon conversion or exercise of a derivative instrument, the instrument is marked to fair value at the conversion date and then that fair value is reclassified to equity.

In circumstances where the embedded conversion option in a convertible instrument is required to be bifurcated and there are also other embedded derivative instruments in the convertible instrument that are required to be bifurcated, the bifurcated derivative instruments are accounted for as a single, compound derivative instrument.

The classification of derivative instruments, including whether such instruments should be recorded as liabilities or as equity, is re-assessed at the end of each reporting period. Equity instruments that are initially classified as equity that become subject to reclassification are reclassified to liability at the fair value of the instrument on the reclassification date. Derivative instrument liabilities will be classified in the balance sheet as current or non-current based on whether or not net-cash settlement of the derivative instrument is expected within 12 months of the balance sheet date.

Debt Modifications and Extinguishments

When Adynxx modifies debt, it does so in accordance with ASC 470-50, Debt: Modifications and Extinguishments, which requires modification to debt instruments to be evaluated to assess whether the modifications are considered "substantial modifications". A substantial modification of terms shall be accounted for like an extinguishment. Based on the guidance relied upon and the analysis performed, changes to debt provisions were not considered substantial and were treated as modifications. If Adynxx determines the change in terms meet the criteria for substantial modification under ASC 470 it will treat the modification as extinguishment and recognize a gain or loss from debt extinguishment.

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Results of Operations

Comparison of the Nine Months Ended September 30, 2018 and 2017

| | Nine Months Ended September 30, | | Dollar Change |
|---|---|---|---|
| | 2018 | 2017 | |
| | (in thousands) | | |
| Operating expenses: | | | |
| Research and development | $ 1,793 | $ 6,772 | $ (4,979) |
| General and administrative | 2,102 | 1,811 | 291 |
| Total operating expenses | 3,895 | 8,583 | (4,688) |
| Loss from operations | (3,895) | (8,583) | 4,688 |
| Interest income (expense), net | (766) | (405) | (361) |
| Other income | 211 | 16 | 195 |
| Net loss | $ (4,450) | $ (8,972) | $ 4,522 |

Research and Development

Research and development expenses decreased by $4.9 million to $1.8 million for the nine months ended September 30, 2018 from $6.7 million for the nine months ended September 30, 2017. The decrease for the nine months ended September 30, 2018, was primarily due to an increase of $0.2 million, related to bonus accruals and a decrease of $5.1 million related to the close out of a clinical study initiated in 2017.

General and Administrative

General and administrative expenses increased by $0.3 million to $2.1 million for the nine months ended September 30, 2018 from $1.8 million for the nine months ended September 30, 2017. The increase was primarily due to an increase of $0.2 million, for the nine months ended September 30, 2018, related to bonus accruals and an increase of $0.1 million for the nine months ended September 30, 2018, for legal and professional service costs related to reverse merger activities, increased travel and website development activities.

Interest Expense

Interest expense increased by $0.4 million to $0.8 million for the nine months ended September 30, 2018 from $0.4 million for the nine months ended September 30, 2017. The increase was related to interest paid on secured debt, accretion of a final charge due at maturity for the secured debt and the amortization of debt discount related to the embedded derivatives related to the convertible notes.

Other Income

Other income increased by $0.2 million to $0.2 million for the nine months ended September 30, 2018 due to the change in valuation of the embedded derivatives related to the convertible notes.

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Comparison of the Years Ended December 31, 2017 and 2016

| | Years Ended December 31, 2017 | 2016 | Dollar Change |
|---|---|---|---|
| | (in thousands) | | |
| Operating expenses: | | | |
| Research and development | $ 8,722 | $ 3,786 | $ 4,936 |
| General and administrative | 2,341 | 2,417 | (76) |
| Total operating expenses | 11,063 | 6,203 | 4,860 |
| Loss from operations | (11,063) | (6,203) | (4,860) |
| Interest expense | (515) | (563) | 48 |
| Other income | 17 | 20 | (3) |
| Net loss | $ (11,561) | $ (6,746) | $ (4,815) |

Research and Development

Research and development expenses increased by $4.9 million to $8.7 million for the year ended December 31, 2017 from $3.8 million for the year ended December 31, 2016. The increase was primarily due to an increase of $4.9 million in connection with the conduct of the Phase 2 ADYX-004 clinical trial that initiated enrollment in February 2017 and completed enrollment in December 2017.

General and Administrative

General and administrative expenses decreased by $0.1 million to $2.3 million for the year ended December 31, 2017 from $2.4 million for the year ended December 31, 2016. The decrease was primarily due to a decrease of $0.1 million in legal and professional service costs related to patent matters.

Interest Expense

Interest expense decreased by $0.1 million, to $0.5 million for the year ended December 31, 2017 from $0.6 million for the year ended December 31, 2016. The decrease was related to payments of principal that reduced the interest paid on secured debt, and accretion of a final charge due at maturity for the secured debt.

Income Taxes

Adynxx has incurred net losses and has not recorded any U.S. federal or state income tax benefits for losses as they have been offset by valuation allowances.

Liquidity and Capital Resources

Since inception through September 30, 2018, Adynxx's operations have been financed primarily by net cash proceeds of $28.6 million from the sale of its equity securities, $20 million from payments associated with strategic collaborations, $4.9 million aggregate principal amount borrowed under term loans, net of financing costs, and $3.0 million aggregate principal amount of convertible promissory notes issued to current investors. As of September 30, 2018, Adynxx had $1.8 million in cash and an accumulated deficit of $35.7 million.

Adynxx expects that its research and development and general and administrative expenses will increase, and, as a result, Adynxx anticipates that it will continue to incur increasing losses in the foreseeable future. Therefore, Adynxx will need to raise additional capital to fund its operations, which may be through the issuance of additional equity, including in connection with the contemplated merger, and potentially through incurrence of debt. The amount and timing of its future funding requirements will depend on many factors, including the pace and results of its clinical development efforts. Failure to raise capital as and when needed, on favorable terms or at all, would have a negative impact on its financial condition and its ability to develop its product candidates.

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Cash Flows

The following table summarizes Adynxx's cash flows for the periods indicated:

| | Years Ended December 31, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2017 | 2016 | 2018 | 2017 |
| | (in thousands) | | | |
| Net cash used in operating activities | $ (10,183) | $ (7,267) | $ (4,648) | $ (7,842) |
| Net cash used in investing activities | (3) | (47) | (2) | — |
| Net cash (used) provided by financing activities | (59) | 17,727 | 2,110 | (59) |
| Net increase (decrease) in cash | $ (10,245) | $ 10,413 | $ (2,540) | $ (7,901) |

Cash Flows from Operating Activities

Cash used in operating activities for the nine months ended September 30, 2018 was $4.6 million, consisting of a net loss of $4.4 million, which was offset by noncash charges of $0.5 million primarily for stock-based compensation expense, non-cash interest expense, change in fair value of embedded derivatives and accretion of final charge due upon maturity of debt, and net changes in operating assets and liabilities of $0.7 million. The change in Adynxx's net operating assets and liabilities was primarily due to the use of $0.6 million of cash related to the reduction of accounts payable and $0.1 million related to the reduction of accrued liabilities for research and development activities.

Cash used in operating activities for the nine months ended September 30, 2017 was $7.8 million, consisting of a net loss of $8.9 million, which was offset by noncash charges of $0.3 million primarily for stock-based compensation expense, accretion of final charge due upon maturity of debt and amortization of debt discount and debt financing costs, and net changes in operating assets and liabilities of $0.8 million. The change in Adynxx's net operating assets and liabilities was due primarily to an increase in accounts payable of $0.1 million related to increased clinical trial activity, a decrease of $0.3 million in prepaid expenses related to research and development activities and an increase of $0.4 million in accrued liabilities related to clinical trial activities.

Cash used in operating activities for the year ended December 31, 2017 was $10.2 million, consisting of a net loss of $11.6 million, which was offset by noncash charges of $0.5 million primarily for stock-based compensation expense, accretion of final charge due upon maturity of debt and amortization of debt discount and debt financing costs, and net changes in operating assets and liabilities of $0.9 million. The change in Adynxx's net operating assets and liabilities was due primarily to an increase in accounts payable of $0.6 million related increased clinical trial activity and a decrease of $0.3 million in prepaid expenses primarily related to research and development activities.

Cash used in operating activities for the year ended December 31, 2016 was $7.3 million, consisting of a net loss of $6.7 million, which was offset by noncash charges of $0.2 million primarily for accretion of final charge due upon maturity of debt, amortization of debt discount and debt financing costs, non-cash interest expense and stock compensation expense, and net changes in operating assets and liabilities of $0.7 million. The change in Adynxx's net operating assets and liabilities was primarily due to a decrease in accounts payable of $0.2 million, a decrease in accrued liabilities of $0.2 million related to general and administrative activities and an increase in prepaid expenses of $0.3 million related to research and development activities.

Cash Flows from Investing Activities

Cash used in investing activities for all periods presented was related to purchases of property and equipment, primarily related to office and computer equipment.

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Cash Flows from Financing Activities

During the nine months ended September 30, 2018, net cash provided by financing activities was $2.1 million consisting primarily of proceeds of $3.0 million from the issuance of a convertible note and the repayment of principal on debt of $0.9 million. During the nine months ended September 30, 2017 and December 31, 2017, net cash provided by financing activities was not significant.

During the year ended December 31, 2016, net cash provided by financing activities was $17.7 million, consisting primarily of net proceeds of $15.8 million from the issuance of Series B convertible preferred shares and net proceeds of $1.9 million of long term debt net and the repayment of principal on debt of $0.1 million.

Future Funding Requirements

Adynxx has not generated any revenue from product sales. Adynxx does not know when, or if, it will generate any revenue from product sales. Adynxx does not expect to generate any revenue from product sales unless and until it obtains regulatory approval for and commercializes any of its other product candidates. At the same time, Adynxx expects its expenses to increase in connection with its ongoing development and manufacturing activities, particularly as Adynxx continues the research, development, manufacture and clinical trials of, and seeks regulatory approval for, its product candidates. Upon the closing of the merger, Adynxx expects to incur additional costs associated with operating as a public company. In addition, subject to obtaining regulatory approval of any of its product candidates, Adynxx anticipates that it will need substantial additional funding in connection with its continuing operations.

Until Adynxx can generate a sufficient amount of product revenue to finance its cash requirements, it expects to finance its future cash needs primarily through the issuance of additional equity, including in connection with the contemplated merger, and potentially through borrowings, and strategic alliances with partner companies. To the extent that Adynxx raises additional capital through the issuance of additional equity or convertible debt securities, the ownership interest of Adynxx's stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of existing stockholders. Debt financing, if available, may involve agreements that include covenants limiting or restricting Adynxx's ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If Adynxx raises additional funds through collaborations, strategic alliances or licensing arrangements with third parties, Adynxx may have to relinquish valuable rights to its technologies, future revenue streams, research programs or product candidates on terms that may not be favorable to Adynxx. If Adynxx is unable to raise additional funds through equity or debt financings when needed, Adynxx may be required to delay, limit, reduce or terminate its product development or commercialization efforts or grant rights to develop and market product candidates to third parties that Adynxx would otherwise prefer to develop and market itself.

Contractual Obligations and Other Commitments

The following table summarizes Adynxx's contractual obligations at December 31, 2017:

| | Payments due by period | | | | |
|---|---|---|---|---|---|
| | Total | Less than 1 year | 1 – 3 Years | 3 – 5 Years | More than 5 years |
| | (in thousands) | | | | |
| Debt principal and interest(1) | $ 5,726 | $ 2,069 | $ 3,657 | $ — | $ — |
| Operating lease commitments(2) | 471 | 232 | 239 | — | — |
| Total | $ 6,197 | $ 2,301 | $ 3,896 | $ — | $ — |

(1)

Reflects principal, interest payments and final ballon payment due to Oxford Finance under a loan security agreement. Interest rate is floating and future interest payments are estimated based upon the December 2017 interest rate.

(2)

Adynxx leases its office space under a noncancellable long-term operating lease.

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The following table summarizes Adynxx's contractual obligations at September 30, 2018:

| | Payments Due by Period | | | | |
|---|---|---|---|---|---|
| | Total | Less than 1 year | 1 – 3 Years | 3 – 5 Years | More than 5 years |
| | (in thousands) | | | | |
| Debt principal and interest(1) | $ 4,636 | $ 89 | $ 4,547 | $ — | $ — |
| Convertible notes and interest(2) | 3,240 | — | 3,240 | — | — |
| Operating lease commitments(3) | 297 | 58 | 239 | — | — |
| Total | $ 8,173 | $ 147 | $ 8,026 | $ — | $ — |

(1)
Reflects principal, interest payments and final balloon payment due to Oxford under a loan security agreement. Interest rate is floating and future interest payments are estimated based upon the September 2018 interest rate.

(2)
Principal and unpaid accrued interest under convertible promissory notes. Adynxx anticipates all principal and accrued interest to convert to equity upon the next qualified financing or close of the merger.

(3)
Adynxx leases its office space under a noncancellable long-term operating lease.

Term Loans

On November 24, 2015, Adynxx entered into a Loan and Security Agreement (the "Loan Agreement") with Oxford pursuant to which Oxford agreed to lend Adynxx up to $10.0 million principal amount issuable in three tranches (the "Term Loans"), of which only $5.0 million was drawn. As of September 30, 2018, the remaining $5.0 million available under the Term Loans was never drawn and expired and $3.8 million of the Term Loans was outstanding. The Term Loans will mature on November 1, 2019. Adynxx has the option to prepay all, but not less than all, of the borrowed amounts, provided that Adynxx will be obligated to pay a prepayment fee. The Term Loans will bear interest at a floating per annum rate equal to (i) 7.06% plus (ii) the greater of (a) the 30-day U.S. Dollar LIBOR rate reported in the Wall Street Journal on the last business day of the month that immediately precedes the month in which the interest will accrue or (b) 0.19%. Adynxx will be required to make a final payment of 4.25% of the funded amount, payable on the earlier of (i) the maturity date or (ii) the prepayment of the Term Loans. Adynxx's obligations under the Loan Agreement are secured by a perfected first-priority lien on all of its assets. The Loan Agreement includes a negative pledge on all owned intellectual property.

In January 2017, Adynxx and Oxford agreed to amend the Loan Agreement. After Adynxx made principal payments on December 1, 2016 and January 1, 2017, Oxford agreed to an additional 12 months of interest-only payments followed by 23 months of amortization. The final payment increased by $100,000. The amendment was accounted for as a debt modification.

In March 2018, Adynxx and Oxford agreed to a third amendment of the Loan Agreement. After Adynxx made principal payments on January 1, 2018, February 1, 2018 and March 1, 2018, Oxford agreed to another 5 months of interest-only payments followed by 15 months of amortization. The final payment increased by $200,000. The amendment was accounted for as a debt modification.

In September 2018, after making a principal payment in the amount of $273,752, Adynxx and Oxford agreed to a fourth amendment of Adynxx's Loan Agreement that allows for three additional months of interest only payments upon the occurrence of certain events. Upon consummating the $1.5 million convertible promissory notes from current investors in September 2018, Oxford agreed to one additional month of interest only payments beginning

October 1, 2018. Upon entering into a merger agreement with Alliqua in October 2018, Oxford agreed to an additional two months of interest only payments beginning November 1, 2018. The final payment increased by $25,000. The amendment was accounted for as a debt modification.

As of September 30, 2018, Adynxx was in compliance with all covenants under the Loan Agreement.

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In connection with the Loan Agreement, Adynxx issued 329,525 warrants to purchase Adynxx's preferred stock at an exercise price equal to the Series A preferred stock price of $0.2276. The warrants are exercisable after closing of the Loan Agreement and expire ten years from the issuance date. The warrants are classified as a liability as they are exercisable into shares of common stock that are potentially redeemable. The fair value of the warrant liability is re-measured at each balance sheet date with the change recorded as other income in the statements of operations. As of September 30, 2018 the warrants remain outstanding and exercisable.

Other Contracts

Adynxx enters into contracts in the normal course of business with various third parties for preclinical research studies, clinical trials, testing and other general and administrative services. These contracts generally provide for termination upon notice, and therefore Adynxx believes that its non-cancelable obligations under these agreements are not material.

Off-Balance Sheet Arrangements

Adynxx has not entered into any off-balance sheet arrangements and does not have any holdings in variable interest entities.

Going Concern

Adynxx has an accumulated deficit of $35.7 million as of September 30, 2018 and expects to incur substantial losses in future periods. Adynxx is subject to risks common to companies in the clinical stage, including, but not limited to, development of new products, development of markets and distribution channels, dependence on key personnel, and the ability to obtain additional capital as needed to fund its product development plans. Adynxx has a limited operating history and has yet to generate any revenues from customers. There is no guarantee that profitable operations, if ever achieved, could be sustained on a continuing basis.

Adynxx plans to finance its operations and capital funding needs through equity and/or debt financing. However, there can be no assurance that additional funding will be available to Adynxx on acceptable terms on a timely basis, if at all, or that Adynxx will generate sufficient cash from operations to adequately fund operating needs or ultimately achieve profitability. The conditions above raise substantial doubt about the ability of Adynxx to continue as a going concern.

Recent Accounting Pronouncements

In February 2016, the FASB issued ASU No. 2016-02. This standard introduces the new leases standard that applies a right-of-use ("ROU") model and requires a lessee to record, for all leases with a lease term of more than 12 months, an asset representing its right to use the underlying asset and a liability to make lease payments. For leases with a term of 12 months or less, a practical expedient is available whereby a lessee may elect, by class of underlying asset, not to recognize an ROU asset or lease liability. At inception, lessees must classify all leases as either finance or operating based on five criteria. Balance sheet recognition of finance and operating leases is similar, but the pattern of expense recognition in the income statement, as well as the effect on the statement of cash flows, differs depending on the lease classification. This ASU is effective for fiscal years beginning after December 15, 2018 including interim periods within that fiscal year, with early adoption permitted. Adynxx is currently assessing whether these amendments will have a material effect on its financial statements.

In March 2016, the FASB issued ASU No. 2016-09. This standard introduces targeted amendments intended to simplify the accounting for stock compensation. Specifically, the ASU requires all excess tax benefits and tax deficiencies (including tax benefits of dividends on share-based payment awards) to be recognized as income tax expense or benefit in the income statement. The tax effects of exercised or vested awards should be treated as discrete items in the reporting period in which they occur. An entity also should recognize excess tax benefits, and assess the need for a valuation allowance, regardless of whether the benefit reduces taxes payable in the current period. That is, off balance sheet accounting for net operating losses stemming from excess tax benefits would no longer be required and instead such net operating losses

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would be recognized when they arise. Existing net operating losses that are currently tracked off balance sheet would be recognized, net of a valuation allowance if required, through an adjustment to opening retained earnings in the period of adoption. Entities will no longer need to maintain and track an "APIC pool." The ASU also requires excess tax benefits to be classified along with other income tax cash flows as an operating activity in the statement of cash flows. This ASU is effective for fiscal years beginning after December 15, 2016 and interim periods within that fiscal year. Adynxx adopted the guidance on January 1, 2017 and the impact to its financial statements was not material.

In November 2016, the FASB issued ASU No. 2016-18, Statement of Cash Flows: Restricted Cash. This ASU requires changes in restricted cash during the period to be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. If cash, cash equivalents and restricted cash are presented in more than one line item on the balance sheet, the new guidance requires a reconciliation of the total in the statement of cash flows to the related captions in the balance sheet. This guidance is effective for fiscal years beginning after December 15, 2017 and interim periods within that fiscal year, with early adoption permitted. The amendments in this ASU should be applied retrospectively to all periods presented. Adynxx adopted the guidance on a retrospective basis on January 1, 2018 and the beginning and ending balance of cash and cash equivalents for the respective periods in Adynxx's condensed statements of cash flows include restricted cash.

In June 2018, the FASB issued ASU No. 2018-07, Stock-based Compensation: Improvements to Nonemployee Share-based Payment Accounting, which amends the existing accounting standards for share-based payments to nonemployees. This ASU aligns much of the guidance on measuring and classifying nonemployee awards with that of awards to employees. Under the new guidance, the measurement of nonemployee equity awards is fixed on the grant date. This ASU becomes effective for fiscal years beginning after December 15, 2018 including interim periods within that fiscal year, with early adoption permitted. Entities will apply the ASU by recognizing a cumulative-effect adjustment to retained earnings as of the beginning of the annual period of adoption. We are currently evaluating the impact that ASU 2018-07 will have on our condensed financial statements.

In August 2018, the FASB issued ASU No. 2018-13, Changes to the Disclosure Requirements for Fair Value Measurement (Topic 820). The amendments on changes in unrealized gains and losses, the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements, and the narrative description of measurement uncertainty should be applied prospectively for only the most recent interim or annual period presented in the initial fiscal year of adoption. This ASU is effective for fiscal years beginning after December 15, 2019 including interim periods within that fiscal year, with early adoption permitted. Adynxx is currently assessing whether these amendments will have a material effect on its financial statements.

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QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT
ADYNXX'S MARKET RISK

As of September 30, 2018, Adynxx had cash of $1.8 million, which consisted of bank deposits. Such interest-earning instruments carry a degree of interest rate risk; however, historical fluctuations of interest income have not been significant. Adynxx has not been exposed nor does it anticipate being exposed to material risks due to changes in interest rates.

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## MANAGEMENT FOLLOWING THE MERGER

### Executive Officers and Directors of the Combined Company Following the Merger

Pursuant to the Merger Agreement, two of the five current directors of Alliqua will resign at or prior to the Effective Time. Immediately after the Effective Time, the combined company's board of directors will be fixed at eight members, seven of whom will be directors designated by Adynxx and one of whom will be directors designated by Alliqua. Designees to the board of directors are expected to satisfy the requisite independence requirements for Alliqua board of directors, as well as the sophistication and independence requirements for committee members pursuant to Nasdaq listing requirements. It is anticipated that the Alliqua designee will be David I. Johnson and Adynxx designees will be Dennis Podlesak, Eckard Weber, Stan Abel, Rick Orr, Julien Mamet, Joseph Leone and Jeffrey Sklar.

Following the Merger, the management team of the combined company is expected to be composed of the management team of Adynxx. The following table lists the names and positions of the individuals who are expected to serve as executive officers and directors of the combined company upon the completion of the Merger:

| Name | Age | Position(s) |
|---|---|---|
| Executive Officers and Directors | | |
| Rick Orr | 57 | Chief Executive Officer and Director |
| Donald Manning, M.D., Ph.D. | 60 | Chief Medical Officer |
| Julien Mamet, Ph.D. | 42 | Chief Scientific Officer and Director |
| Non-Employee Directors | | |
| David Johnson(2) | 60 | Director |
| Dennis Podlesak | 61 | Chairperson |
| Eckard Weber | 68 | Director |
| Stan Abel | 52 | Director |
| Joseph Leone | 64 | Director |
| Jeffrey Sklar | 55 | Director |

(1)
Adynxx designee

(2)
Alliqua designee

### Executive Officers and Directors

Rick Orr has served as a member of Adynxx's board of directors and as President and Chief Executive Officer since December 2010. Prior to joining Adynxx, Mr. Orr was Chief Operating Officer at Corthera, Inc., a private, clinical-stage biopharmaceutical company focused on developing therapies for acute heart failure, from May 2009 to July 2010. Corthera was acquired by Novartis Pharmaceuticals Corporation in February 2010. Prior to Corthera, Mr. Orr served as Sr. Vice President of Operations at Cerexa, Inc., a wholly owned subsidiary of Forest Laboratories, Inc. focused on developing novel anti-infective therapies, from October 2007 to May 2009. Mr. Orr was part of the management team that founded Cerexa in July 2005 and served as General Counsel from the company's inception until October 2007. Forest Laboratories acquired Cerexa in January 2007. Mr. Orr received a B.A. from The Ohio State University, an M.A. from the University of California, Santa Barbara, and a J.D. from the University of San Francisco School of Law.

Mr. Orr was selected to serve on the Adynxx board of directors because of his extensive experience in the biopharmaceutical industry and his executive leadership experience.

Donald C. Manning, M.D., Ph.D. has served as Chief Medical Officer at Adynxx since January 2012. Prior to joining Adynxx, Dr. Manning served as Chief Medical Officer at Shionogi Inc., the U.S. subsidiary of Shionogi & Co., Ltd., a

global pharmaceutical company, from July 2009 to May 2011 and as Executive
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Vice President of Clinical Development, Medical Affairs and Pharmacovigilance from March 2010 to May 2011. Prior to Shionogi, Dr. Manning served as Vice President of Medical Affairs at King Pharmaceuticals Inc., from January 2009 to June 2009, and as Vice President of Clinical Research and Development at Alpharma Inc., a global specialty pharmaceutical company, from August 2008 to January 2009. Alpharma was acquired by King Pharmaceuticals in January 2009. Prior to Alpharma, Dr. Manning served as Vice President and Therapeutic Area Head for Neurosciences at Celgene Corporation, a biotechnology company that develops and commercializes medicines for cancer and inflammatory disorders, from October 2006 to August 2008 and as Executive Director from April 2003 to October 2006. Dr. Manning received a B.S. from McGill University and an M.D. and Ph.D. from Johns Hopkins School of Medicine.

Julien Mamet, Ph.D. is the founder of Adynxx and has served as a member of Adynxx's board of directors since its inception in October 2007 and as Chief Scientific Officer since December 2010. Previously, Dr. Mamet served as President and Chief Executive Officer of Adynxx from inception to December 2010. Prior to founding Adynxx, Dr. Mamet completed his post-doctoral work at the Scripps Research Institute, a nonprofit biomedical research institute, from September 2006 to December 2006, and at the Genomics Institute of the Novartis Research Foundation, a research institute of Novartis International AG, a global pharmaceutical company, from February 2004 to September 2006. Dr. Mamet received a B.S. and M.S. from the University Claude Bernard in Lyon, France and a Ph.D. from the Institute of Molecular and Cellular Pharmacology in Nice-Sophia Antipolis, France. Dr. Mamet was selected to serve on the Adynxx board of directors because of his experience discovering the AYX platform of transcription factor decoys for the treatment of pain.

Non-Employee Directors

David Johnson has served as a member of the board of directors and as Executive Chairman of Aquamed Technologies, Inc., a wholly owned subsidiary of Alliqua, on November 29, 2012. He was appointed President and Chief Executive Officer of Alliqua on February 4, 2013. Mr. Johnson was formerly President of the ConvaTec Division of Bristol-Myers Squibb, Inc. until 2008 when he orchestrated a sale of the division from its pharmaceutical parent to Avista Capital Partners and Nordic Capital in a deal valued at $4.1 billion. Concurrently, he acquired and integrated the assets of Copenhagen-based Unomedical to expand ConvaTec Inc.'s manufacturing and infrastructure into Europe. From 2008 through 2012, Mr. Johnson served as the Chief Executive Officer of ConvaTec Inc. Prior to his tenure with ConvaTec Inc., Mr. Johnson held several senior positions in the U.S., Europe and Canada with Zimmer Inc., Fisher Scientific, and Baxter Corporation. He served as a member of ConvaTec Inc.'s board of directors and the board of the Advanced Medical Technology Association (AdvaMed), where he chaired the Global Wound Sector Team for four years. Mr. Johnson received an Undergraduate Business Degree in Marketing from the Northern Alberta Institute of Technology in Edmonton, Alberta, Canada, completed the INSEAD Advanced Management Program in Fontainbleau, France, and is a fellow from the Wharton School of the University of Pennsylvania. Mr. Johnson was selected to serve on the Adynxx board of directors because of his extensive experience in the pharmaceutical and biotechnology fields and his executive leadership experience.

Dennis Podlesak has served as a member of Adynxx's board of directors since 2010. Since 2007, Mr. Podlesak has served as a Partner of Domain Associates LLC, an exclusively life sciences focused venture capital firm. While at Domain, Mr. Podlesak has been the founder and the Chief Executive Officer of a number of companies, including Calixa Therapeutics, Inc., a privately held biopharmaceutical company which was acquired by Cubist Pharmaceuticals, Inc. in December 2009. Mr. Podlesak was also the Executive Chairman of Corthera, Inc., a privately held biopharmaceutical company, which was acquired by Novartis AG in January 2010. Prior to joining Domain, from 2005 to 2007, Mr. Podlesak served as the Founder and Chief Executive Officer of Cerexa, Inc., a privately held biotechnology company, which became a wholly owned subsidiary of Forest Laboratories, Inc. after being acquired by Forest in January 2007. From 2004 to 2005, Mr. Podlesak served as the Chief Executive Officer of Peninsula Pharmaceuticals Inc., a privately held pharmaceutical company, and in June 2005, he led the sale of Peninsula to Ortho-McNeil Pharmaceutical, Inc., a subsidiary of Johnson & Johnson. Prior to joining Peninsula, Mr. Podlesak held various senior executive positions at Novartis AG, a publicly traded healthcare company,

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Allergan plc, a publicly traded healthcare company, and SmithKline Beecham (now GlaxoSmithKline plc, a publicly traded pharmaceutical company). Mr. Podlesak currently serves as the chairperson of the board of directors of Syndax Pharmaceuticals, Inc., a clinical stage biopharmaceutical company. Mr. Podlesak received a B.A. from Western Illinois University and an M.B.A. from Pepperdine University. He completed post-graduate studies at The Wharton School, University of Pennsylvania.

Mr. Podlesak was selected to serve on the Adynxx board of directors because of his experience as the Chief Executive Officer and Chairman of other successful companies in the biotechnology industry, his over 20 years of strategic, operational and commercial experience in the pharmaceutical industry, and his service as a director of other publicly traded and privately held life science companies.

Eckard Weber, M.D. has served as a member of Adynxx's board of directors since 2010. Dr. Weber has served as a partner with Domain Associates, LLC, a private venture capital management firm focused on life sciences, since 2001. Dr. Weber has over 20 years of drug discovery and development experience. Dr. Weber has been the founding Chief Executive Officer of multiple Domain Associates portfolio companies including Acea Pharmaceuticals, Ascenta Therapeutics, Calixa Therapeutics, Cytovia and Novacardia. Dr. Weber also served as chairman or member of the board of directors of a number of companies until their sale including Peninsula Pharmaceuticals (sold to Johnson & Johnson, 2005), Cerexa (sold to Forest Laboratories, 2007), NovaCardia (sold to Merck, 2007), Calixa (sold to Cubist Pharmaceuticals, 2009) and Ocera Therapeutics (sold to Mallinckrodt, 2017). Dr. Weber also served as a member of the board of directors of Conforma Therapeutics (sold to Biogen-IDEC in 2006) and Cabrellis Pharmaceuticals (sold to Pharmion in 2006). Until 1995, Dr. Weber was a tenured Professor of Pharmacology at the University of California, Irvine. Dr. Weber is the inventor or co-inventor of numerous patents and patent applications and has published more than 130 papers in scientific periodicals. Dr. Weber received his German undergraduate degree from Kolping Kolleg in Germany and an M.D. from the University of Ulm Medical School in Germany. Dr. Weber received his postdoctoral training in neuroscience at Stanford University Medical School.

Dr. Weber was selected to serve on the Adynxx board of directors because of his extensive experience in the life sciences industry as an entrepreneur, chief executive officer and venture capitalist, as well as his training as a physician.

Stan Abel has served as a member of Adynxx's board of directors since 2008. Since 2010, Mr. Abel has served as the President and Chief Executive Officer of SiteOne Therapeutics Inc., a pain company focused on developing a novel platform of highly selective sodium channel 1.7 inhibitors. From 2007 to 2010, Mr. Abel served as Chief Executive Officer of Corthera, Inc., through the successful sale of the company to Novartis AG in February 2010. From 2005 to 2007, Mr. Abel served as the Chief Financial Officer of Cerexa, Inc., through the successful sale of the company to Forest Laboratories in January 2007. From 2003 to 2005, Mr. Abel served as the Chief Financial Officer of Peninsula Pharmaceuticals, Inc., through the successful sale of the company to Johnson & Johnson in June 2005. Mr. Abel received a B.S. in Business from Indiana University and an M.B.A., with honors, from the University of Chicago.

Mr. Abel was selected to serve on the Adynxx board of directors because of his extensive experience in strategic biopharmaceutical transactions and leadership of clinical-stage companies.

Joseph Leone has served as a member of Alliqua's board of directors since January 2011. Mr. Leone spent more than 24 years with CIT Group, one of the nation's largest small and mid-size business lenders, and held several senior-level positions at CIT, including Vice Chairman and Chief Financial Officer from May 1995 through April 2010. From 1975 through 1983, Mr. Leone was employed by KPMG — Peat Marwick as a Senior Manager for Financial Services Clients including Citibank and Manufacturers Hanover Bank. He has been a Certified Public Accountant since 1977. Mr. Leone is a graduate of Baruch College (BBA in Accounting) and the Advanced Management Program at Harvard Business School. Mr. Leone serves as a Trustee and the Chairman of the Audit Committee of The Baruch College Fund. Since December 2012, Mr. Leone has served as Director of RMH Franchise Holdings, a privately owned company with over 150 franchise restaurants in 15 states and revenues over $350 million.

Mr. Leone was selected to serve on the Adynxx board of directors because of his extensive background in accounting and finance.

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Jeffrey Sklar has served as a member of Alliqua's board of directors since January 2011. Mr. Sklar has served as the Managing Partner of Sklar, Heyman Hirshfield, & Kantor LLP, a regional accounting firm, where he oversees the industry specialization team for non-bank financial institutions and for forensic and investigative auditing services, since January 2010, and prior to that, from January 2006 to December 2009, he served as an audit partner. Since 2000, Mr. Sklar has also served as the Managing Director of SHC Consulting Group, LLC. Mr. Sklar served Public Savings Bank as a Director, as the Chair of the Compliance and Risk Committee, and as a member of the Audit Committee from September 2010 to September 2011. In addition to being a Certified Public Accountant, Mr. Sklar is a Certified Financial Crime Specialist, Certified Anti-Money Laundering Specialist, Certified Fraud Specialist and Certified in Financial Forensics by the American Institute of CPAs. He also serves on the Advisory Board of the Association of Financial Crime Specialists.

Mr. Sklar was selected to serve on the Adynxx board of directors because of his extensive background in accounting and finance.

Family Relationships

There are no family relationships among any of combined company's directors or executive officers.

Board Composition

The combined company's board of directors will consist of eight members upon the closing of the Merger. Alliqua's certificate of incorporation and bylaws provide that directors are to be elected at each annual meeting of stockholders to hold office until the next annual meeting and until their respective successors are elected and qualified. Vacancies on the board of directors resulting from death, resignation, retirement, disqualification or removal may be filled by the affirmative vote of a majority of the remaining directors then in office, whether or not a quorum of the board of directors is present. Newly created directorships resulting from any increase in the number of directors may, unless the board of directors determines otherwise, be filled only by the affirmative vote of the directors then in office, whether or not a quorum of the board of directors is present. Any director elected as a result of a vacancy shall hold office for a term expiring at the next annual meeting of stockholders and until such director's successor shall have been elected and qualified.

Director Independence

The Alliqua board of directors undertook a review of the independence of the proposed directors of the combined company and considered whether any director has a material relationship with the combined company that could compromise his or her ability to exercise independent judgment in carrying out his or her responsibilities. Based upon information requested from and provided by each director concerning their background, employment and affiliations, including family relationships, the board of directors has determined that all of the proposed directors, except Mr. Orr, due to his position as the chief executive officer of the combined company, Mr. Johnson, due to his prior position as the chief executive officer of Alliqua, and Dr. Mamet, due to his position as the chief scientific officer of the combined company, are "independent" as that term is defined under the rules of Nasdaq Listing Rule 5605.

In making these determinations, the board of directors considered the current and prior relationships that each non-employee director has with the combined company and all other facts and circumstances the board of directors deemed relevant in determining their independence, including the beneficial ownership of capital stock by each non-employee director, and the transactions.

Board Committees

The board of directors has the authority to appoint committees to perform certain management and administration functions. The board of directors has established an audit committee, a compensation committee and nominating and corporate governance committee. The board of directors may establish other committees to facilitate the management of the combined company's business. The composition and functions of each committee are described below. Members serve on these committees until their resignation or until otherwise determined by the board of directors.

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All of the committees will comply with all applicable requirements of the Sarbanes-Oxley Act, Nasdaq and SEC rules and regulations as further described below. Following the closing of the Merger, the charters for each of these committees will be available on the combined company's website at www.adynxx.com. Such charters are currently available on Alliqua's website at www.alliqua.com. Information contained on or accessible through Alliqua's or Adynxx's website is not a part of this proxy statement, and the inclusion of such website address in this proxy statement is an inactive textual reference only.

Audit Committee

The audit committee is expected to consist of Stan Abel, Dennis Podlesak and Eckard Weber. The Alliqua board of directors has determined each proposed member is independent under Nasdaq listing standards and Rule 10A-3(b)(1) of the Exchange Act. The chair of the audit committee is expected to be Mr. Abel. The Alliqua board of directors has determined that each of Mr. Abel and Mr. Podlesak is an "audit committee financial expert" within the meaning of SEC regulations. The Alliqua board of directors has also determined that each member of the audit committee can read and understand fundamental financial statements in accordance with applicable requirements. In arriving at these determinations, the board of directors has examined each audit committee member's scope of experience and the nature of their employment in the corporate finance sector.

The primary purpose of the audit committee is to discharge the responsibilities of the board of directors with respect to the combined company's accounting, financial and other reporting and internal control practices and to oversee its independent registered accounting firm. Specific responsibilities of the audit committee include:

- selecting a qualified firm to serve as the independent registered public accounting firm to audit the combined company's financial statements;
- helping to ensure the independence and performance of the independent registered public accounting firm;
- discussing the scope and results of the audit with the independent registered public accounting firm, and reviewing, with management and the independent accountants, the combined company's interim and year-end operating results;
- developing procedures for employees to anonymously submit concerns about questionable accounting or audit matters;
- reviewing policies on risk assessment and risk management;
- reviewing related party transactions;
- obtaining and reviewing a report by the independent registered public accounting firm at least annually, that describes the combined company's internal quality control procedures, any material issues with such procedures, and any steps taken to deal with such issues when required by applicable law; and
- approving (or, as permitted, pre-approving) all audit and all permissible non-audit services, other than de minimis non-audit services, to be performed by the independent registered public accounting firm.

Compensation Committee

The compensation committee is expected to consist of Dennis Podlesak and Eckard Weber. The Alliqua board of directors has determined each proposed member of the compensation committee is independent under Nasdaq listing standards, is a “non-employee director” as defined in Rule 16b-3 promulgated under the Exchange Act and is an “outside director” as that term is defined in Section 162(m) of the Code. The chair of the compensation committee is expected to be Mr. Podlesak.

The primary purpose of the compensation committee is to discharge the responsibilities of the combined company’s board of directors to oversee compensation policies, plans and programs and to review and determine the compensation to be paid to the executive officers, directors and other senior management, as appropriate. Specific responsibilities of the compensation committee include:

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- reviewing and approving, or recommending that the board of directors approve, the compensation of executive officers;

- reviewing and recommending to the board of directors the compensation of the directors;

- reviewing and approving, or recommending that the board of directors approve, the terms of compensatory arrangements with the executive officers;

- administering the stock and equity incentive plans;

- selecting independent compensation consultants and assessing whether there are any conflicts of interest with any of the committee's compensation advisers;

- reviewing and approving, or recommending that the board of directors approve, incentive compensation and equity plans, severance agreements, change-of-control protections and any other compensatory arrangements for executive officers and other senior management, as appropriate; and

- reviewing and establishing general policies relating to compensation and benefits of employees and reviewing the combined company's overall compensation philosophy.

Nominating and Corporate Governance Committee

The nominating and corporate governance committee is expected to consist of Dennis Podlesak, David Johnson and Stan Abel. The chair of the nominating and corporate governance committee is expected to be Mr. Podlesak. Each proposed member of the nominating and corporate governance committee is independent within the meaning of applicable listing standards, is a non-employee director and is free from any relationship that would interfere with the exercise of his or her independent judgment, as determined by the combined company's board of directors in accordance with the applicable Nasdaq listing standards. Specific responsibilities of the nominating and corporate governance committee include:

- identifying, evaluating and selecting, or recommending that the board of directors approve, nominees for election to the board of directors;

- evaluating the performance of the board of directors and of individual directors;

- considering and making recommendations to the board of directors regarding the composition of the committees of the board of directors;

- reviewing developments in corporate governance practices;

-

evaluating the adequacy of corporate governance practices and reporting;

- reviewing management succession plans;

- developing and making recommendations to the board of directors regarding corporate governance guidelines and matters; and

- overseeing an annual evaluation of the board of directors' performance.

Code of Business Conduct and Ethics

The combined company will adopt a code of business conduct and ethics that applies to all of its employees, officers, including the principal executive officer, principal financial officer and principal accounting officer or controller, or persons performing similar functions and agents and representatives, including directors and consultants. The full text of the code of business conduct and ethics will be posted on the combined company's website at www.adynxx.com. The combined company intends to disclose future amendments to certain provisions of the code of business conduct and ethics, or waivers of such provisions applicable to any principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions, and the directors, on the website identified above. Information contained on or accessible through the website is not a part of this proxy statement and the inclusion of the website address in this proxy statement is an inactive textual reference only.

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Compensation Committee Interlocks and Insider Participation

Following the closing of the Merger, Dennis Podlesak and Eckard Weber are expected to serve as members of the compensation committee. None of the proposed members of combined company's compensation committee has ever been an officer or employee of either company. None of the combined company's executive officers serve, or have served during the last fiscal year, as a member of the board of directors, compensation committee or other board committee performing equivalent functions of any entity that has one or more executive officers serving as one of the combined company's directors or on the compensation committee.

Combined Company Non-Employee Director Compensation Policy

The combined company expects to adopt a non-employee director compensation policy, pursuant to which non-employee directors will be eligible to receive compensation for service on the combined company's board of directors and committees of the board of directors.

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UNAUDITED PRO FORMA FINANCIAL INFORMATION

The following unaudited pro forma condensed combined financial information was prepared using the acquisition method of accounting under U.S. GAAP, and gives effect to the transaction between Alliqua and Adynxx to be accounted for as a reverse acquisition, with Adynxx being deemed the acquiring company for accounting purposes. Because Adynxx will be treated as the acquiring company, Adynxx's assets and liabilities will be recorded at their pre-combination carrying amounts and the historical operations that are reflected in the unaudited pro forma condensed combined financial information will be those of Adynxx. The merger will be treated by Alliqua as a reverse merger and recapitalization effected by a share exchange for financial accounting and reporting purposes since substantially all of Alliqua's operations will be disposed of immediately prior to the consummation of the merger. Since Alliqua had no operations upon the merger taking place, Alliqua is not considered to be a business for accounting purposes. Accordingly, no goodwill or intangible assets will be recorded as a result of the merger. Adynxx was determined to be the accounting acquirer based upon the terms of the Merger Agreement and other factors including: (i) Adynxx equityholders are expected to own approximately 86% of the voting interests of the combined company immediately following the closing of the transaction and Alliqua equityholders are expected to own approximately 14%; (ii) directors appointed by Adynxx will hold a majority of board seats in the combined company; and (iii) Adynxx management will hold all key positions in the management of the combined company.

In addition, the pro forma condensed combined financial information gives effect to the spin off of Alliqua's wholly owned subsidiary engaged in the custom hydrogel manufacturing business, in the form of a pro rata distribution of the common equity of the subsidiary to Alliqua's stockholders (the Spin off Transaction). The pro forma condensed combined financial information also gives effect to the sale of certain assets by Alliqua comprising its MIST, Biovance and Interfyl Product lines to Cellularity, Inc (the Asset Sale Transaction) that was completed on May 7, 2018.

The unaudited pro forma condensed combined balance sheet as of September 30, 2018 assumes that the transactions took place on September 30, 2018 and combines the historical balance sheets of Alliqua and Adynxx as of such date. The unaudited pro forma condensed combined statements of operations for the nine months ended September 30, 2018 and for the year ended December 31, 2017 assumes that the transactions took place as of January 1, 2017, and combines the historical results of Alliqua and Adynxx for each period. The historical financial statements of Alliqua and Adynxx have been adjusted to give pro forma effect to events that are (i) directly attributable to the transaction, (ii) factually supportable, and (iii) with respect to the statements of operations, expected to have a continuing impact on the combined company's results.

The following information does not give effect to the proposed reverse stock split described in the section entitled "Matters Being Submitted to a Vote of Alliqua's Stockholders — Proposal 2: Approval of the Reverse Stock Split," beginning on page 96 of this proxy statement.

The unaudited pro forma condensed combined financial information is based on the assumptions and adjustments that are described in the accompanying notes. The pro forma adjustments are preliminary, subject to further revision as additional information becomes available and additional analyses are performed, and have been made solely for the purpose of providing unaudited pro forma condensed combined financial information. Differences between these preliminary estimates and the final amounts, expected to be completed after the closing of the transaction, will occur and these differences could have a material impact on the accompanying unaudited pro forma condensed combined financial information and the combined company's future results of operations and financial position.

The unaudited pro forma condensed combined financial information does not give effect to the potential impact of current financial conditions, regulatory matters, operating efficiencies or other savings or expenses that may be associated with the integration of the two companies. The unaudited pro forma condensed combined financial information is preliminary and has been prepared for illustrative purposes only and is not necessarily indicative of the financial position or results of operations in future periods or the results that actually would have been realized had Alliqua and Adynxx been a combined company during the specified periods. The actual results reported in periods following the transaction may differ significantly from those reflected in the unaudited pro forma condensed combined financial information

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presented herein for a number of reasons, including, but not limited to, differences in the assumptions used to prepare this pro forma financial information.

The unaudited pro forma condensed combined financial information, including the notes thereto, should be read in conjunction with the separate Alliqua and Adynxx historical financial statements, and their respective management's discussion and analysis of financial condition and results of operations. Adynxx's historical unaudited financial statements for the nine months ended September 30, 2018, and audited financial statements for the years ended December 31, 2017 and December 31, 2016 are included elsewhere in this proxy statement. Alliqua's historical unaudited consolidated financial statements for the nine months ended September 30, 2018, and the audited consolidated financial statements for the years ended December 31, 2017 and December 31, 2016 are included elsewhere in this proxy statement.

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ADYNXX, INC. & SUBSIDIARIES

UNAUDITED PRO FORMA CONDENSED COMBINED BALANCE SHEET
AS OF SEPTEMBER 30, 2018
(IN THOUSANDS)

| | Adynxx, Inc. (Acquiror) Historical | Alliqua BioMedical, Inc. (Acquiree) Historical | Asset Sale Transaction | Spin-Off | Adynxx Transactions | Total Pro Forma Adjustments | Notes |
|---|---|---|---|---|---|---|---|
| ASSETS | | | | | | | |
| Current Assets: | | | | | | | |
| Cash and cash equivalents | $ 1,761 | $ 11,095 | $ (11,095) | $ — | $ — | $ (11,095) | (a) |
| Accounts receivable, net | — | 172 | — | (172) | — | (172) | (b) |
| Inventory, net | — | 183 | — | (183) | — | (183) | (b) |
| Prepaid expenses and other current assets | 21 | 341 | — | (341) | — | (341) | (b) |
| Current assets of discontinued operations | — | 445 | (445) | — | — | (445) | (a) |
| Total current assets | 1,782 | 12,236 | (11,540) | (696) | — | (12,236) | |
| Property and equipment, net | 9 | 279 | — | (279) | — | (279) | (b) |
| Restricted cash | 55 | — | — | — | — | — | |
| Other non current assets | 18 | 178 | — | (178) | — | (178) | (b) |
| Total assets | $ 1,864 | $ 12,693 | $ (11,540) | $ (1,153) | $ — | $ (12,693) | |
| LIABILITIES, REDEEMABLE CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT) | | | | | | | |
| Current Liabilities: | | | | | | | |
| Accounts payable | $ 133 | $ 305 | $ — | (305) | $ — | $ (305) | (b) |
| Accrued expenses and other current liabilities | 1,238 | 256 | — | (256) | — | (256) | (b) |
| | — | — | — | — | (62) | (62) | (d) |
| | — | — | — | — | 500 | 500 | (e) |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Derivative liability | 653 | — | — | — | (653) | (653) | (d) |
| Warrant liability | — | 186 | (186) | — | — | (186) | (a) |
| Current portion of term loan | 3,136 | — | — | — | — | — | |
| Convertible notes, net of debt discount, related party | 2,359 | — | — | — | (3,000) | (3,000) | (d) |
| | — | — | — | — | 641 | 641 | (d) |
| Current liabilities of discontinued operations | — | 2,351 | (2,351) | — | — | (2,351) | (a) |
| Total current liabilities | 7,519 | 3,098 | (2,537) | (561) | (2,574) | (5,672) | |
| Other long-term liabilities | — | 53 | — | (53) | — | (53) | (b) |
| Warrant liability | 43 | — | — | — | (43) | (43) | (c) |
| Term loan, net of current portion | 671 | — | — | — | — | — | |
| Total liabilities | 8,233 | 3,151 | (2,537) | (614) | (2,617) | (5,768) | |
| Commitments and contingencies | | | | | | | |
| Redeemable convertible preferred stock | 28,711 | — | — | — | (28,711) | (28,711) | (f) |
| STOCKHOLDERS' EQUITY (DEFICIT) | | | | | | | |
| Common stock | 20 | 5 | — | — | 15 | 15 | (f) |
| Additional paid-in capital | 644 | 166,674 | (9,003) | — | — | (9,003) | (a) |
| | — | — | — | (539) | — | (539) | (b) |
| | — | — | — | — | 43 | 43 | (c) |
| | — | — | — | — | 653 | 653 | (d) |
| | — | — | — | — | 3,000 | 3,000 | (d) |
| | — | — | — | — | 62 | 62 | (d) |
| | — | — | — | — | 600 | 600 | (e) |
| | — | — | — | — | (1,100) | (1,100) | (e) |
| | — | — | — | — | (157,152) | (157,152) | (f) |
| | — | — | — | — | 28,711 | 28,711 | (f) |
| Accumulated deficit | (35,744) | (157,137) | — | — | 157,137 | 157,137 | (f) |
| | — | — | — | — | (641) | (641) | (d) |
| Total stockholders' equity (deficit) | (35,080) | 9,542 | (9,003) | (539) | 31,328 | 21,786 | |
| | $ 1,864 | $ 12,693 | $ (11,540) | $ (1,153) | $ — | $ (12,693) | |

Total liabilities, redeemable convertible preferred stock & stockholders' equity (deficit)

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ADYNXX, INC. & SUBSIDIARIES

UNAUDITED PRO FORMA CONDENSED COMBINED STATEMENT OF OPERATIONS
FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2018
(IN THOUSANDS, EXCEPT PER SHARE DATA)

| | Adynxx, Inc. (Acquiror) | Alliqua BioMedical, Inc. (Acquiree) | Asset Sale Transaction | Spin-Off | Adynxx Transactions | Total Pro Forma Adjustments | Notes | Pro Form Combine |
|---|---|---|---|---|---|---|---|---|
| Revenue, net | $ — | $ 1,756 | $ (4) | $ — | $ — | $ (4) | (g) | $ — |
| | — | — | — | $ (1,752) | — | (1,752) | (h) | — |
| Cost of revenues | — | 1,371 | (17) | — | — | (17) | (g) | — |
| | — | — | — | (1,354) | — | (1,354) | (h) | — |
| Gross profit | — | 385 | 13 | (398) | — | (385) | | — |
| Operating expenses: | | | | | | | | |
| Selling, general and administrative | 2,102 | 3,892 | (2,159) | — | — | (2,159) | (g) | — |
| | — | — | — | (1,733) | — | (1,733) | (h) | 2,102 |
| Research and development | 1,793 | 413 | (413) | | | (413) | (g) | 1,793 |
| Total operating expenses | 3,895 | 4,305 | (2,572) | (1,733) | — | (4,305) | | 3,895 |
| Loss from operations | (3,895) | (3,920) | 2,585 | 1,335 | — | 3,920 | | (3,895 |
| Interest and other income (expenses): | | | | | | | | |
| Interest expense | (767) | 12 | — | (12) | — | (12) | (h) | — |
| | — | — | — | — | 62 | 62 | (j) | — |
| | — | — | — | — | (641) | (641) | (j) | (1,346 |
| Change in fair value of warrant liability | (1) | (56) | 56 | — | — | 56 | (g) | — |
| | — | — | — | — | 1 | 1 | (i) | — |
| Change in fair value of derivative liability | 212 | | | | (212) | (212) | (j) | — |
| Loss on early extinguishment of | — | (1,706) | 1,706 | — | — | 1,706 | (g) | — |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| debt, net | | | | | | | |
| Other income (expense), net | 1 | — | — | — | — | — | 1 |
| Net loss | $ (4,450) | $ (5,670) | $ 4,347 | $ 1,323 | $ (790) | $ 4,880 | $ (5,240 |
| Net loss per share basic and diluted common share | | $ (1.16) | | | | | $ 0.21 |
| Pro forma weighted average shares outstanding used in computing basic and diluted net loss per common share | | 4,902,657 | | | | 20,047,944 | 24,950 |
| Reconciliation of pro forma weighted average shares outstanding: | | | | | | | |
| Weighted average number of shares held by Adynxx shareholders pre-merger | | | | | | | 127,1 |
| Conversion ratio | | | | | | | 0.157 |
| Weighted average number of shares held by Adynxx shareholders post-merger | | | | | | | 20,04 |
| Weighted average number of shares held by Alliqua shareholders | | | | | | | 4,902, |
| Total pro forma weighted average shares outstanding | | | | | | | 24,950 |

See accompanying notes to unaudited Pro Forma consolidated financial statements

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ADYNXX, INC. & SUBSIDIARIES

UNAUDITED PRO FORMA CONDENSED COMBINED STATEMENT OF OPERATIONS
FOR THE YEAR ENDED DECEMBER 31, 2017
(IN THOUSANDS, EXCEPT PER SHARE DATA)

| | Adynxx, Inc. (Acquiror) | Alliqua BioMedical, Inc. (Acquiree) | Asset Sale Transaction | Spin-Off | Adynxx Transactions | Total Pro Forma Adjustments | Notes | Pro For Combin |
|---|---|---|---|---|---|---|---|---|
| Revenue, net | $ — | $ 19,565 | $ (17,573) | $ — | $ — | $ (17,573) | (g) | $ — |
| | — | — | — | (1,992) | — | (1,992) | (h) | — |
| Cost of revenues | — | 6,763 | (4,918) | — | — | (4,918) | (g) | — |
| | — | — | — | (1,845) | — | (1,845) | (h) | — |
| Gross profit | — | 12,802 | (12,649) | (147) | — | (12,802) | | — |
| Operating expenses: | | | | | | | | |
| Sellng, general and administrative | 2,341 | 28,090 | (26,974) | — | — | (26,974) | (g) | — |
| | — | — | — | (1,116) | — | (1,116) | (h) | 2,34 |
| Royalties | — | 820 | (820) | — | — | (820) | (g) | — |
| Research and development | 8,722 | 121 | (121) | — | — | (121) | (g) | 8,72 |
| Acquisition related expenses | — | (365) | 365 | — | — | 365 | (g) | — |
| Change in fair value of contingent consideration | — | 35 | (35) | — | — | (35) | (g) | — |
| Impairment charges | — | 10,300 | (10,300) | — | — | (10,300) | (g) | — |
| Total operating expenses | 11,063 | 39,001 | (37,885) | (1,116) | — | (39,001) | | 11,0 |
| Loss from operations | (11,063) | (26,199) | 25,230 | 969 | — | 26,199 | | (11,0 |
| Interest and other income (expenses): | | | | | | | | |
| Interest expense | (515) | (2,282) | 2,282 | — | — | 2,282 | (g) | (515 |
| Change in fair value of warrant liability | 12 | 692 | (692) | — | — | (692) | (g) | 12 |
| | — | — | — | — | (12) | (12) | (i) | (12) |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Warrant modification expense | — | (803) | 803 | — | — | 803 | (g) | — |
| Loss on early extinguishment of debt, net | — | (214) | 214 | — | — | 214 | (g) | — |
| Other income (expense), net | 5 | 206 | (206) | — | — | (206) | (g) | 5 |
| Loss before tax benefit | (11,561) | (28,600) | 27,637 | 969 | (12) | 28,588 | | (11,5 |
| Income tax benefit | — | 743 | (743) | — | — | (743) | | — |
| Net loss | $ (11,561) | $ (27,857) | $ 26,888 | $ 969 | $ (12) | $ 27,845 | | $ (11,5 |
| Net loss per share basic and diluted common share | | $ (6.49) | | | | | | $ 0.48 |
| Pro forma weighted average shares outstanding used in computing basic and diluted net loss per common share | | 4,291,600 | | | | 20,047,944 | | 24,3 |
| Reconciliation of pro forma weighted average shares outstanding: | | | | | | | | |
| Weighted average number of shares held by Adynxx shareholders pre-merger | | | | | | | | 127, |
| Conversion ratio | | | | | | | | 0.15 |
| Weighted average number of shares held by Adynxx shareholders post-merger | | | | | | | | 20,0 |
| | | | | | | | | 4,29 |

| | |
|---|---|
| Weighted average number of shares held by Alliqua shareholders | |
| Total pro forma weighted average shares outstanding | 24,3 |

See accompanying notes to unaudited Pro Forma consolidated financial statements

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## NOTES TO THE UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION

### 1. Description of Transactions and Basis of Presentation

The unaudited pro forma condensed combined financial information was prepared in accordance with the acquisition method of accounting under U.S. GAAP and pursuant to the rules and regulations of SEC Regulation S-X and presents the pro forma financial position and results of operations of the combined companies based upon the historical data of Alliqua and Adynxx.

Description of Transaction

On October 11, 2018, Alliqua, Merger Sub, and Adynxx entered into an Agreement and Plan of Merger and Reorganization, the Merger Agreement, pursuant to which, among other things, subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, Merger Sub will merge with and into Adynxx, with Adynxx becoming a wholly-owned subsidiary of Alliqua and the surviving corporation of the merger. Immediately following the merger, the name of Alliqua will be changed from “Alliqua BioMedical, Inc.” to “Adynxx, Inc.” The merger is intended to qualify for federal income tax purposes as a tax-free reorganization under the provisions of Section 368(a) of the Internal Revenue Code of 1986, as amended.

Subject to the terms and conditions of the Merger Agreement, at the effective time of the merger, or the Effective Time, (a) each outstanding share of capital stock of Adynxx, will be converted into the right to receive the number of shares of the combined company’s common stock equal to the exchange ratio described below and (b) each outstanding Adynxx stock option, whether vested or unvested, and warrant that has not previously been exercised prior to the Effective Time will be assumed by Alliqua and converted into a stock option or warrant, as the case may be, to purchase shares of Alliqua common stock at the Exchange Ratio.

Under the Exchange Ratio formula in the Merger Agreement, as of immediately following the Merger, but excluding the effect of certain financings (as further described in the Merger Agreement), Adynxx equityholders are expected to own approximately 86% of the aggregate number of shares of the combined company and Alliqua equityholders are expected to own approximately 14% of the combined company. The Exchange Ratio will be fixed immediately prior to the Effective Time to reflect Alliqua’s and Adynxx’s equity capitalization as of immediately prior to such time. In addition, to the extent Adynxx consummates a Permitted Financing (as further described in the Merger Agreement and elsewhere in this proxy statement), in excess of $10 million dollars prior to the Effective Time, the Exchange Ratio may be further adjusted in a manner that would reduce the percentage of the combined company held by Alliqua stockholders as of immediately prior to the Merger. See “The Merger Agreement — Exchange Ratio” for more information.

Prior to the Effective Time, pursuant to the Merger Agreement, Alliqua will use commercially reasonable efforts to consummate the divestiture of SpinCo, in the form of a pro rata distribution of the common equity of SpinCo to Alliqua’s stockholders. Following the Spin-off, Alliqua will no longer own or be subject to any liabilities or obligations relating to the custom hydrogel manufacturing business. So long as Alliqua exercised commercially reasonable efforts to cause the Spin-off to occur concurrently with the Effective Time, the occurrence of the Spin-off is not a condition of Adynxx’s obligations to the consummate the transactions contemplated by the Merger Agreement. The unaudited pro forma condensed financial statements reflect carve out balance sheets and results of operations that do not include the activities that are being distributed to Alliqua stockholders separately. See “The Merger Agreement — Section 5.29 Contract Manufacturing Business” and elsewhere in this proxy for more information.

As described elsewhere in this proxy statement, on January 5, 2018, Alliqua entered into an Asset Sale Transaction with Celularity pursuant to which Alliqua agreed to sell substantially all of its assets to Celularity. The unaudited pro forma condensed financial statements also include pro forma adjustments that reflect the distribution of cash and any remaining assets and liabilities related to the Asset Sale Transaction that are expected to be distributed prior to the Merger.

The pro forma adjustments described in Note 2 were based on available information and certain assumptions made by management and may be revised as additional information becomes available. The historical financial information has been adjusted in the unaudited pro forma condensed combined financial information to give effect to events that are (1) directly attributable to the merger transaction, (2) factually supportable, and (3) with respect to the statement of operations, expected to have a continuing impact on the combined results.

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NOTES TO THE UNAUDITED PRO FORMA CONDENSED COMBINED
FINANCIAL INFORMATION

2. Pro Forma Adjustments

The accompanying unaudited pro forma condensed combined statement of operations has been prepared as if the acquisition was completed on January 1, 2017 in each of the periods presented.

The calculation of the net loss per share in the unaudited pro forma condensed combined statement of operations assume the issuance of common shares to Alliqua stockholders in the Merger had occurred on January 1, 2017.

The unaudited pro forma condensed combined balance sheet has been prepared as if the acquisition was completed on September 30, 2018 and reflects the following pro forma adjustments:

(a)

To reflect the distribution of 1) existing cash on hand and 2) certain assets and liabilities relating to discontinued operations that were held by Alliqua prior to the time of the Merger. In connection with the merger, existing cash on hand will be used to settle all remaining liabilities associated with the discontinued operations and all merger related costs. The balance of existing cash on hand and assets related to discontinued operations will be distributed to existing Alliqua shareholders prior to the consummation of the merger.

(b)

To reflect the impacts of the Spin-off transaction, whereby Alliqua is expected to spin-off its existing contract manufacturing operations prior to the merger. After this Spin-off transaction, Alliqua will no longer have any operating assets and liabilities.

(c)

To reflect the reclassification of the Adynxx warrant liability to additional paid in capital. This liability was historically recognized as the warrants held by Adynxx shareholders were exerciseable into shares of stock that were potentially redeemable. In connection with the Merger, the outstanding warrants held by Adynxx shareholders were exchanged for warrants that are exerciseable into shares of common stock and qualify for equity classification.

(d)

To reflect the conversion of the convertible promissory notes outstanding principal balance of $3,000,000 and unpaid accrued interest of $61,808 into shares of Adynxx Series B Preferred Stock and then exchanged for shares of common stock in Alliqua. In accordance with an amendment to the convertible promissory notes signed in October 2018, in the event that Adynxx consummates a merger on or before the maturity date, the convertible notes will automatically convert into shares of Series B Preferred Stock at a conversion price of $0.3133 per share. This adjustment includes the recognition of $641,325 of previously unamortized debt discount which was immediately recognized as interest expense and the reclassification of the derivative liability of $652,852 to additional paid in capital.

(e)

To reflect $1,100,000 of investment banking fees an aggregate of $750,000 was incurred by Adynxx, of which $250,000 is payable in cash or stock upon consummation of the merger and $500,000 is payable in cash at a specified period after consummation of the merger, and $350,000 was incurred by Alliqua, of which $300,000 is payable in stock and $50,000 is payable in warrants upon consummation of the merger.

(f)

To reflect recapitalization of Adynxx through the contribution of all the share capital in Adynxx, including redeemable convertible preferred stock, in exchange for shares of common shares of Alliqua. Note that these financial statements do not include the impacts of the reverse stock split that is contemplated in the proposals herein.

The unaudited pro forma condensed combined statements of operations reflects the following pro forma adjustments:

(g)

To reflect the impacts of the Asset Sale Transaction

(h)
To reflect the impacts of the Spin-off transaction whereby Alliqua is expected to spin-off its existing contract manufacturing operations prior to the merger. After this Spin-off transaction, Alliqua will no longer have any operating assets and liabilities.

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(i)
To eliminate the changes in fair value of warrant liability. In connection with the Merger, the outstanding warrants held by Adynxx shareholders were exchanged for warrants that are exerciseable into shares of common stock and qualify for equity classification. As such, mark-to-market adjustments are no longer applicable.

(j)
To eliminate the changes in the derivative liability, the interest expense associated with the convertible promissory notes and to recognize interest expense for the unamortized note debt discount. In accordance with an amendment to the convertible promissory notes signed in October 2018, in the event that Adynxx consummates a merger on or before the maturity date, the convertible notes will automatically convert into shares of Series B Preferred Stock at a conversion price of $0.3133 per share. As it is assumed that the transaction occurred on the first day of the period presented, such amounts would not be incurred.

(k)
To compute the impacts of the Merger on the weighted average shares outstanding, computed as the sum of (1) the weighted average shares held by Adynxx shareholders prior to the merger, adjusted for an estimated exchange ratio of 0.1577 and (2) the weighted average shares outstanding held by Alliqua sharesholders derived from the Alliqua Form 10-K for the year ended December 31, 2017 and the Alliqua Form 10-Q for the nine months ended September 30, 2018

(l)
Because the pro forma combined statement of operations yields a net loss, pro forma weighted average shares outstanding excludes the impacts of 807,855 warrants outstanding, 20,031,613 options outstanding and 189,674 non-vested restricted stock at December 31, 2017 and 729,146 warrants outstanding, 19,565,600 options outstanding and 20,000 non-vested restricted stock at September 30, 2018, as the effects of such dilutive securities are anti-dilutive.

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## DESCRIPTION OF ALLIQUA'S CAPITAL STOCK

As a result of the completion of the Merger, Adynxx equity holders who receive shares of Alliqua common stock in the Merger will become stockholders of Alliqua. Rights of holders of Alliqua common stock will be governed by the DGCL and the certificate of incorporation, as amended, and bylaws of Alliqua. The following description briefly summarizes the material terms of Alliqua common stock. For more complete terms, please refer to the applicable provisions of the DGCL and the full text of Alliqua's certificate of incorporation, as amended, and bylaws. See the section titled "Where You Can Find More Information" beginning on page 176 of this proxy statement.

### Authorized Capital Stock

Alliqua has authorized 96,000,000 shares of capital stock, par value $0.001 per share, of which 95,000,000 are shares of common stock and 1,000,000 are shares of "blank check" preferred stock. As of the record date for the Special Meeting, there were 5,005,210 shares of Alliqua common stock issued and outstanding and no shares of preferred stock issued and outstanding.

### Common Stock

The holders of Alliqua common stock are entitled to one vote per share. Alliqua's certificate of incorporation does not provide for cumulative voting. The holders of Alliqua common stock are entitled to receive ratably such dividends, if any, as may be declared by Alliqua's board of directors out of legally available funds; however, the current policy of Alliqua's board of directors is to retain earnings, if any, for operations and growth. Upon liquidation, dissolution or winding-up, the holders of Alliqua common stock are entitled to share ratably in all assets that are legally available for distribution. The holders of Alliqua common stock have no preemptive, subscription, redemption or conversion rights. The rights, preferences and privileges of holders of Alliqua common stock are subject to, and may be adversely affected by, the rights of the holders of any series of preferred stock, which may be designated solely by action of Alliqua's board of directors and issued in the future.

Alliqua common stock is listed on Nasdaq under the symbol "ALQA."

### Preferred Stock

The Alliqua board of directors is authorized, subject to any limitations prescribed by law, without further vote or action by the Alliqua stockholders, to issue from time to time shares of preferred stock in one or more series and, as to each series, to establish the number of shares to be included in each such series, and to fix the designations, preferences, voting powers, qualifications, and special or relative rights or privileges of the shares in each such series, which may include, among others, dividend rights, voting rights, liquidation preferences, conversion rights and preemptive rights. Issuance of preferred stock by the Alliqua board of directors could result in such shares having dividend or liquidation preferences senior to the rights of the holders of Alliqua common stock and could dilute the voting rights of the holders of Alliqua common stock.

Prior to the issuance of shares of each series of preferred stock, the Alliqua board of directors is required by the DGCL and the Alliqua certificate of incorporation to adopt resolutions and file a certificate of designation with the Secretary of State of the State of Delaware. The certificate of designation fixes for each class or series the designations, powers, preferences, rights, qualifications, limitations and restrictions, including, but not limited to, some or all of the following:

- the number of shares constituting that series and the distinctive designation of that series, which number may be increased or decreased (but not below the number of shares then outstanding) from time to time by action of the board of directors;

- the dividend rate and the manner and frequency of payment of dividends on the shares of that series, whether dividends will be cumulative, and, if so, from which date;

- whether that series will have voting rights, in addition to any voting rights provided by law, and, if so, the terms of such voting rights;

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- the terms and conditions of any conversion privilege of the series, including provision for adjustment of the conversion rate in such events as the board of directors may determine;

- whether or not the shares of that series will be redeemable, and, if so, the terms and conditions of such redemption;

- whether that series will have a sinking fund for the redemption or purchase of shares of that series, and, if so, the terms and amount of such sinking fund;

- whether or not the shares of that series will have priority over, be on a parity with or be junior to the shares of any other series or class in any respect;

- the rights of the shares of that series in the event of voluntary or involuntary liquidation, dissolution or winding up of the corporation, and the relative rights or priority, if any, of payment of shares of that series; and

- any other relative rights, preferences and limitations of that series.

Although the Alliqua board of directors has no intention at the present time of doing so, it could authorize the issuance of a series of preferred stock that could, depending on the terms of such series, impede the completion of a merger, tender offer or other takeover attempt. In connection with the entry into the Credit Agreement, a five-year warrant (the "Warrant") to purchase 75,000 shares of common stock, par value of $0.001 per share at an exercise price of $55.138 per share was issued to Perceptive.

Registration Rights

On May 29, 2015, Alliqua and each of its subsidiaries entered into a credit agreement (the "Credit Agreement") with Perceptive Credit Opportunities Fund, LP ("Perceptive"), an affiliate of Perceptive Advisors, LLC, which beneficially owns more than 5% of Alliqua common stock. In connection with the entry into the Credit Agreement, a five-year warrant (the "Warrant") to purchase 75,000 shares of common stock, par value of $0.001 per share at an exercise price of $55.138 per share was issued to Perceptive. Alliqua granted Perceptive customary demand and piggy-back registration rights with respect to the shares of common stock issuable upon exercise of the Warrant.

Delaware Anti-Takeover Law and Provisions of our Certificate of Incorporation and Bylaws

Delaware Anti-Takeover Law

We are subject to Section 203 of the Delaware General Corporation Law. Section 203 generally prohibits a public Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

- the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding (i) shares owned by persons who are directors and also officers and (ii) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

- on or subsequent to the date of the transaction, the business combination is approved by the board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 662⁄3% of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;

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- any sale, transfer, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;

- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder; or

- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with, or controlling, or controlled by, the entity or person. The term "owner" is broadly defined to include any person that, individually, with or through that person's affiliates or associates, among other things, beneficially owns the stock, or has the right to acquire the stock, whether or not the right is immediately exercisable, under any agreement or understanding or upon the exercise of warrants or options or otherwise or has the right to vote the stock under any agreement or understanding, or has an agreement or understanding with the beneficial owner of the stock for the purpose of acquiring, holding, voting or disposing of the stock.

The restrictions in Section 203 do not apply to corporations that have elected, in the manner provided in Section 203, not to be subject to Section 203 of the Delaware General Corporation Law or, with certain exceptions, which do not have a class of voting stock that is listed on a national securities exchange or authorized for quotation on The Nasdaq Stock Market or held of record by more than 2,000 stockholders. Our certificate of incorporation and bylaws do not opt out of Section 203.

Section 203 could delay or prohibit mergers or other takeover or change in control attempts with respect to us and, accordingly, may discourage attempts to acquire us even though such a transaction may offer our stockholders the opportunity to sell their stock at a price above the prevailing market price.

Certificate of Incorporation and Bylaws

Provisions of our certificate of incorporation and bylaws may delay or discourage transactions involving an actual or potential change in our control or change in our management, including transactions in which shareholders might otherwise receive a premium for their shares, or transactions that our shareholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our common stock. Among other things, our certificate of incorporation and bylaws:

- permit our board of directors to issue up to 1,000,000 shares of preferred stock, without further action by the shareholders, with any rights, preferences and privileges as they may designate, including the right to approve an acquisition or other change in control;

- provide that the authorized number of directors may be changed only by resolution of the board of directors;

- provide that all vacancies, including newly created directorships, may, except as otherwise required by law, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;

- do not provide for cumulative voting rights (therefore allowing the holders of a majority of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose);

- provide that special meetings of our shareholders may be called only by our board of directors; and

- set forth an advance notice procedure with regard to the nomination, other than by or at the direction of our board of directors, of candidates for election as directors and with regard to business to be brought before a meeting of shareholders.

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Limitations on Liability and Indemnification of Officers and Directors

Our certificate of incorporation contains a provision permitted under the DGCL relating to the liability of directors. This provision eliminates a director's personal liability to the fullest extent permitted by the DGCL for monetary damages resulting from a breach of fiduciary duty; provided that such provision will not eliminate or limit a director's liability for:

- any breach of the director's duty of loyalty;
- acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of the law;
- Section 174 of the DGCL (unlawful dividends); or
- any transaction from which the director derives an improper personal benefit.

The principal effect of the limitation on liability provision is that a stockholder is unable to prosecute an action for monetary damages against a director unless the stockholder can demonstrate a basis for liability for which indemnification is not available under the DGCL. This provision, however, should not limit or eliminate our rights or any stockholder's rights to seek non-monetary relief, such as an injunction or rescission, in the event of a breach of a director's fiduciary duty. This provision does not alter a director's liability under federal securities laws. The inclusion of this provision in our certificate of incorporation may discourage or deter stockholders or management from bringing a lawsuit against directors for a breach of their fiduciary duties, even though such an action, if successful, might otherwise have benefited us and our stockholders.

Our certificate of incorporation and bylaws provide that we are required to indemnify our directors and officers, to the fullest extent permitted by law, subject to any permissible expansion or limitation of such indemnification, as may be set forth in any stockholders' or directors' resolution or by contract.

We have entered into indemnification agreements and employment agreements with our directors and certain of our executive officers, respectively, pursuant to which we have agreed to indemnify such persons against any liability, damage, cost or expense incurred in connection with the defense of any action, suit or proceeding to which such persons are a party to the extent permitted by applicable law, subject to certain exceptions.

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PRINCIPAL STOCKHOLDERS OF ALLIQUA

The following table sets forth information with respect to the beneficial ownership of our common stock as of November 13, 2018 by:

- each person known by us to beneficially own more than 5.0% of our common stock;
- each of our directors;
- each of the named executive officers; and
- all of our directors and executive officers as a group.

The percentages of common stock beneficially owned are reported on the basis of regulations of the SEC governing the determination of beneficial ownership of securities. Under the rules of the SEC, a person is deemed to be a beneficial owner of a security if that person has or shares voting power, which includes the power to vote or to direct the voting of the security, or investment power, which includes the power to dispose of or to direct the disposition of the security, or if that person has the right to acquire such voting power or investment power within 60 days. Except as indicated in the footnotes to this table, each beneficial owner named in the table below has sole voting and sole investment power with respect to all shares beneficially owned, and each person's address is c/o Alliqua BioMedical, Inc., 2150 Cabot Boulevard West, Suite B, Langhorne, PA 19047. As of November 13, 2018, we had 5,005,210 shares outstanding.

| Name of Beneficial Owner | Number of Shares Beneficially Owned(1) | Percentage Beneficially Owned(1) |
|---|---|---|
| 5% Owners | | |
| Celgene Corporation<br>86 Morris Avenue<br>Summit, New Jersey 07901 | 902,519(2) | 17.7% |
| Perceptive Advisors, LLC<br>499 Park Avenue, 25th Floor<br>New York, NY 10022 | 643,730(3) | 12.3% |
| Officers and Named Executive Officers | | |
| David I. Johnson | 342,814(4) | 6.7% |
| Joseph Warusz | — | —% |
| Brian M. Posner(10) | 84,656(5) | 1.7% |
| Joseph M. Leone | 21,194(6) | * |
| Jeffrey Sklar | 18,805(7) | * |
| Gary Restani | 15,700(8) | * |
| Mark Wagner | 54,430(9) | 1.1% |
| Directors and executive officers as a group (7 persons) | 581,057 | 13.2% |

*
Represents ownership of less than 1%

(1)
Shares of common stock beneficially owned and the respective percentages of beneficial ownership of common stock assumes the exercise of all options, warrants and other securities convertible into common stock beneficially owned by such person or entity currently exercisable or exercisable within 60 days of November 13, 2018. Shares issuable pursuant to the exercise of stock options and warrants exercisable within 60 days are deemed outstanding and held by the holder of such options or warrants for computing the percentage of outstanding common stock beneficially owned by such person but are not deemed outstanding for computing the percentage of outstanding common stock beneficially owned by any other person.

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(2)
Based on information contained in Amendment No. 8 to Schedule 13D filed with the SEC on June 27, 2017. Comprised of (i) 804,610 shares of our common stock owned directly by Celgene Corporation, and (ii) 97,909 shares of our common stock issuable to Celgene Corporation upon the exercise of warrants that are currently exercisable. Celgene Corporation is a publicly traded corporation listed on Nasdaq.

(3)
Based on information contained in Schedule 13G filed on February 14, 2018. Comprised of (i) 429,108 shares of our common stock owned directly by Perceptive Advisors, LLC, and (ii) 214,622 shares of our common stock issuable to Perceptive Advisors, LLC upon the exercise of warrants that are currently exercisable.

(4)
Comprised of (i) 199,454 shares of our common stock owned directly by Mr. Johnson, (ii) 141,949 shares of our common stock issuable to Mr. Johnson upon the exercise of stock options that are vested or will vest within 60 days of November 13, 2018, and (iii) 1,411 shares of common stock issuable upon the exercise of warrants held by Mr. Johnson.

(5)
Comprised of (i) 47,642 shares of our common stock owned directly by Mr. Posner, and (ii) 37,014 shares of our common stock issuable to Mr. Posner upon the exercise of stock options that are vested or will vest within 60 days of November 13, 2018.

(6)
Comprised of (i) 4,383 shares of our common stock owned directly by Mr. Leone, (ii) 16,529 shares of our common stock issuable to Mr. Leone upon the exercise of stock options that are vested or will vest within 60 days of November 13, 2018, and (iii) 282 shares of common stock issuable upon the exercise of warrants held by Mr. Leone.

(7)
Comprised of (i) 2,436 shares of our common stock owned directly by Mr. Sklar, (ii) 69 shares of our common stock held in a custodial account for a child, of which Mr. Sklar disclaims beneficial ownership, and (iii) 16,300 shares of our common stock issuable to Mr. Sklar upon the exercise of stock options that are vested or will vest within 60 days of November 13, 2018.

(8)
Comprised of shares of our common stock issuable to Mr. Restani upon the exercise of stock options that are vested or will vest within 60 days of November 13, 2018.

(9)
Comprised of (i) 7,050 shares of our common stock owned directly by Mr. Wagner, (ii) 32,380 shares owned directly by 2003 Revocable Trust of Mark Wagner dated April 23, 2003 (the “Wagner Trust”) and (iii) 15,000 shares of our common stock issuable to Mr. Wagner upon the exercise of stock options that are vested or will vest within 60 days of November 13, 2018. Mr. Wagner is the trustee and deemed to have a pecuniary interest in, and therefore to be the beneficial owner of, shares held by the Wagner Trust. The Wagner Trust acquired 17,403 shares as part of the merger consideration for the acquisition of Celleration on May 29, 2015.

(10) Mr. Posner resigned as our Chief Financial Officer, Secretary and Treasurer effective April 1, 2018.

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PRINCIPAL STOCKHOLDERS OF ADYNXX

The following table sets forth information with respect to the beneficial ownership of Adynxx common stock as of September 30, 2018 by:

- each person known by Adynxx to beneficially own more than 5.0% of Adynxx common stock;
- each of Adynxx's directors;
- each of the named executive officers; and
- all of Adynxx's directors and executive officers as a group.

The percentages of common stock beneficially owned are reported on the basis of regulations of the SEC governing the determination of beneficial ownership of securities. Under the rules of the SEC, a person is deemed to be a beneficial owner of a security if that person has or shares voting power, which includes the power to vote or to direct the voting of the security, or investment power, which includes the power to dispose of or to direct the disposition of the security, or if that person has the right to acquire such voting power or investment power within 60 days. Applicable percentage ownership assumes the conversion of all outstanding shares of Series A and Series B preferred stock outstanding into shares of Adynxx common stock at the applicable conversion ratio. Except as indicated in the footnotes to this table, each beneficial owner named in the table below has sole voting and sole investment power with respect to all shares beneficially owned, and each person's address is c/o Adynxx, Inc. 100 Pine St., Suite 500, San Francisco, CA 94111 unless otherwise indicated. As of September 30, 2018, Adynxx had 127,290,889 shares outstanding.

| | Beneficial Ownership | |
|---|---|---|
| Name of Beneficial Owner | Shares | % |
| Greater than 5% Stockholders: | | |
| Entities affiliated with Domain Partners(1) | 77,229,771 | 60.7 |
| TPG Biotechnology Partners IV, L.P.(2) | 28,726,460 | 22.6 |
| Named Executive Officers and Directors: | | |
| Rick Orr(3) | 6,634,193 | 5.2 |
| Donald Manning, M.D., Ph.D.(4) | 2,565,300 | 2.0 |
| Julien Mamet, Ph.D.(5) | 11,104,090 | 8.4 |
| Dennis Podlesak(6) | 3,942,336 | 3.0 |
| Eckard Weber(7) | 3,942,336 | 3.0 |
| Heath Lukatch, Ph.D.(8) | 28,726,460 | 22.6 |
| Stan Abel(9) | 2,121,167 | 1.6 |
| All current executive officers and directors as a group (7 persons)(10) | 59,035,882 | 41.9 |

(1)
Consists of (i) 76,660,847 shares held of record by Domain Partners VIII, L.P. and (ii) 568,924 shares held of record by DP VIII Associates, L.P. The address for these entities is One Palmer Square, Suite 515, Princeton, NJ 08542.

(2)

Consists of 28,726,460 shares held of record by TPG Biotechnology Partners IV, L.P. (“TPG”). Heath Lukatch, a member of the Adynxx board of directors, is a partner and managing director of TPG. The address for the entity is 301 Commerce Street, Suite 3300, Fort Worth, Texas 76102.

(3)
Consists of (i) 3,957,944 shares held of record by Mr. Orr and (ii) 2,676,249 shares subject to options exercisable within 60 days of September 30, 2018.

(4)
Consists of 2,565,300 shares subject to options exercisable within 60 days of September 30, 2018.

(5)
Consists of (i) 6,697,897 shares held of record by Dr. Mamet and (ii) 4,406,193 shares subject to options exercisable within 60 days of September 30, 2018.

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(6)
Consists of (i) 2,374,766 shares held of record by Mr. Podlesak and (ii) 1,567,570 shares subject to options exercisable within 60 days of September 30, 2018.

(7)
Consists of (i) 2,374,766 shares held of record by Dr. Weber and (ii) 1,567,570 shares subject to options exercisable within 60 days of September 30, 2018.

(8)
Consists of the shares listed in footnote (2) above, which are held of record by TPG. Dr. Lukatch is a managing director of TPG. Dr. Lukatch shares voting and dispositive power with respect to the shares held by TPG.

(9)
Consists of (i) 1,337,383 shares held of record by Mr. Abel and (ii) 783,784 shares subject to options exercisable within 60 days of September 30, 2018.

(10)
Consists of (i) 45,469,216 shares held of record by Adynxx's directors, executive officers and their respective affiliates and (ii) 13,566,666 shares subject to options exercisable within 60 days of September 30, 2018.

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## PRINCIPAL STOCKHOLDERS OF THE COMBINED COMPANY

Except where specifically noted, the following information and all other information contained in this proxy statement do not give effect to the reverse stock split described in the Reverse Stock Split Proposal.

The following table sets forth information with respect to the beneficial ownership of the combined company's common stock immediately after the closing of the merger, assuming the closing of the merger occurred on January 18, 2019 by:

- each person, or group of affiliated persons, expected by Alliqua and Adynxx to become the beneficial owner of more than 5% of the outstanding common stock of the combined company;
- each executive officer and director of the combined company; and
- all of the combined company's executive officers and directors as a group.

Beneficial ownership is determined according to the rules of the SEC and generally means that a person has beneficial ownership of a security if he, she or it possesses sole or shared voting or investment power of that security, including options that are exercisable within 60 days of January 18, 2019. Shares of common stock issuable pursuant to stock options are deemed outstanding for computing the percentage of the person holding such options and the percentage of any group of which the person is a member but are not deemed outstanding for computing the percentage of any other person. Except as indicated by the footnotes below, the combined company believes, based on the information furnished to it, that the persons named in the table below have sole voting and investment power with respect to all shares of common stock shown that they beneficially own, subject to community property laws where applicable. The information does not necessarily indicate beneficial ownership for any other purpose, including for purposes of Section 13(d) and 13(g) of the Securities Act.

The percentage of shares beneficially owned is based on 35,310,245 shares of common stock expected to be outstanding upon the closing of the merger, excluding the effect of the reserve stock split, if approved, adjusted as required by the rules promulgated by the SEC to determine beneficial ownership. Neither Alliqua nor Adynxx know of any arrangements, including any pledge by any person of securities of the combined company.

Immediately after the closing of the merger, based on the exchange ratio, Adynxx stockholders, warrantholders and optionholders will own approximately 86% of the fully-diluted common stock of the combined companies with Alliqua stockholders and optionholders holding approximately 14% of the fully-diluted common stock of the combined company. The following table and the related notes assume that, at the Effective Time, each share of Adynxx common stock will convert into the right to receive approximately 0.22 shares of Alliqua common stock accounting for the occurrence of certain events discussed elsewhere in this proxy statement. The estimated exchange ratio calculation used herein is based upon Alliqua's and Adynxx's capitalization immediately prior to the date of this proxy statement/ prospectus/information statement, and will be adjusted to account for the issuance of any additional shares of Alliqua's and Adynxx's common stock prior to the closing of the merger. See "The Merger Agreement — Exchange Ratio" for more information regarding the exchange ratio.

Except as indicated in footnotes to this table, Alliqua and Adynxx believe that the stockholders named in this table have sole voting and investment power with respect to all shares of common stock of the combined company shown as beneficially owned by them, based on information provided to Alliqua and Adynxx by such stockholders and subject to community property laws where applicable.

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Unless otherwise indicated, the address of each beneficial owner listed in the table below is c/o Adynxx, Inc. 100 Pine St., Suite 500, San Francisco, CA 94111.

| | Beneficial Ownership | |
|---|---|---|
| Name of Beneficial Owner | Shares | % |
| Greater than 5% Stockholders | | |
| Entities affiliated with Domain Partners(1) | 16,766,583 | 47.6% |
| TPG Biotechnology Partners IV, L.P.(2) | 6,236,514 | 17.7 |
| Executive Officers and Directors | | |
| Rick Orr(3) | 1,440,282 | 4.0 |
| Donald Manning, M.D., Ph.D.(4) | 556,926 | 1.6 |
| Julien Mamet, Ph.D.(5) | 2,410,697 | 6.7 |
| David I. Johnson(6) | 342,814 | 1.0 |
| Dennis Podlesak(7) | 855,880 | 2.4 |
| Eckard Weber(8) | 855,880 | 2.4 |
| Stan Abel(9) | 460,504 | 1.3 |
| Jeffrey Sklar(10) | 18,805 | * |
| Joseph M. Leone(11) | 21,194 | * |
| All current executive officers and directors as a group (9 persons)(12) | 6,580,172 | 18.6 |

(1)
Consists of (i) 16,766,583 shares held of record by Domain Partners VIII, L.P. and (ii) 123,740 shares held of record by DP VIII Associates, L.P. The address for these entities is One Palmer Square, Suite 515, Princeton, NJ 08542.

(2)
Consists of 6,236,514 shares held of record by TPG. Heath Lukatch, a former member of the Adynxx board of directors, is a partner and managing director of TPG. The address for the entity is 301 Commerce Street, Suite 3300, Fort Worth, Texas 76102.

(3)
Consists of (i) 859,269 shares held of record by Mr. Orr and (ii) 582,084 shares subject to options exercisable within 60 days of January 18, 2019.

(4)
Consists of 556,926 shares subject to options exercisable within 60 days of January 18, 2019.

(5)
Consists of (i) 1,454,113 shares held of record by Dr. Mamet and (ii) 958,346 shares subject to options exercisable within 60 days of January 18, 2019.

(6)
Consists of (i) 199,454 shares held of record by Mr. Johnson, (ii) 141,949 shares subject to options exercisable within 60 days of January 18, 2019 and (iii) 1,411 shares of common stock issuable upon the exercise of warrants held by Mr. Johnson.

(7)

Consists of (i) 515,561 shares held of record by Mr. Podlesak and (ii) 340,319 shares subject to options exercisable within 60 days of January 18, 2019.

(8)
Consists of (i) 515,561 shares held of record by Dr. Weber and (ii) 340,319 shares subject to options exercisable within 60 days of January 18, 2019.

(9)
Consists of (i) 290,345 shares held of record by Mr. Abel and (ii) 170,159 shares subject to options exercisable within 60 days of January 18, 2019, of which 68,204 shares are vested as of such date.

(10)
Consists of (i) 2,436 shares of our common stock owned directly by Mr. Sklar, (ii) 69 shares of our common stock held in a custodial account for a child, of which Mr. Sklar disclaims beneficial ownership, and (iii) 16,300 shares of our common stock issuable to Mr. Sklar upon the exercise of stock options that are vested or will vest within 60 days of January 18, 2019.

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(11)

Consists of (i) 4,383 shares of our common stock owned directly by Mr. Leone, (ii) 16,529 shares of our common stock issuable to Mr. Leone upon the exercise of stock options that are vested or will vest within 60 days of January 18, 2019, and (iii) 282 shares of common stock issuable upon the exercise of warrants held by Mr. Leone.

(12)

Consists of (i) 3,634,849 shares held of record by Adynxx's directors, executive officers and their respective affiliates following the consummation of the Merger, and (ii) 2,945,323 shares subject to warrants and options exercisable within 60 days of January 18, 2019.

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## WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public from commercial document retrieval services and at the website maintained by the SEC at www.sec.gov. The reports and other information that we file with the SEC are also available in the Investor Relations section of our corporate website at www.alliqua.com. The information located on, or hyperlinked or otherwise connected to, our website is not, and shall not be deemed to be, a part of this proxy statement or incorporated into any other files that we make with the SEC.

You may request a copy of our reports and other documents filed with the SEC at no cost by writing our Secretary at Alliqua BioMedical, Inc., 2150 Cabot Blvd., West, Suite B, Langhorne, PA 19047.

Stockholders should not rely on information that purports to be made by or on behalf of Alliqua other than that contained in this proxy statement. Alliqua has not authorized anyone to provide information on behalf of Alliqua that is different from that contained in this proxy statement. This proxy statement is dated January 24, 2019. No assumption should be made that the information contained in this proxy statement is accurate as of any date other than that date, and the mailing of this proxy statement will not create any implication to the contrary. Notwithstanding the foregoing, in the event of any material change in any of the information previously disclosed, Alliqua will, where relevant and if required by applicable law, update such information through a supplement to this proxy statement.

We have not authorized anyone to give you any information or to make any representation about the proposed Merger or Alliqua that is different from or adds to the information contained in this proxy statement. Therefore, if anyone does give you any different or additional information, you should not rely on it.

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## INFORMATION INCORPORATED BY REFERENCE

Certain information has been "incorporated by reference" into this proxy statement, which means that Alliqua has disclosed important information to you by referring you to another document filed separately with the SEC. The documents incorporated by reference into this proxy statement contain important information that you should read about Alliqua.

The following documents are incorporated by reference into this proxy statement:

(a)
Alliqua's Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed with the SEC on March 2, 2018;

(b)
Alliqua's Amendment to Annual Report on Form 10-K for the fiscal year ended December 31, 2017, filed with the SEC on April 30, 2018;

(c)
Alliqua's Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2018, June 30, 2018 and September 30, 2018, filed with the SEC on May 14, 2018, August 10, 2018 and October 26, 2018, respectively; and

(d)
Alliqua's Current Reports on Form 8-K, as filed with the SEC on January 5, 2018, February 9, 2018, March 15, 2018, April 30, 2018, May 7, 2018, May 11, 2018, June 26, 2018, October 12, 2018, November 13, 2018, November 28, 2018, December 13, 2018 and January 3, 2019.

Alliqua is delivering to its stockholders with this proxy statement the aforementioned annual report in accordance with Item 13(b)(2) of Schedule 14A and its quarterly reports on Form 10-Q subsequent to December 31, 2017. In addition, all reports and other documents that Alliqua subsequently files pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, after the date of this proxy statement and prior to the Special Meeting will be deemed to be incorporated by reference into this proxy statement and to be part of this proxy statement from the date of the filing of such reports and documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes hereof to the extent that a statement contained herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this proxy statement.

Documents incorporated by reference are also available, without charge. You may obtain documents incorporated by reference in this proxy statement by requesting them in writing or by telephone at the following address:

Alliqua BioMedical, Inc.
Attn: Corporate Secretary
2150 Cabot Blvd., West
Suite B
Langhorne, PA 19047
Phone: (215) 702-8550

THE PROXY STATEMENT DOES NOT CONSTITUTE AN OFFER TO SELL, OR A SOLICITATION OF AN OFFER TO BUY, ANY SECURITIES, OR THE SOLICITATION OF A PROXY, IN ANY JURISDICTION TO OR FROM ANY PERSON TO WHOM IT IS NOT LAWFUL TO MAKE ANY OFFER OR SOLICITATION IN THAT JURISDICTION. THE INFORMATION CONTAINED IN THIS PROXY STATEMENT SPEAKS ONLY AS OF THE DATE INDICATED ON THE COVER OF THIS PROXY STATEMENT UNLESS THE INFORMATION SPECIFICALLY INDICATES THAT ANOTHER DATE APPLIES.

ALLIQUA HAS NOT AUTHORIZED ANYONE TO GIVE YOU ANY INFORMATION OR TO MAKE ANY REPRESENTATION ABOUT THE PROPOSED MERGER OR ALLIQUA THAT IS DIFFERENT FROM OR ADDS TO THE INFORMATION CONTAINED IN THIS PROXY STATEMENT OR IN THE DOCUMENTS ALLIQUA HAS PUBLICLY FILED WITH THE SEC. ALLIQUA IS NOT RESPONSIBLE FOR, AND CAN

PROVIDE NO ASSURANCES AS TO THE RELIABILITY OF, ANY INFORMATION OTHER THAN THE INFORMATION CONTAINED OR INCORPORATED BY REFERENCE IN THIS PROXY STATEMENT.
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## HOUSEHOLDING

Some banks, brokers and other nominee record holders may be participating in the practice of "householding." This means that only one copy of this proxy statement may have been sent to multiple stockholders in a household. We will promptly deliver, upon oral or written request, a separate copy of the proxy statement to any stockholder residing at an address to which only one copy was mailed. Requests for additional copies should be directed in writing to a stockholder's broker, bank or other nominee holding shares of our common stock for such stockholder or you may contact our principal executive offices at Alliqua BioMedical, Inc., 2150 Cabot Blvd., West, Suite B, Langhorne, PA 19047, Attn: Investor Relations or call (215) 702-8550 and ask for Investor Relations. Stockholders wishing to receive separate copies of our proxy statements in the future, and stockholders sharing an address that wish to receive a single copy of our proxy statements if they are receiving multiple copies of our proxy statements, should contact his or her bank, broker or other nominee record holder, or may contact our principal executive offices as described above.

## OTHER MATTERS

### Stockholder Proposals

Pursuant to Rule 14a-8 of the Exchange Act, a stockholder who intends to present a proposal at our next annual meeting of stockholders and who wishes the proposal to be included in the proxy statement for that meeting must submit the proposal to us in writing to the attention of the Secretary at Alliqua BioMedical, Inc., 2150 Cabot Boulevard West, Suite B, Langhorne, Pennsylvania 19047. The proposal must be received no later than January 17, 2019, after which date such stockholder proposal will be considered untimely. However, pursuant to such rule, if the 2019 annual meeting is held on a date that is before May 27, 2019 or after July 26, 2019, then a stockholder proposal submitted for inclusion in our Proxy Statement must be received by us a reasonable time before we begin to print and mail our proxy statement for the 2019 annual meeting. Stockholders wishing to submit director nominations and proposals to be presented directly at the annual meeting instead of for inclusion in next year's proxy statement must follow the submission criteria and deadlines set forth in our bylaws. To be timely in connection with our next annual meeting, such a stockholder proposal must be received by our Secretary at our principal executive offices between February 26, 2019, and March 28, 2019; provided, however, if and only if the 2019 Annual Meeting is not scheduled to be held between April 27, 2019 and July 26, 2019, such stockholder's notice must be delivered to our Secretary not earlier than 120 days prior to the date of the 2019 annual meeting and not later than the later of (A) the 90th day prior to the date of the 2019 annual meeting or (B) if the first public announcement of the 2019 Annual Meeting is less than 100 days prior to the date of the 2019 Annual Meeting, the 10th day following the day on which public announcement of the date of the 2019 annual meeting is first made. The advance notice of the proposal must contain certain information specified in our bylaws, including information concerning the proposal and the stockholder proponent.

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Independent Auditor's Report

Board of Directors

Adynxx, Inc.

San Francisco, California

We have audited the accompanying financial statements of Adynxx, Inc. (the "Company"), which comprise the balance sheets as of December 31, 2017 and 2016 and the related statements of operations, redeemable convertible preferred stock and stockholders' deficit, and cash flows for the years then ended, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

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Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Adynxx, Inc. as of December 31, 2017 and 2016, and the results of its operations and its cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter Regarding Going Concern

The accompanying financial statements have been prepared assuming that Adynxx will continue as a going concern. As described in Note 1 to the financial statements, Adynxx does not have a commercial product that can generate cash and accordingly will need to raise additional capital to fund its operations. These factors, among others, raise substantial doubt about its ability to continue as a going concern. Management’s plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty. Our opinion is not modified with respect to this matter.

/s/ BDO USA, LLP

San Jose, California

September 28, 2018

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Adynxx, Inc.

Balance Sheets

| | December 31, 2017 | 2016 |
|---|---|---|
| Assets | | |
| Current Assets | | |
| Cash and cash equivalents | $ 4,300,726 | $ 14,545,943 |
| Prepaid expenses and other current assets | 33,691 | 362,989 |
| Total Current Assets | 4,334,417 | 14,908,932 |
| Property and Equipment, Net | 12,885 | 19,947 |
| Restricted Cash | 54,885 | 54,885 |
| Other Assets | 18,736 | 20,095 |
| Total Assets | $ 4,420,923 | $ 15,003,859 |
| Liabilities and Stockholders' Deficit | | |
| Current Liabilities | | |
| Accounts payable | $ 702,795 | $ 101,901 |
| Accrued liabilities | 1,157,779 | 1,064,093 |
| Current portion of term loan | 1,710,950 | 138,889 |
| Total Current Liabilities | 3,571,524 | 1,304,883 |
| Term Loan, Net of Current Portion and Discount | 2,950,813 | 4,607,940 |
| Warrant Liability | 42,007 | 54,338 |
| Commitments and Contingencies (Note 6) | | |
| Redeemable Convertible Preferred Stock: | | |
| Series A redeemable convertible preferred stock, $0.001 par value; 57,002,183 shares authorized; 56,672,658 and 56,321,165 shares issued and outstanding as of December 31, 2017 and 2016, respectively (liquidation value of $12,898,697 and $12,818,698 as of December 31, 2017 and 2016, respectively) | 12,814,320 | 12,734,320 |
| Series B redeemable convertible preferred stock, $0.001 par value; 51,069,262 shares authorized; 51,069,262 shares issued and outstanding as of December 31, 2017 and 2016 (liquidation value of $16,000,000 as of December 31, 2017 and 2016) | 15,896,861 | 15,896,861 |
| Stockholders' Deficit: | | |
| Common stock, $0.001 par value; 148,000,000 shares authorized; 19,548,969 shares issued and outstanding as of December 31, 2017 and 2016 | 19,549 | 19,549 |
| Additional paid-in capital | 419,344 | 118,702 |
| Accumulated deficit | (31,293,495) | (19,732,734) |
| Total Stockholders' Deficit | (30,854,602) | (19,594,483) |
| Total Liabilities, Redeemable Convertible Preferred Stock and Stockholders' Deficit | $ 4,420,923 | $ 15,003,859 |

The accompanying notes are an integral part of these financial statements.

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Adynxx, Inc.

Statements of Operations

| | Years Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Operating Expenses | | |
| Research and development | $ 8,721,752 | $ 3,786,188 |
| General and administrative | 2,340,874 | 2,417,000 |
| Total Operating Expenses, Net | 11,062,626 | 6,203,188 |
| Loss from Operations | (11,062,626) | (6,203,188) |
| Interest Income (Expense), Net | (515,157) | (563,386) |
| Other Income | 17,022 | 20,659 |
| Net Loss | $ (11,560,761) | $ (6,745,915) |

The accompanying notes are an integral part of these financial statements.

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Adynxx, Inc.

Statements of Redeemable Convertible Preferred Stock and Shareholders' Deficit

| | Series A Redeemable Convertible Preferred Stock | | Series B Redeemable Convertible Preferred Stock | | Common Stock | | Addition Paid-in Capital |
|---|---|---|---|---|---|---|---|
| | Shares | Amount | Shares | Amount | Shares | Amount | |
| Balance, December 31, 2015 | 56,321,165 | $ 12,734,320 | — | $ — | 19,548,969 | $ 19,549 | $ 105,3 |
| Conversion of convertible notes and accrued interest to Series B redeemable convertible preferred stock | — | — | 6,469,356 | 2,026,849 | — | — | — |
| Issuance of Series B redeemable convertible preferred stock for cash at $0.3133 per share, net of issuance costs of $103,139 | — | — | 44,599,906 | 13,870,012 | — | — | — |
| Stock-based compensation expense | — | — | — | — | — | — | 13,33 |
| Net loss | — | — | — | — | — | — | — |
| Balance, December 31, 2016 | 56,321,165 | 12,734,320 | 51,069,262 | 15,896,861 | 19,548,969 | 19,549 | 118,7 |
| Exercise of warrants | 351,493 | 80,000 | — | — | — | — | — |
| Stock-based compensation expense | — | — | — | — | — | — | 300,6 |
| Net loss | — | — | — | — | — | — | — |
| Balance, December 31, 2017 | 56,672,658 | $ 12,814,320 | 51,069,262 | $ 15,896,861 | 19,548,969 | $ 19,549 | $ 419,3 |

The accompanying notes are an integral part of these financial statements.

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Adynxx, Inc.

Statements of Cash Flows

| | Years Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Cash Flows from Operating Activities | | |
| Net Loss | $ (11,560,761) | $ (6,745,915) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | |
| Depreciation expense | 10,419 | 10,327 |
| Loss on disposal of property and equipment | — | 1,394 |
| Stock-based compensation expense | 300,642 | 13,330 |
| Expiration of preferred stock warrants | — | (2,477) |
| Changes in fair value of warrant liability | (12,331) | (18,111) |
| Accretion of final charge upon maturity of loan | 105,993 | 85,639 |
| Amortization of debt issuance costs | 53,823 | 79,954 |
| Non-cash interest expense on convertible notes | — | 26,849 |
| Changes in operating assets and liabilities: | | |
| Prepaid expenses and other current assets | 329,298 | (326,868) |
| Other assets | 1,359 | (18,295) |
| Accounts payable | 600,894 | (198,681) |
| Accrued liabilities | (12,307) | (173,883) |
| Net Cash Used in Operating Activities | (10,182,971) | (7,266,737) |
| Cash Flows from Investing Activities | | |
| Restricted cash | — | (27,305) |
| Purchases of property and equipment | (3,357) | (19,802) |
| Net Cash Used in Investing Activities | (3,357) | (47,107) |
| Cash Flows from Financing Activities | | |
| Proceeds from issuance of term loan, net of issuance costs | — | 1,996,366 |
| Payment on long term loan | (138,889) | (138,889) |
| Exercise of warrants | 80,000 | — |
| Proceeds from issuance of convertible notes | — | 2,000,000 |
| Proceeds from issuance of Series B convertible preferred stock | — | 13,973,151 |
| Payments of issuance costs for Series B convertible preferred stock | — | (103,139) |
| Net Cash Provided (Used) by Financing Activities | (58,889) | 17,727,489 |
| Net Increase (Decrease) in Cash and Cash Equivalents | (10,245,217) | 10,413,645 |
| Cash and Cash Equivalents at Beginning of Year | 14,545,943 | 4,132,298 |
| Cash and Cash Equivalents at End of Year | $ 4,300,726 | $ 14,545,943 |
| Supplemental Disclosure of Non-Cash Financing Activities | | |
| Non-cash issuance of warrant | $ — | $ 22,259 |
| Conversion of convertible notes and accrued interest to preferred stock | $ — | $ 2,026,849 |
| Cash paid for interest | $ 355,341 | $ 357,646 |

The accompanying notes are an integral part of these financial statements.

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Adynxx, Inc.
Notes to Financial Statements
1. Description of Business
Adynxx
Adynxx, Inc. was incorporated on October 24, 2007, in the state of Delaware. Adynxx is a clinical-stage pharmaceutical entity that is developing a technology platform to address pain at its molecular roots. Through December 31, 2017, Adynxx has been primarily engaged in developing initial product technology, recruiting personnel, and raising capital.
Basis of Presentation
The accompanying financial statements have been prepared using accounting principles generally accepted in the United States of America ("GAAP").
Liquidity
The accompanying financial statements have been prepared assuming Adynxx will continue as a going concern. Adynxx has an accumulated deficit of $31,293,495 as of December 31, 2017. Adynxx expects to incur substantial losses in future periods. Adynxx is subject to risks common to companies in the clinical stage, including, but not limited to, development of new products, development of markets and distribution channels, dependence on key personnel, and the ability to obtain additional capital as needed to fund its product development plans. Adynxx has a limited operating history and has yet to generate any revenues from customers. There is no guarantee that profitable operations, if ever achieved, could be sustained on a continuing basis.
Adynxx plans to finance its operations and capital funding needs through equity and/or debt financing. However, there can be no assurance that additional funding will be available to Adynxx on acceptable terms on a timely basis, if at all, or that Adynxx will generate sufficient cash from operations to adequately fund operating needs or ultimately achieve profitability. The conditions above, among others, raise substantial doubt about the ability of Adynxx to continue as a going concern within one year after the date the financial statements are available to be issued. The accompanying financial statements do not include any adjustments that might result from the outcome of these uncertainties.
2. Significant Accounting Policies
Use of Estimates
The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent liabilities at the date of the financial statements, and the reported amounts of expenses incurred during the reporting period. Actual results could differ from those estimates and such differences could be material to Adynxx's financial position and results of operations.
Significant estimates and assumptions include the valuation of equity instruments and equity-linked instruments, including the valuation of Adynxx's common stock and the valuation of Adynxx's common stock options for purposes of accounting for stock-based compensation, and accruals for clinical trials and the valuation allowances on deferred tax assets.
Concentration of Credit Risk and Other Risks and Uncertainties
Financial instruments that potentially subject Adynxx to concentration of credit risk consist of cash and cash equivalents. Cash and cash equivalents are deposited in demand and money market accounts with established financial institutions and, at times, such balances with any one financial institution may be in excess of the Federal Deposit Insurance Corporation insured limits. To date, Adynxx has not experienced any losses on its deposits of cash and cash equivalents.

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Adynxx operates in a dynamic and highly competitive industry and believes that changes in any of the following areas could have a material adverse effect on Adynxx's future financial position, results of operations, or cash flows: ability to obtain future financing; advances and trends in new technologies and industry standards; results of clinical trials; regulatory approval and market acceptance of Adynxx's products; development of sales channels; certain strategic relationships; litigation or claims against Adynxx based on intellectual property, patent, product, regulatory, or other factors; and Adynxx's ability to attract and retain employees necessary to support its growth.

At December 31, 2017, two vendors represented 56% and 31% of total accounts payable. At December 31, 2016, three vendors represented 45%, 32% and 13% of total accounts payable.

Clinical Trial Accruals

Adynxx's clinical trial accruals are based on patient enrollment and related costs at clinical investigator sites as well as for the services received and efforts expended pursuant to contracts with multiple research institutions and clinical research organizations that conduct and manage clinical trials on Adynxx's behalf. Adynxx accrues expenses related to clinical trials based on contracted amounts applied to the level of patient enrollment and activity according to the clinical trial protocol. If timelines or contracts are modified based upon changes in the clinical trial protocol or scope of work to be performed, Adynxx modifies the estimates of accrued expenses accordingly. To date, Adynxx has had no significant adjustments to accrued clinical trial expenses.

In March 2016, Adynxx incurred $25,491 of expense to close out a Phase 2 clinical trial that was initiated in May 2014. In April 2016, Adynxx entered into agreements with Premier Research International LLC and CRF Health, Inc. ("Research Organizations") pursuant to which the Research Organizations agreed to conduct a Phase 2 clinical trial. Adynxx also entered into agreements with ICON Central Laboratories for laboratory services and Almac Clinical Services for storage and distribution services. For the years ended December 31, 2017 and 2016, Adynxx incurred $6,201,266 and $1,148,613, respectively, of expenses in connection with its clinical studies.

Cash and Cash Equivalents

Adynxx considers all highly liquid investments purchased with a maturity of three months or less on the date of acquisition to be cash and cash equivalents.

Property and Equipment, Net

Property and equipment are stated at cost, net of accumulated depreciation. Depreciation is computed using a straight-line method over the estimated useful lives of the assets, generally three to five years. Leasehold improvements are amortized over the shorter of the estimated useful life of the asset or the remaining term of the lease.

Expenditures for repairs and maintenance are charged to expense as incurred. Upon disposition of an asset, the cost and related accumulated depreciation are removed from the accounts and the resulting gain or loss is reflected in the statements of operations.

Impairment of Long-Lived Assets

Adynxx's long-lived assets and other assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. Recoverability of an asset to be held and used is measured by a comparison of the carrying amount of an asset to the future undiscounted cash flows expected to be generated by the asset. If such asset is considered to be impaired, the impairment to be recognized is measured as the amount by which the carrying amount of the asset exceeds its fair value. Through December 31, 2017, Adynxx had not experienced impairment losses on its long-lived assets.

Restricted Cash

At December 31, 2017 and 2016, cash of $54,885 was restricted from withdrawal and held by a bank in the form of a letter of credit held in lieu of a security deposit for Adynxx's office lease.

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Stock-Based Compensation

Stock-based compensation is measured at the grant date based on the fair value of the award. The fair value of the award that is ultimately expected to vest is recognized as expense on a straight-line basis over the requisite service period, which is generally the vesting period. The expense recognized has been reduced for the estimated portion of the award that is not expected to vest due to forfeitures. The forfeiture rate is determined at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

Adynxx uses the Black-Scholes option-pricing model (the "Black-Scholes model") as the method for determining the estimated fair value of stock options.

Expected Term — The expected term represents the period that Adynxx's stock-based awards are expected to be outstanding and is determined using the simplified method.

Expected Volatility — Expected volatility is estimated using comparable public companies' volatility for similar terms.

Expected Dividend — The Black-Scholes model calls for a single expected dividend yield as an input. Adynxx has never paid dividends and has no plans to pay dividends.

Risk-Free Interest Rate — The risk-free interest rate used in the Black-Scholes model is based on the U.S. Treasury zero-coupon issues in effect at the time of grant for periods corresponding with the expected term of the option.

Research and Development

Research and development expenses consist of personnel costs, including salaries, benefits and stock-based compensation, preclinical studies, clinical studies performed by contract research organizations ("CROs"), materials and supplies, licenses and fees, and overhead allocations consisting of various administrative and facilities related costs. Adynxx charges research and development costs, including clinical study costs, to expense when incurred.

Income Taxes

Adynxx accounts for income taxes using the asset and liability method whereby deferred tax asset and liability account balances are determined based on differences between the financial reporting and tax basis of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. Adynxx provides a valuation allowance, if necessary, to reduce deferred tax assets to their estimated realizable value.

In evaluating the ability to recover its deferred income tax assets, Adynxx considers all available positive and negative evidence, including its operating results, ongoing tax planning, and forecasts of future taxable income on a jurisdiction-by-jurisdiction basis. In the event Adynxx determines that it would be able to realize its deferred income tax assets in the future in excess of their net recorded amount, it would make an adjustment to the valuation allowance, which would reduce the provision for income taxes. Conversely, in the event that all or part of the net deferred tax assets are determined not to be realizable in the future, an adjustment to the valuation allowance would be charged to earnings in the period such determination is made.

Adynxx recognizes the tax benefit from uncertain tax positions in accordance with GAAP, which prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of uncertain tax positions taken or expected to be taken in a company's tax return.

Convertible Preferred Stock Warrants

Freestanding warrants are classified as liabilities on the accompanying balance sheets. These warrants are subject to remeasurement at fair value at each balance sheet date, and any change in fair value is recognized as a component of other income or expense. Adynxx will continue to adjust the carrying values of freestanding warrants classified as liabilities for changes in fair value until the earlier of the exercise or expiration of the warrants or the completion of a liquidation event, including the completion of an initial public offering.

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Fair Value of Financial Instruments

Accounting Standards Codification ("ASC") 820-10, Fair Value Measurement, provides a framework for measuring fair value under GAAP and requires expanded disclosures regarding fair value measurements. The standard defines fair value as an exit price, representing the amount that would be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between market participants. The standard also establishes a fair value hierarchy, which prioritizes the inputs used in measuring fair value. The standard describes three levels of inputs that may be used to measure fair value:

Level 1 — Unadjusted quoted prices in active markets for identical assets or liabilities that Adynxx has the ability to access as of the measurement date.

Level 2 — Inputs other than quoted prices included within Level 1 that are directly observable for the asset or liability or indirectly observable through corroboration with observable market data.

Level 3 — Unobservable inputs for the asset or liability only used when there is little, if any, market activity for the asset or liability at the measurement date.

This hierarchy requires the use of observable market data when available and to minimize the use of unobservable inputs when determining fair value.

The following tables present Adynxx's fair value hierarchy for all of its financial instruments measured at fair value on a recurring basis as of December 31, 2017 and 2016:

| 2017 | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| Liabilities: | | | | |
| Preferred stock warrant liability | $ — | $ — | $ 42,007 | $ 42,007 |
| Total Financial Liabilities | $ — | $ — | $ 42,007 | $ 42,007 |

| 2016 | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| Liabilities: | | | | |
| Preferred stock warrant liability | $ — | $ — | $ 54,338 | $ 54,338 |
| Total Financial Liabilities | $ — | $ — | $ 54,338 | $ 54,338 |

The carrying amounts reported in the accompanying balance sheets for cash and cash equivalents, accounts payable and accrued liabilities approximate their fair value due to their short maturities. The fair value of Adynxx's term loan is based on the borrowing rate currently available to Adynxx for borrowings with similar terms and maturity and approximates its carrying value.

Derivative liability instruments are considered Level 3 when their fair values are determined using pricing models, discounted cash flow methodologies, or similar techniques, and at least one significant model assumption or input is unobservable. Level 3 liability instruments consist of the preferred stock warrant liability for which there is no observable market data for the determination of fair value and which require significant management judgment and estimation. The fair value of the warrant liability was determined using the Black-Scholes model (see Note 8).

The change in fair value of the preferred stock warrant liability is summarized below:

| | Years Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Fair value, January 1 | $ 54,338 | $ 52,667 |
| Preferred stock warrants – exercised | (8,347) | |
| Preferred stock warrants – expired | — | (2,477) |
| Issuance of preferred stock warrants in connection with debt arrangement | — | 22,259 |
| Change in fair value of preferred stock warrants | (3,984) | (18,111) |

| | | |
|---|---|---|
| Fair value, December 31, | $ 42,007 | $ 54,338 |

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Reclassifications

Certain reclassifications have been made in the prior year's financial statements to conform to the presentation and classifications used in the current year.

Recent Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board ("FASB") issued ASU No. 2016-02. This standard introduces the new leases standard that applies a right-of-use ("ROU") model and requires a lessee to record, for all leases with a lease term of more than 12 months, an asset representing its right to use the underlying asset and a liability to make lease payments. For leases with a term of 12 months or less, a practical expedient is available whereby a lessee may elect, by class of underlying asset, not to recognize an ROU asset or lease liability. At inception, lessees must classify all leases as either finance or operating based on five criteria. Balance sheet recognition of finance and operating leases is similar, but the pattern of expense recognition in the income statement, as well as the effect on the statement of cash flows, differs depending on the lease classification. This ASU is effective for fiscal year beginning after December 15, 2018, including interim periods within that fiscal year, with early adoption premitted. The Company is currently assessing whether these amendments will have a material effect on its financial statements.

In March 2016, the FASB issued ASU No. 2016-09. This standard introduces targeted amendments intended to simplify the accounting for stock compensation. Specifically, the ASU requires all excess tax benefits and tax deficiencies (including tax benefits of dividends on share-based payment awards) to be recognized as income tax expense or benefit in the income statement. The tax effects of exercised or vested awards should be treated as discrete items in the reporting period in which they occur. An entity also should recognize excess tax benefits, and assess the need for a valuation allowance, regardless of whether the benefit reduces taxes payable in the current period. That is, off balance sheet accounting for net operating losses stemming from excess tax benefits would no longer be required and instead such net operating losses would be recognized when they arise. Existing net operating losses that are currently tracked off balance sheet would be recognized, net of a valuation allowance if required, through an adjustment to opening retained earnings in the period of adoption. Entities will no longer need to maintain and track an "APIC pool." The ASU also requires excess tax benefits to be classified along with other income tax cash flows as an operating activity in the statement of cash flows. This ASU is effective for fiscal years beginning after December 15, 2016, and interim periods within that fiscal year. Adynxx adopted the guidance on January 1, 2017 and the impact to its financial statements was not material.

3. Property and Equipment, Net

Property and equipment, net, consist of the following:

| | December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Furniture and fixtures | $ 28,990 | $ 28,990 |
| Office equipment | 1,672 | 1,672 |
| Computer equipment | 24,856 | 21,499 |
| Laboratory equipment | 1,615 | 1,615 |
| Total property and equipment | 57,133 | 53,776 |
| Less accumulated depreciation | (44,248) | (33,829) |
| Property and equipment, net | $ 12,885 | $ 19,947 |

Depreciation expense was $10,419 and $10,327 for the years ended December 31, 2017 and 2016, respectively.

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4. Accrued Liabilities

Accrued liabilities consist of the following:

| | December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Payroll and related expenses | 273,392 | 892,565 |
| Accrued term loan final payment | 196,991 | 90,997 |
| Accrued clinical trial expense | 653,816 | — |
| Professional fees and other costs | 33,580 | 80,531 |
| Total | 1,157,779 | 1,064,093 |

5. Term Loans

On November 24, 2015, Adynxx entered into a loan and security agreement ("Loan Agreement") with Oxford Finance, LLC ("Oxford"), pursuant to which Oxford agreed to lend Adynxx up to $10,000,000, issuable in three tranches of $3,000,000 (the "Term Loan A"), $2,000,000 (the "Term Loan B") and $5,000,000 (the "Term Loan C"). Term Loan A, Term Loan B and Term Loan C will collectively be referred to as Term Loans. On November 24, 2015, Adynxx received $3,000,000 in proceeds from Term Loan A and on January 29, 2016, Adynxx received $2,000,000 in proceeds from Term Loan B. Warrants were issued in connection with Term Loan A and Term Loan B (See Note 8). Under the terms of the Loan Agreement, Adynxx may, at its sole discretion, borrow $5,000,000 under the Term Loan C following the achievement of a defined milestone event until the earlier of 30 days thereafter or March 31, 2016. Adynxx did not draw on Term Loan C at March 31, 2016 and the availability of the $5,000,000 under Term Loan C expired.

All outstanding Term Loans will mature on November 1, 2019 (the "Maturity Date") and Adynxx will have interest only payments through November 1, 2016, followed by 36 months of principal and interest payments. The term loans will bear interest at a floating per annum rate equal to (i) 7.06% plus (ii) the greater of (a) the 30 day U.S. Dollar LIBOR rate reported in the Wall Street Journal on the last business day of the month that immediately precedes the month in which the interest will accrue or (b) 0.19%.

Adynxx has the option to prepay all, but not less than all, of the borrowed amounts, provided that Adynxx will be obligated to pay a prepayment fee equal to (i) 3% of the outstanding principal balance of the applicable Term Loan if prepayment is made prior to the first anniversary of the applicable funding date of the Term Loan, provided, however, the prepayment fee will be reduced to 1% if Adynxx is acquired within six months from the Term Loan closing date, or (ii) 2% of the outstanding principal balance of the applicable Term Loan if prepayment is made prior to the second anniversary of the applicable funding date of the Term Loan, or (iii) 1% of the applicable Term Loan prepaid thereafter and prior to the Maturity Date. Adynxx will be required to make a final payment of 4.25% of the funded amount, payable on the earlier of (i) the Maturity Date or (ii) the prepayment of the Term Loan.

Adynxx may use the proceeds from the Term Loans solely for working capital and to fund its general business requirements. Adynxx's obligations under the Loan Agreement are secured by a perfected first priority lien in all of its assets with a negative pledge on owned intellectual property.

In January 2017, Adynxx and Oxford agreed to amend the Loan Agreement. After Adynxx made principal payments on December 1, 2016 and January 1, 2017, Oxford agreed to an additional 12 months of interest-only payments followed by 23 months of amortization. The final balloon payment increased by $100,000. The amendment was accounted for as a debt modification.

The Term Loan A was recorded at its initial carrying value of $3,000,000, less debt issuance costs of approximately $141,000. Term Loan B was recorded at its initial carrying value of $2,000,000, less debt issuance costs of approximately $3,000. The debt issuance costs are being amortized to interest expense over the life of the Term Loans using the effective interest method. The final payment is accrued over the life of the Term Loans through interest expense using the effective interest method.

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As of December 31, 2017, $2,833,333 was outstanding under Term Loan A and $1,888,889 was outstanding under Term Loan B. At December 31, 2016, $2,916,667 was outstanding under Term Loan A and $1,944,444 was outstanding under Term Loan B.

Interest expense of $515,157 and $563,386 was recorded for the years ended December 31, 2017 and 2016, respectively.

As of December 31, 2017, Adynxx was in compliance with all covenants under the Loan Agreement.

Future principal payments for the Term Loans due under the Loan Agreement are as follows and reflect subsequent amendment of the Loan Agreement in March 2018 (see Note 13):

| Years Ending December 31, | Amount |
|---|---|
| 2018 | $ 1,710,950 |
| 2019 | 3,011,272 |
| Total | $ 4,722,222 |

6. Commitments and Contingencies

Purchase Commitment

Adynxx entered into an agreement with Nitto Denko Avecia in August 2015 to manufacture certain quantity of materials to be used in clinical trials for total purchase price of $1,143,000. Adynxx recorded $382,000 and $342,000 related to this agreement to research and development expense in 2017 and 2016, respectively. Adynxx's commitment to purchase the remaining quantities for $382,000 was paid by Adynxx in March 2018.

Operating Leases

Adynxx leases office facilities under a noncancelable operating lease agreement expiring on December 31, 2019.

Future minimum payments under the non-cancelable leases for the years ending December 31 are as follows:

| Years Ending December 31, | Amount |
|---|---|
| 2018 | $ 231,779 |
| 2019 | 238,733 |
| Total | $ 470,512 |

Rent expense related to Adynxx's operating leases was $224,523 and $235,015 for the years ended December 31, 2017 and 2016, respectively.

Indemnifications

Adynxx has agreed to indemnify its officers and directors for certain events or occurrences arising as a result of the officer's or director's serving in such capacity. Adynxx has a directors and officers liability insurance policy that limits its exposure and enables Adynxx to recover a portion of any future amounts paid resulting from the indemnification of its officers and directors.

Adynxx has not incurred material costs to defend lawsuits or settle claims related to these indemnification agreements. Adynxx's management believes the estimated fair value of these indemnification agreements is minimal and has not recorded a liability for these agreements as of December 31, 2017.

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7. Stockholders' Equity

Convertible Preferred Stock

As of December 31, 2017, Adynxx had 56,672,658 shares of Series A convertible preferred stock issued and outstanding, including 3,531,889 shares issued as a result of a conversion of notes to investors and accrued interest to Series A convertible preferred stock in 2010 and 51,069,262 shares of Series B convertible preferred stock issued and outstanding, including 6,469,356 shares issued as a result of a conversion of notes to investors and accrued interest to Series B convertible preferred stock in 2016.

The holders of preferred stock have various rights and preferences as follows:

Voting Rights — A holder of each share of Series A and Series B convertible preferred stock shall have the right to one vote for each share of common stock into which such preferred stock could be converted. Series A convertible preferred stock holders voting as a separate class are entitled to elect two directors to Adynxx's Board of Directors as long as shares of Series A convertible preferred stock remain outstanding. Series B convertible preferred stock holders voting as a separate class are entitled to elect one director to Adynxx's Board of Directors as long as at least 10,000,000 shares of Series B convertible preferred stock remain outstanding. Common stockholders voting as a separate class are entitled to elect two directors. The holders of preferred and common stock voting together as a single class on an as-if-converted basis are entitled to elect all remaining directors.

Dividends — Holders of Series B convertible preferred stock, in preference to the holders of Series A preferred and common stock, are entitled to receive noncumulative dividends at the annual rate of $0.0251 per share, when, as, and if declared by the Board of Directors. Holders of Series A convertible preferred stock are entitled to receive noncumulative dividends at the annual rate of $0.0182 per share, when, as, and if declared by the Board of Directors. No dividends on preferred stock have been declared by the Board of Directors during the years ended December 31, 2017 and 2016.

Liquidation Preference — In the event of any liquidation, dissolution, or winding up of Adynxx, including a merger, acquisition, or sale of assets, as defined, the holders of Series B convertible preferred stock are entitled to receive an amount of $0.3133 per share (as adjusted for recapitalizations, stock combinations, stock dividends, stock splits, and the like), plus any declared but unpaid dividends prior to and in preference to any distribution to the holders of Series A preferred or common stock.

After distributions have been made to all holders of Series B convertible preferred stock as described above, the remaining assets of Adynxx available for distribution to stockholders shall be distributed to all holders of Series A convertible preferred stock. The holders of Series A convertible preferred stock are entitled to receive an amount of $0.2276 per share (as adjusted for recapitalizations, stock combinations, stock dividends, stock splits, and the like), plus any declared but unpaid dividends prior to and in preference to any distribution to the holders of common stock. The remaining assets of Adynxx available for distribution to stockholders shall be distributed ratably among the holders of the common stock and preferred stock on an as-if-converted basis.

Conversion Rights — Each share of Series A and Series B convertible preferred stock is convertible, at the option of the holder, into shares of common stock on a one for one basis (subject to adjustment for certain events). The preferred stock will also be converted automatically into shares of common stock (1) immediately prior to an initial public offering with aggregate proceeds of at least $40,000,000 and an offering price of not less than $1.00 per common share or (2) upon the date specified by written consent of holders of a majority of the outstanding preferred shares on an as-converted basis.

The Series A and Series B Preferred Stock were classified as temporary equity in the accompanying balance sheets as of December 31, 2017 and 2016, as shares are subject to redemption upon the occurrence of uncertain events not solely within Adynxx's control. As of December 31, 2017 and 2016, the Series A and Series B Preferred Stock were not currently redeemable and it was not probable that they will become redeemable.

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Common Stock

Adynxx's articles of incorporation, as amended, authorize Adynxx to issue 148,000,000 shares of $0.001 par value common stock. Common stockholders are entitled to dividends when and if declared by the Board of Directors and after any Series B and Series A convertible preferred shares dividends are fully paid. The holder of each share of common stock is entitled to one vote. At December 31, 2017, no dividends had been declared.

Shares Reserved for Future Issuance

At December 31, 2017 and 2016, Adynxx has reserved shares of common stock for future issuances as follows:

| | December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Series B convertible preferred stock | 51,069,262 | 51,069,262 |
| Series A convertible preferred stock | 56,672,658 | 56,321,165 |
| Warrants for Series A convertible preferred stock | 329,525 | 681,018 |
| Common stock options issued and outstanding | 19,222,027 | 19,222,027 |
| Common stock available for future option grants | 5 | 5 |
| Total | 127,293,477 | 127,293,477 |

8. Warrants

In connection with convertible notes agreements with investors issued between January 1, 2009 and July 1, 2010, Adynxx issued warrants to purchase such number of shares of Series A convertible preferred stock issued in the next round of equity financing equal to 20% of notes payable principal amounts divided by the price per share of such preferred stock. The warrants are exercisable after closing of each preferred stock financing for five years and expire seven years from the issuance date. At the issuance dates, Adynxx estimated the fair value of issued warrants as minimal due to the uncertainty of the Series A convertible preferred stock financing. Adynxx estimated the fair value of outstanding warrants at the date of closing of the Series A convertible preferred stock financing and used the Black-Scholes model with the following assumptions: expected lives equal to the remaining contractual life in a range of 3.92 to 7 years, risk-free interest rates in a range of 1.46% to 2.66%, expected dividend yield of zero, volatility in the range of 73.6% to 81.5%, and a fair value of Series A convertible preferred stock of $0.2276 per share. The change in fair value of the warrants at December 31, 2017 and 2016 of $8,347 and $8,167, respectively, were recorded to other income. As of December 31, 2017 the outstanding warrants had been exercised.

In connection with the Oxford Loan Agreement signed in November 2015, Adynxx issued a warrant to purchase 197,715 shares of Adynxx's preferred stock at an exercise price equal to the Series A preferred stock price of $0.2276. The warrant is exercisable after closing and expires ten years from the issuance date. Adynxx estimated the fair value of the warrant at closing and used the Black-Scholes model with the following assumptions: expected life equal to the remaining contractual life of 10 years, risk-free interest rate of 2.07%, expected dividend yield of zero, volatility of 68.7%, and a fair value of Series A convertible preferred stock of $0.20 per share. Adynxx recorded the fair value of the warrant of $33,386 as a debt discount to be amortized to interest expense over the life of the Term Loan A.

In January 2016, in connection with the Loan Agreement signed in November 2015, Adynxx issued a warrant to purchase 131,810 shares of Adynxx's preferred stock at an exercise price equal to the Series A preferred stock price of $0.2276. The warrant is exercisable after closing and expires ten years from the issuance date. Adynxx estimated the fair value of the warrant at closing and used the Black-Scholes model with the following assumptions: expected life equal to the remaining contractual life of 10 years, risk-free interest rate of 2.09%, expected dividend yield of zero, volatility of 68.6%, and a fair value of Series A convertible preferred stock of $0.23 per share. Adynxx recorded the fair value of the warrant of $22,259 as a debt discount to be amortized to interest expense over the life of the Term Loan B.

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The change in fair value of the warrants issued in connection with Term Loan A and B at December 31, 2017 and 2016 of $3,984 and $9,944, respectively, were recorded to other income. As of December 31, 2017 the warrants remained outstanding and exercisable.

The above Black-Scholes model assumptions were determined as follows:

Term — The term represents the remaining contractual term of the warrants.

Risk-free interest rate — The risk-free interest rate is based on the U.S. Treasury yield in effect at the time of grant for zero coupon U.S. Treasury notes with maturities approximately equal the remaining term of the warrants.

Expected volatility — The expected volatility is derived from historical volatilities of several unrelated publicly listed peer companies over a period approximately equal to the remaining term of the warrants because Adynxx has limited information on the volatility of the preferred stock since there is currently no trading history. When making the selections of Adynxx's industry peer companies to be used in the volatility calculation, Adynxx considered the size and operational and economic similarities to Adynxx's principle business operations.

Expected dividend yield — The expected dividend yield is based on Adynxx's history of not paying dividends.

The warrants are classified as a liability as they are exercisable into shares that are potentially redeemable. The fair value of the warrant liability is re-measured at each balance sheet date with the change as other income recorded in the statements of operations.

During 2016, 91,341 and 21,748 warrants issued by Adynxx in 2009 and 2010, respectively, expired. No warrants expired during 2017.

Warrants outstanding at December 31, 2017, are as follows:

| Issuance Date | Expiration Date | Exercise Price | Number of Shares | Fair Value |
|---|---|---|---|---|
| November 2015 | November 2025 | $ 0.2276 | 197,715 | 25,120 |
| January 2016 | January 2026 | $ 0.2276 | 131,810 | 16,887 |
| Total | | | 329,525 | 42,007 |

The fair value of the Series A convertible preferred stock warrants was determined using the following assumptions:

| | December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Risk-free interest rate | 2.28% | 0.64% – 2.45% |
| Remaining contractual life (in years) | 7.92 – 8.08 | 8.50 – 9.08 |
| Dividend yield | —% | —% |
| Expected volatility | 71.0% | 70.6% – 75.7% |

9. Stock Option Plans

In December 2010, Adynxx adopted the 2010 Equity Incentive Plan (the "Plan"). The Plan provides for the granting of stock options to employees and consultants of Adynxx. Options granted under the Plan may be either incentive stock options ("ISOs") or nonqualified stock options ("NSOs"). ISOs may be granted only to Company employees (including officers and directors who are also employees). NSOs may be granted to Company employees and consultants.

Adynxx has 19,222,032 shares of common stock reserved for issuance under the Plan as of December 31, 2017.

Options under the Plan may be granted for periods of up to 10 years and at prices no less than 100% of the estimated fair value of the underlying shares of common stock on the date of grant as determined by the Board of Directors provided, however, that the exercise price of an ISO and NSO granted to a

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10% shareholder shall not be less than 110% of the estimated fair value of the shares on the date of grant. The Plan requires that options be exercised no later than 10 years after the grant. Options granted to employees generally vest ratably on a monthly basis over four years.

Activity under the Plan is set forth below:

| | | Outstanding Options | | |
|---|---|---|---|---|
| | Shares Available for Grant | Number of Shares | Weighted-Average Exercise Price per Share | Weighted-Average Remaining Contractual Life in Years |
| Balance, December 31, 2015 | 1,860 | 3,069,363 | 0.04 | 6.2 |
| Additional shares reserved | 16,150,809 | — | — | — |
| Options granted | (16,152,664) | 16,152,664 | 0.11 | — |
| Balance, December 31, 2016 | 5 | 19,222,027 | 0.10 | 9.4 |
| Options granted | — | — | — | — |
| Balance, December 31, 2017 | 5 | 19,222,027 | 0.10 | 8.4 |

The determination of the fair value of stock-based payment awards on the date of grant is affected by the stock price as well as assumptions regarding a number of complex and subjective variables. These variables include expected stock price volatility over the term of the awards, actual and projected employee stock option exercise behaviors, risk-free interest rates, and expected dividends. No options were granted during the year ended December 31, 2017. The estimated grant-date fair value of the employee stock options for the year ended December 31, 2016 was calculated using the Black-Scholes model using the following assumptions:

| | |
|---|---|
| Risk-free interest rate | 1.96% |
| Expected term (in years) | 6.25 |
| Dividend yield | —% |
| Expected volatility | 72.52% |

At December 31, 2017, Adynxx had 2,032,761 of stock options vested and exercisable at an exercise price of $0.04 per share, 1,036,602 of stock options vested and exercisable at an exercise price of $0.05 per share and 4,038,166 of stock options vested and exercisable at an exercise price of $0.11 per share. At December 31, 2016, Adynxx had 2,032,761 of stock options vested and exercisable at an exercise price of $0.04 per share and 1,036,602 of stock options vested and exercisable at an exercise price of $0.05 per share. No options were granted in 2017.

In connection with the grant of stock options to employees, Adynxx recorded stock-based compensation expense to research and development and general and administrative expenses of $300,642 and $13,330 for the years ended December 31, 2017 and 2016, respectively. As of December 31, 2017, unrecognized stock-based compensation expense related to employees totaled $888,096 and is expected to be recognized over approximately three years.

10. Income Taxes

The significant components of net deferred tax assets are as follows:

| | December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Net operating loss carryforward | $ 6,158,000 | $ 5,909,000 |
| Research and development credits | 1,284,000 | 978,000 |
| Accruals and reserves | 99,000 | 392,000 |
| Fixed assets | (300) | (1,000) |

| | | |
|---|---|---|
| Total deferred tax asset | 7,540,700 | 7,278,000 |
| Valuation allowance | (7,540,700) | (7,278,000) |
| Net deferred tax asset | $ — | $ — |

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On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the "Tax Act"). The Tax Act makes broad and complex changes to the U.S. tax code that affect fiscal 2017, including, but not limited to requiring a one-time transition tax on certain unrepatriated earnings of foreign subsidiaries (the "Transition Tax"). The Tax Act also establishes new tax laws that will affect 2018 and later years, including, but not limited to, a reduction of the U.S. federal corporate tax rate from 35% to 21% and a transition of U.S. international taxation from a worldwide tax system to a territorial system. During the year ended December 31, 2017, Adynxx did not recognize an amount for the one-time transition tax, nor did Adynxx make any accounting policy elections on the treatment of the other international provisions of tax reform due to the fact Adynxx does not currently have any foreign subsidiaries. Adynxx continues to evaluate the impact of the Tax Act.

As a result of the Tax Act, Adynxx revalued its federal and state deferred tax assets based on a 21% tax rate as opposed to a 34% tax rate. The net effect of this change is an increase of $3,849,000 to Adynxx's tax expense, with a corresponding offset to valuation allowance of ($3,849,000).

No tax benefit has been recorded through December 31, 2017, because given the history of operating losses, Adynxx believes it is more likely than not that the deferred tax asset will not be realized and a full valuation allowance has been provided. The change in the valuation allowance for the years ended December 31, 2017 and 2016 was $262,700 and $1,622,000, respectively.

During 2017, Adynxx corrected the balance of Net Operating Losses and Research and Development Credits and the associated Valuation Allowances in connection with Adynxx's determination of nexus in an additional state which was previously not identified correctly. The correction of such error did not have any impact on Adynxx's financial position and results of operations for any period presented or any prior period results. Adynxx has corrected the gross amount of deferred tax assets and the valuation allowance for 2016 to correct the error.

As of December 31, 2017, Adynxx had federal net operating loss carryforwards of $29,325,000 available to reduce future taxable income, if any. The net operating loss carryforwards will begin to expire in 2033. As of December 31, 2017, Adynxx had federal and state research and development credits of $1,428,000 and $286,000, respectively. The federal research and development credits will begin to expire in 2031. The state research and development credit will carry forward indefinitely.

Internal Revenue Code ("IRC") Section 382 and similar California rules place a limitation on the amount of taxable income that can be offset by net operating loss and credit carryforwards after a change in control. Generally after a control change, a corporation cannot deduct net operating loss or credit carryforwards in excess of the Section 382 limitations. Due to these provisions, utilization of the net operating loss and tax credit carryforwards may be subjected to annual limitations regarding their utilization against taxable income in future periods. Management has considered the impact of such limitation in determining the utilization of its operating loss carryforwards against taxable income.

The tax return years 2014 through 2017 remain open to examination by the major domestic taxing jurisdictions to which Adynxx is subject. Net operations losses generated on a tax return basis by Adynxx for calendar years 2013 and 2015 to 2017 remain open to examination by the IRS. Net operating losses generated on state returns by Adynxx for calendar years 2007 to 2013 and 2015 to 2017 remain open to examination by state authorities.

ASC 740-10 requires companies to determine whether it is more likely than not that a tax position will be sustained upon examination by the appropriate taxing authorities. The following table summarizes the activity related to Adynxx's gross unrecognized tax benefits:

| | |
|---|---|
| Balance at December 31, 2016 | $ 319,000 |
| Changes related to prior year positions | (72,000) |
| Increases related to current year positions | 84,000 |
| Balance at December 31, 2017 | $ 331,000 |

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Adynxx's policy is to record interest related to uncertain tax positions as interest and any penalties as other expense in its statement of operations. As of the date of adoption and through December 31, 2017, Adynxx did not have any interest and penalties associated with unrecognized tax benefits.

11. Related-Party Transactions

Adynxx has entered into various consulting agreements with certain Company shareholders and advisory board members. Adynxx incurred zero and $3,077 in the years ended December 31, 2017 and 2016, respectively, for these consulting services. At December 31, 2017, Adynxx had no payables due to these related parties.

12. Employee Benefit Plan

Adynxx has established a 401(k) Plan (the "401(k) Plan") that permits participants to make contributions by salary deduction pursuant to Section 401(k) of the IRC. Adynxx may, at its discretion, make matching contributions to the 401(k) Plan. Adynxx has made no contributions to the 401(k) Plan since its inception. Adynxx makes a nonelective 401(k) safe harbor contribution on behalf of each employee equal to 3% of their annual salary. Adynxx's nonelective safe harbor contributions totaled $54,255 and $52,545 for the years ended December 31, 2017 and 2016, respectively.

13. Subsequent Events

Adynxx completed a 200 patient Phase 2 clinical study in January of 2018. The total study cost was approximately $7,400,000 and $320,000 close out costs were incurred in 2018. Adynxx is currently evaluating various strategic opportunities to finance a new clinical study projected to begin enrollment in the second quarter of 2019.

In March 2018, Adynxx's primary investors agreed to provide Adynxx $1,500,000 in the form of a convertible promissory note to fund Company operations through September 2018. The note, plus any accrued interest, will convert to equity upon closing of a qualified financing or initial public offering. The maturity date of the note is March 29, 2019.

In March 2018, Adynxx and Oxford agreed to a third amendment of the debt agreement. After Adynxx made principal payments on January 1, 2018, February 1, 2018 and March 1, 2018, Oxford agreed to another 5 months of interest-only payments followed by 15 months of amortization. The maturity date of the loans remains unchanged and the final balloon payment increased by $200,000. The loan matures on November 1, 2019.

In September 2018, Adynxx's primary investors agreed to provide Adynxx $1,500,000 in the form of a convertible promissory note to fund Company operations through December 2018. The note, plus any accrued interest, will convert to equity upon closing of a qualified financing or initial public offering. The maturity date of the note is September 27, 2019.

Adynxx has evaluated subsequent events through September 28, 2018, the date the financial statements were available for general release, for appropriate accounting and financial statement disclosures.

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Adynxx, Inc.
Unaudited Balance Sheets

| | September 30, 2018 | December 31, 2017 |
|---|---|---|
| Assets | | |
| Current Assets | | |
| Cash and cash equivalents | $ 1,761,077 | $ 4,300,726 |
| Prepaid expenses and other current assets | 20,991 | 33,691 |
| Total Current Assets | 1,782,068 | 4,334,417 |
| Property and Equipment, Net | 8,707 | 12,885 |
| Restricted Cash | 54,885 | 54,885 |
| Other Assets | 18,736 | 18,736 |
| Total Assets | $ 1,864,396 | $ 4,420,923 |
| Liabilities and Stockholders' Deficit | | |
| Current Liabilities | | |
| Accounts payable | $ 132,873 | $ 702,795 |
| Accrued liabilities | 1,238,580 | 1,157,779 |
| Convertible promissory notes – related party, net of discount | 2,358,675 | — |
| Current portion of term loan | 3,135,705 | 1,710,950 |
| Derivative liability | 652,852 | — |
| Total Current Liabilities | 7,518,685 | 3,571,524 |
| Term Loan, Net of Current Portion and Discount | 671,364 | 2,950,813 |
| Warrant Liability | 42,757 | 42,007 |
| Commitments and Contingencies (Note 6) | | |
| Redeemable Convertible Preferred Stock: | | |
| Series A redeemable convertible preferred stock, $0.001 par value; 57,002,183 shares authorized; 56,672,658 shares issued and outstanding as of September 30, 2018 and December 31, 2017 (liquidation value of $12,898,697 as of September 30, 2018 and December 31, 2017) | 12,814,320 | 12,814,320 |
| Series B redeemable convertible preferred stock, $0.001 par value; 51,069,262 shares authorized; 51,069,262 shares issued and outstanding as of September 30, 2018 and December 31, 2017 (liquidation value of $16,000,000 as of September 30, 2018 and December 31, 2017) | 15,896,861 | 15,896,861 |
| Stockholders' Deficit: | | |
| Common stock, $0.001 par value;148,000,000 shares authorized; 19,548,969 shares issued and outstanding as of September 30, 2018 and December 31, 2017 | 19,549 | 19,549 |
| Additional paid-in capital | 644,494 | 419,344 |
| Accumulated deficit | (35,743,634) | (31,293,495) |
| Total Stockholders' Deficit | (35,079,591) | (30,854,602) |
| Total Liabilities, Redeemable Convertible Preferred Stock and Stockholders' Deficit | $ 1,864,396 | $ 4,420,923 |

The accompanying notes are an integral part of these financial statements.
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Adynxx, Inc.
Unaudited Statements of Operations

| | Nine Months Ended September 30, | |
|---|---|---|
| | 2018 | 2017 |
| Operating Expenses | | |
| Research and development | 1,792,619 | 6,771,616 |
| General and administrative | 2,101,990 | 1,811,448 |
| Total Operating Expenses, Net | 3,894,609 | 8,583,064 |
| Loss from Operations | (3,894,609) | (8,583,064) |
| Interest Income (Expense), Net | (767,000) | (405,061) |
| Other Income | 211,470 | 16,454 |
| Net Loss | (4,450,139) | (8,971,671) |

The accompanying notes are an integral part of these financial statements.

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Adynxx, Inc.
Unaudited Statement of Redeemable Convertible Preferred Stock and Shareholders' Deficit
For the nine months ended September 30, 2018

| | Series A Redeemable Convertible Preferred Stock | | Series B Redeemable Convertible Preferred Stock | | Common Stock | | Additio Paid-in Capital |
|---|---|---|---|---|---|---|---|
| | Shares | Amount | Shares | Amount | Shares | Amount | |
| Balance, December 31, 2017 | 56,672,658 | 12,814,320 | 51,069,262 | 15,896,861 | 19,548,969 | 19,549 | 419, |
| Stock-based compensation expense | — | — | — | — | — | — | 225, |
| Net loss | — | — | — | — | — | — | — |
| Balance, September 30, 2018 | 56,672,658 | $ 12,814,320 | 51,069,262 | $ 15,896,861 | 19,548,969 | $ 19,549 | $ 644, |

The accompanying notes are an integral part of these financial statements.

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Adynxx, Inc.
Unaudited Statements of Cash Flows

| | Nine Months Ended September 30, | |
|---|---|---|
| | 2018 | 2017 |
| Cash Flows from Operating Activities | | |
| Net Loss | $ (4,450,139) | $ (8,971,671) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | |
| Depreciation expense | 5,885 | 8,499 |
| Stock-based compensation expense | 225,150 | 225,150 |
| Change in fair value of derivative liability | (211,504) | — |
| Changes in fair value of warrant liability | 750 | (12,404) |
| Accretion of final charge upon maturity of Oxford Term Loan A and B | 161,486 | 77,115 |
| Amortization of debt issuance costs | 258,030 | 39,000 |
| Non-cash interest expense on convertible notes | 61,808 | — |
| Changes in operating assets and liabilities: | | |
| Prepaid expenses and other current assets | 12,700 | 324,207 |
| Other assets | — | 1,359 |
| Accounts payable | (569,921) | 110,844 |
| Accrued liabilities | (142,493) | 356,089 |
| Net Cash Used in Operating Activities | (4,648,248) | (7,841,812) |
| Cash Flows from Investing Activities | | |
| Purchases of property and equipment | (1,707) | — |
| Net Cash Used in Investing Activities | (1,707) | — |
| Cash Flows from Financing Activities | | |
| Payment on long term loan | (889,694) | (138,889) |
| Exercise of warrants | — | 80,000 |
| Proceeds from issuance of convertible promissory notes – related party | 3,000,000 | — |
| Net Cash Provided (Used) by Financing Activities | 2,110,306 | (58,889) |
| Net Decrease in Cash and Cash Equivalents | (2,539,649) | (7,900,701) |
| Cash and Cash Equivalents and Restricted Cash at Beginning of Year | 4,355,611 | 14,600,828 |
| Cash and Cash Equivalents and Restricted Cash at September 30 | 1,815,962 | 6,700,127 |
| Other Supplemental Disclosure | | |
| Cash paid for interest | $ 285,675 | $ 288,947 |

The accompanying notes are an integral part of these financial statements.

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Adynxx, Inc.
Notes to Unaudited Financial Statements
1.
Description of Business

Adynxx
Adynxx, Inc. was incorporated on October 24, 2007, in the state of Delaware. Adynxx is a clinical-stage pharmaceutical entity that is developing a technology platform to address pain at its molecular roots. Adynxx is primarily engaged in developing initial product technology, recruiting personnel, and raising capital.
Basis of Presentation
The unaudited condensed financial statements have been prepared using accounting principles generally accepted in the United States of America ("GAAP") for interim financial statements and reflect all adjustments, which only include normal recurring adjustments, which are in the opinion of management necessary for a fair statement of Adynxx's financial position, results of operations and cash flows for the interim period and are not necessarily indicative of results to be expected for the full fiscal year or for any other future annual or interim periods The unaudited condensed financial statements should be read in conjunction with the audited financial statements and notes thereto for the fiscal year ended December 31, 2017.
Liquidity
The accompanying financial statements have been prepared assuming Adynxx will continue as a going concern. Adynxx has an accumulated deficit of $35,743,634 as of September 30, 2018. Adynxx expects to incur substantial losses in future periods. Adynxx is subject to risks common to companies in the clinical stage, including, but not limited to, development of new products, development of markets and distribution channels, dependence on key personnel, and the ability to obtain additional capital as needed to fund its product development plans. Adynxx has a limited operating history and has yet to generate any revenues from customers. There is no guarantee that profitable operations, if ever achieved, could be sustained on a continuing basis.
Adynxx plans to finance its operations and capital funding needs through equity and/or debt financing. However, there can be no assurance that additional funding will be available to Adynxx on acceptable terms on a timely basis, if at all, or that Adynxx will generate sufficient cash from operations to adequately fund operating needs or ultimately achieve profitability. The conditions above, among others, raise substantial doubt about the ability of Adynxx to continue as a going concern within one year after the date the financial statements are available to be issued. The accompanying financial statements do not include any adjustments that might result from the outcome of these uncertainties.
2.
Significant Accounting Policies

Use of Estimates
The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent liabilities at the date of the financial statements, and the reported amounts of expenses incurred during the reporting period. Actual results could differ from those estimates and such differences could be material to Adynxx's financial position and results of operations.
Significant estimates and assumptions include the valuation of equity instruments and equity-linked instruments, including the valuation of Adynxx's common stock and the valuation of Adynxx's common stock options for purposes of accounting for stock-based compensation, and accruals for clinical trials and the valuation allowances on deferred tax assets.
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Concentration of Credit Risk and Other Risks and Uncertainties

Financial instruments that potentially subject Adynxx to concentration of credit risk consist of cash and cash equivalents. Cash and cash equivalents are deposited in demand and money market accounts with established financial institutions and, at times, such balances with any one financial institution may be in excess of the Federal Deposit Insurance Corporation insured limits. To date, Adynxx has not experienced any losses on its deposits of cash and cash equivalents.

Adynxx operates in a dynamic and highly competitive industry and believes that changes in any of the following areas could have a material adverse effect on Adynxx's future financial position, results of operations, or cash flows: ability to obtain future financing; advances and trends in new technologies and industry standards; results of clinical trials; regulatory approval and market acceptance of Adynxx's products; development of sales channels; certain strategic relationships; litigation or claims against Adynxx based on intellectual property, patent, product, regulatory, or other factors; and Adynxx's ability to attract and retain employees necessary to support its growth.

At September 30, 2018, three vendors represented 42%, 38% and 6% of total accounts payable. This expense was related to general and administrative activities associated with the merger. At September 30, 2017, three vendors represented 33%, 15% and 11%, of total accounts payable. Two of these vendors supported clinical trial activities which accounted for 44% of the total accounts payable. The remaining vendor was associated with general and administrative activities.

Clinical Trial Accruals

Adynxx's clinical trial accruals are based on patient enrollment and related costs at clinical investigator sites as well as for the services received and efforts expended pursuant to contracts with multiple research institutions and contract research organizations that conduct and manage clinical trials on Adynxx's behalf. Adynxx accrues expenses related to clinical trials based on contracted amounts applied to the level of patient enrollment and activity according to the clinical trial protocol. If timelines or contracts are modified based upon changes in the clinical trial protocol or scope of work to be performed, Adynxx modifies the estimates of accrued expenses accordingly. To date, Adynxx has had no significant adjustments to accrued clinical trial expenses.

In April 2016, Adynxx entered into agreements with Premier Research International LLC and CRF Health, Inc. ("Contract Research Organizations or CROs") pursuant to which the CROs agreed to assist Adynxx with the conduct of a Phase 2 clinical trial. To support additional clinical trial activities Adynxx also entered into agreements with ICON Central Laboratories for laboratory services and Almac Clinical Services for storage and distribution services. For the nine months ended September 30, 2018 and 2017, Adynxx incurred $92,081 and $5,148,663, respectively, of expenses in connection with its clinical studies.

Cash and Cash Equivalents

Adynxx considers all highly liquid investments purchased with a maturity of three months or less on the date of acquisition to be cash and cash equivalents.

Property and Equipment, Net

Property and equipment are stated at cost, net of accumulated depreciation. Depreciation is computed using a straight-line method over the estimated useful lives of the assets, generally three to five years. Leasehold improvements are amortized over the shorter of the estimated useful life of the asset or the remaining term of the lease.

Expenditures for repairs and maintenance are charged to expense as incurred. Upon disposition of an asset, the cost and related accumulated depreciation are removed from the accounts and the resulting gain or loss is reflected in the statements of operations.

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Impairment of Long-Lived Assets

Adynxx's long-lived assets and other assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. Recoverability of an asset to be held and used is measured by a comparison of the carrying amount of an asset to the future undiscounted cash flows expected to be generated by the asset. If such asset is considered to be impaired, the impairment to be recognized is measured as the amount by which the carrying amount of the asset exceeds its fair value. Through September 30, 2018, Adynxx had not experienced impairment losses on its long-lived assets.

Restricted Cash

At both September 30, 2018 and December 31, 2017, cash of $54,885 was restricted from withdrawal and held by a bank in the form of a letter of credit held in lieu of a security deposit for Adynxx's office lease.

Stock-Based Compensation

Stock-based compensation is measured at the grant date based on the fair value of the award. The fair value of the award that is ultimately expected to vest is recognized as expense on a straight-line basis over the requisite service period, which is generally the vesting period. The expense recognized has been reduced for the estimated portion of the award that is not expected to vest due to forfeitures. The forfeiture rate is determined at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

Adynxx uses the Black-Scholes option-pricing model (the "Black-Scholes model") as the method for determining the estimated fair value of stock options.

Expected Term — The expected term represents the period that Adynxx's stock-based awards are expected to be outstanding and is determined using the simplified method.

Expected Volatility — Expected volatility is estimated using comparable public companies' volatility for similar terms.

Expected Dividend — The Black-Scholes model calls for a single expected dividend yield as an input. Adynxx has never paid dividends and has no plans to pay dividends.

Risk-Free Interest Rate — The risk-free interest rate used in the Black-Scholes model is based on the U.S. Treasury zero-coupon issues in effect at the time of grant for periods corresponding with the expected term of the option.

Research and Development

Research and development expenses consist of personnel costs, including salaries, benefits and stock-based compensation, preclinical studies, clinical studies performed by CROs, materials and supplies, licenses and fees, and overhead allocations consisting of various administrative and facilities related costs. Adynxx charges research and development costs, including clinical study costs, to expense when incurred.

Income Taxes

Adynxx accounts for income taxes using the asset and liability method whereby deferred tax asset and liability account balances are determined based on differences between the financial reporting and tax basis of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. Adynxx provides a valuation allowance, if necessary, to reduce deferred tax assets to their estimated realizable value.

In evaluating the ability to recover its deferred income tax assets, Adynxx considers all available positive and negative evidence, including its operating results, ongoing tax planning, and forecasts of future taxable income on a jurisdiction-by-jurisdiction basis. In the event Adynxx determines that it would be able to realize its deferred income tax assets in the future in excess of their net recorded amount, it would make

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an adjustment to the valuation allowance, which would reduce the provision for income taxes. Conversely, in the event that all or part of the net deferred tax assets are determined not to be realizable in the future, an adjustment to the valuation allowance would be charged to earnings in the period such determination is made.

Adynxx recognizes the tax benefit from uncertain tax positions in accordance with GAAP, which prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of uncertain tax positions taken or expected to be taken in a company's tax return.

Convertible Preferred Stock Warrants

Freestanding warrants to acquire shares of convertible preferred stock are classified as liabilities on the accompanying balance sheets. These warrants are subject to remeasurement at fair value at each balance sheet date, and any change in fair value is recognized as a component of other income or expense. Adynxx will continue to adjust the carrying values of freestanding warrants classified as liabilities for changes in fair value until the earlier of the exercise or expiration of the warrants or the completion of a liquidation event, including the completion of an initial public offering.

Debt Modifications and Extinguishments

When Adynxx modifies debt, it does so in accordance with Accounting Standards Codification ("ASC") 470-50, Debt: Modifications and Extinguishments, which requires modification to debt instruments to be evaluated to assess whether the modifications are considered "substantial modifications". A substantial modification of terms shall be accounted for like an extinguishment. Based on the guidance relied upon and the analysis performed, changes to debt provisions were not considered substantial and were treated as modifications. If Adynxx determines the change in terms meet the criteria for substantial modification under ASC 470 it will treat the modification as extinguishment and recognize gain or loss from debt extinguishment.

Derivative Instruments

ASC 815-15, Derivatives and Hedging: Embedded Derivatives, generally provides three criteria that, if met, require companies to bifurcate conversion options from their host instruments and account for them as free standing derivative financial instruments. These three criteria include circumstances in which (a) the economic characteristics and risks of the embedded derivative instrument are not clearly and closely related to the economic characteristics and risks of the host contract, (b) the hybrid instrument that embodies both the embedded derivative instrument and the host contract is not re-measured at fair value under otherwise applicable generally accepted accounting principles with changes in fair value reported in earnings as they occur and (c) a separate instrument with the same terms as the embedded derivative instrument would be considered a derivative instrument subject to the requirement of ASC 815.

Adynxx issued certain convertible notes in 2018 with current investors which contained various embedded derivative instruments. In particular, the convertible notes contain the following features: 1) a share settled redemption in a qualified preferred stock financing and 2) the right to an accelerated cash repayment in the event of a change in control. These embedded put options are not considered clearly and closely related to the debt host and result in embedded derivatives that must be bifurcated and accounted for separately from the debt host. Accordingly, Adynxx has recorded the bifurcated redemption features as a derivative liability.

Derivative financial liabilities are initially recorded at fair value, with gains and losses arising for changes in fair value recognized in the statement of operations at each period end while such instruments are outstanding. The liability is being valued using a bond plus option model. See Note 5 for further discussion of the convertible notes and the bifurcated derivative liability.

Fair Value of Financial Instruments

ASC 820-10, Fair Value Measurement, provides a framework for measuring fair value under GAAP and requires expanded disclosures regarding fair value measurements. The standard defines fair value as an exit price, representing the amount that would be received upon the sale of an asset or paid to transfer a liability in an orderly transaction between market participants. The standard also establishes a fair value

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hierarchy, which prioritizes the inputs used in measuring fair value. The standard describes three levels of inputs that may be used to measure fair value:

Level 1 — Unadjusted quoted prices in active markets for identical assets or liabilities that Adynxx has the ability to access as of the measurement date.

Level 2 — Inputs other than quoted prices included within Level 1 that are directly observable for the asset or liability or indirectly observable through corroboration with observable market data.

Level 3 — Unobservable inputs for the asset or liability only used when there is little, if any, market activity for the asset or liability at the measurement date.

This hierarchy requires the use of observable market data when available and to minimize the use of unobservable inputs when determining fair value.

The following tables present Adynxx's fair value hierarchy for all of its financial instruments measured at fair value on a recurring basis as of September 30, 2018 and December 31, 2017:

| September 30, 2018 | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| Liabilities: | | | | |
| Warrant liability | $ — | $ — | $ 42,757 | $ 42,757 |
| Derivative liability | — | — | 652,852 | 652,852 |
| Total Financial Liabilities | $ — | $ — | $ 695,609 | $ 695,609 |

| December 31, 2017 | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| Liabilities: | | | | |
| Warrant liability | $ — | $ — | $ 42,007 | $ 42,007 |
| Total Financial Liabilities | $ — | $ — | $ 42,007 | $ 42,007 |

The carrying amounts reported in the accompanying balance sheets for cash and cash equivalents, accounts payable and accrued liabilities approximate their fair value due to their short maturities. The fair value of Adynxx's term loan is based on the borrowing rate currently available to Adynxx for borrowings with similar terms and maturity and approximates its carrying value.

Derivative liability instruments are considered Level 3 when their fair values are determined using pricing models, discounted cash flow methodologies, or similar techniques, and at least one significant model assumption or input is unobservable. Level 3 liability instruments consist of the preferred stock warrant liability and derivative liability for which there is no observable market data for the determination of fair value and which require significant management judgment and estimation. The fair value of the warrant liability was determined using the Black-Scholes model (see Note 8). The fair value of the embedded derivative liability was determined using a bond plus option model.

The change in fair value of the preferred stock warrant liability is summarized below:

| | Periods Ended, | |
|---|---|---|
| | September 30, 2018 | December 31, 2017 |
| Fair value, beginning of period | $ 42,007 | $ 54,338 |
| Preferred stock warrants – exercised | — | (8,347) |
| Change in fair value of preferred stock warrants | 750 | (3,984) |
| Fair value, end of period | $ 42,757 | $ 42,007 |

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The change in fair value of the derivative liability is summarized below:

| | Periods Ended, | |
|---|---|---|
| | September 30, 2018 | December 31, 2017 |
| Fair value, beginning of period | $ — | $ — |
| Bifurcated derivative from issuance of Convertible notes | 864,356 | — |
| Change in fair value | (211,504) | — |
| Fair value, end of period | $ 625,852 | $ — |

Recent Accounting Pronouncements

In February 2016, the FASB issued ASU No. 2016-02. This standard introduces the new leases standard that applies a right-of-use ("ROU") model and requires a lessee to record, for all leases with a lease term of more than 12 months, an asset representing its right to use the underlying asset and a liability to make lease payments. For leases with a term of 12 months or less, a practical expedient is available whereby a lessee may elect, by class of underlying asset, not to recognize an ROU asset or lease liability. At inception, lessees must classify all leases as either finance or operating based on five criteria. Balance sheet recognition of finance and operating leases is similar, but the pattern of expense recognition in the income statement, as well as the effect on the statement of cash flows, differs depending on the lease classification. This ASU is effective for fiscal years beginning after December 15, 2018 including interim periods within that fiscal year, with early adoption permitted. Adynxx is currently assessing whether these amendments will have a material effect on its financial statements.

In March 2016, the FASB issued ASU No. 2016-09. This standard introduces targeted amendments intended to simplify the accounting for stock compensation. Specifically, the ASU requires all excess tax benefits and tax deficiencies (including tax benefits of dividends on share-based payment awards) to be recognized as income tax expense or benefit in the income statement. The tax effects of exercised or vested awards should be treated as discrete items in the reporting period in which they occur. An entity also should recognize excess tax benefits, and assess the need for a valuation allowance, regardless of whether the benefit reduces taxes payable in the current period. That is, off balance sheet accounting for net operating losses stemming from excess tax benefits would no longer be required and instead such net operating losses would be recognized when they arise. Existing net operating losses that are currently tracked off balance sheet would be recognized, net of a valuation allowance if required, through an adjustment to opening retained earnings in the period of adoption. Entities will no longer need to maintain and track an "APIC pool." The ASU also requires excess tax benefits to be classified along with other income tax cash flows as an operating activity in the statement of cash flows. This ASU is effective for fiscal years beginning after December 15, 2016 and interim periods within that fiscal year. The Company adopted the guidance on January 1, 2017 and the impact to its financial statements was not material.

In November 2016, the FASB issued ASU No. 2016-18, Statement of Cash Flows: Restricted Cash. This ASU requires changes in restricted cash during the period to be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. If cash, cash equivalents and restricted cash are presented in more than one line item on the balance sheet, the new guidance requires a reconciliation of the total in the statement of cash flows to the related captions in the balance sheet. This guidance is effective for fiscal periods beginning after December 15, 2017 and interim periods within that fiscal year, with early adoption permitted. The amendments in this ASU should be applied retrospectively to all periods presented. We have adopted the guidance on a retrospective basis on January 1, 2018 and the beginning and ending balance of cash and cash equivalents for the respective periods in our condensed statements of cash flows include restricted cash.

In June 2018, the FASB issued ASU No. 2018-07, Stock-based Compensation: Improvements to Nonemployee Share-based Payment Accounting, which amends the existing accounting standards for share-based payments to nonemployees. This ASU aligns much of the guidance on measuring and classifying nonemployee awards with that of awards to employees. Under the new guidance, the

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measurement of nonemployee equity awards is fixed on the grant date. This ASU becomes effective for fiscal years beginning after December 15, 2018 including interim periods within that fiscal year, with early adoption permitted. Entities will apply the ASU by recognizing a cumulative-effect adjustment to retained earnings as of the beginning of the annual period of adoption. We are currently evaluating the impact that ASU 2018-07 will have on our condensed financial statements.

In August 2018, the FASB issued ASU No. 2018-13, Changes to the Disclosure Requirements for Fair Value Measurement (Topic 820). This ASU eliminates, adds and modifies certain disclosure requirements for fair value measurements as part of its disclosure framework project. This ASU is effective for fiscal years beginning after December 15, 2019 including interim periods within that fiscal year, with early adoption permitted. Adynxx is currently assessing whether these amendments will have a material effect on its financial statements.

3.

Property and Equipment, Net

Property and equipment, net, consist of the following:

| As of | September 30, 2018 | December 31, 2017 |
|---|---|---|
| Furniture and fixtures | $ 28,990 | $ 28,990 |
| Office equipment | 1,672 | 1,672 |
| Computer equipment | 19,655 | 24,856 |
| Laboratory equipment | 1,615 | 1,615 |
| Total property and equipment | 51,932 | 57,133 |
| Less accumulated depreciation | (43,225) | (44,248) |
| Property and equipment, net | $ 8,707 | $ 12,885 |

Depreciation expense was $5,885 and $8,499 for the nine months ended September 30, 2018 and 2017, respectively

4.

Accrued Liabilities

Accrued liabilities consist of the following:

| As of | September 30, 2018 | December 31, 2017 |
|---|---|---|
| Payroll and related expenses | $ 667,232 | $ 273,392 |
| Accrued term loan final payment | 358,476 | 196,991 |
| Accrued clinical trial expense | — | 653,816 |
| Professional fees and other costs | 212,872 | 33,580 |
| Total | $ 1,238,580 | $ 1,157,779 |

5.

Term Loans and Convertible Promissory Notes

Term Loans

On November 24, 2015, Adynxx entered into a loan and security agreement (“Loan Agreement”) with Oxford pursuant to which Oxford agreed to lend Adynxx up to $10,000,000, issuable in three tranches of $3,000,000 (the “Term Loan A”), $2,000,000 (the “Term Loan B”) and $5,000,000 (the “Term Loan C”). Term Loan A, Term Loan B and Term Loan C will collectively be referred to as Term Loans. On November 24, 2015, Adynxx received $3,000,000 in proceeds from Term Loan A and on January 29, 2016, Adynxx received $2,000,000 in proceeds from Term Loan B. Warrants were

issued in connection with Term Loan A and Term Loan B (See Note 8). Under the terms of the Loan Agreement, Adynxx may, at its sole discretion, borrow $5,000,000 under the Term Loan C following the achievement of a defined milestone event until the earlier of 30 days thereafter or March 31, 2016. Adynxx did not draw on Term Loan C at March 31, 2016 and the availability of the $5,000,000 under Term Loan C expired.

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All outstanding Term Loans will mature on November 1, 2019 (the "Maturity Date") and Adynxx will have interest only payments through November 1, 2016, followed by 36 months of principal and interest payments. The term loans will bear interest at a floating per annum rate equal to (i) 7.06% plus (ii) the greater of (a) the 30 day U.S. Dollar LIBOR rate reported in the Wall Street Journal on the last business day of the month that immediately precedes the month in which the interest will accrue or (b) 0.19%.

Adynxx has the option to prepay all, but not less than all, of the borrowed amounts, provided that Adynxx will be obligated to pay a prepayment fee equal to (i) 3% of the outstanding principal balance of the applicable Term Loan if prepayment is made prior to the first anniversary of the applicable funding date of the Term Loan, provided, however, the prepayment fee will be reduced to 1% if Adynxx is acquired within six months from the Term Loan closing date, or (ii) 2% of the outstanding principal balance of the applicable Term Loan if prepayment is made prior to the second anniversary of the applicable funding date of the Term Loan, or (iii) 1% of the applicable Term Loan prepaid thereafter and prior to the Maturity Date. Adynxx will be required to make a final payment of 4.25% of the funded amount, payable on the earlier of (i) the Maturity Date or (ii) the prepayment of the Term Loan.

Adynxx may use the proceeds from the Term Loans solely for working capital and to fund its general business requirements. Adynxx's obligations under the Loan Agreement are secured by a perfected first priority lien in all of its assets with a negative pledge on owned intellectual property.

In January 2017, Adynxx and Oxford agreed to amend the Loan Agreement. After Adynxx made principal payments on December 1, 2016 and January 1, 2017, Oxford agreed to an additional 12 months of interest-only payments followed by 23 months of amortization. The final balloon payment increased by $100,000. The amendment was accounted for as a debt modification.

In March 2018, Adynxx and Oxford agreed to amend the Loan Agreement. After Adynxx made principal payments on January 1, 2018, February 1, 2018 and March 1, 2018 Oxford agreed to another 5 months of interest-only payments followed by 15 months of amortization. The final balloon payment increased by $200,000. The amendment was accounted for as a debt modification.

In September 2018, Adynxx and Oxford agreed to amend the Loan Agreement. Oxford agreed to 1 month of interest-only payments upon closing a $1,500,000 convertible promissory note with current investors followed by 2 months of interest-only payments upon entering into a merger followed by 12 months of repayments. The maturity date of the loans remains unchanged and the final balloon payment increased by $25,000. The amendment was accounted for as a debt modification.

The Term Loan A was recorded at its initial carrying value of $3,000,000, less debt issuance costs of approximately $141,000. Term Loan B was recorded at its initial carrying value of $2,000,000, less debt issuance costs of approximately $3,000. The debt issuance costs are being amortized to interest expense over the life of the Term Loans using the effective interest method. The final payment is accrued over the life of the Term Loans through interest expense using the effective interest method. As of September 30, 2018, $2,299,517 was outstanding under Term Loan A and $1,533,011 was outstanding under Term Loan B. At December 31, 2017, $2,833,333 was outstanding under Term Loan A and $1,888,889 was outstanding under Term Loan B.

Interest expense of $482,160 and $405,061 was recorded for the nine months ended September 30, 2018 and 2017, respectively.

As of September 30, 2018, Adynxx was in compliance with all covenants under the Loan Agreement.

Future principal payments for the Term Loans due under the Loan Agreement as of September 30, 2018, are as follows:

| | Amount |
|---|---|
| 2018 | $ — |
| 2019 | 3,832,528 |
| Total principal payments | $ 3,832,528 |

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Convertible Promissory Notes

In March 2018, Adynxx received $1,500,000 from the issuance of convertible promissory notes to Adynxx's current investors. The notes accrue simple interest on the outstanding principal amount at the rate of 8% per annum and mature on March 29, 2019.

In September 2018, Adynxx's primary investors agreed to provide Adynxx $1,500,000 in the form of convertible promissory notes to fund Company operations through December 2018. The notes accrue simple interest on the outstanding principal amount at the rate of 8% per annum and mature on September 27, 2019.

The convertible promissory notes have conversion and repayment options as follows: (a) in the event that Adynxx issues and sells shares of its preferred stock to the investors on or before the maturity date, in a preferred stock financing, then the outstanding principal amount of this convertible promissory note and any unpaid accrued interest will automatically convert in whole into equity securities sold in the qualified financing at a conversion price equal to 80% of the cash price paid per share for equity securities by the investors in the qualified financing, (b) if Adynxx consummates a change of control while the convertible promissory notes remain outstanding, Adynxx shall repay the holders in cash in an amount equal to 200% of the outstanding principal amount of the convertible promissory notes, and (c) in the event Adynxx consummates an IPO on or before the maturity date, then the outstanding principal amount of the convertible promissory notes and any unpaid accrued interest will automatically convert into common stock at a conversion price equal to the per share offering price to the public for common stock in the IPO.

Adynxx evaluated its convertible notes and determined embedded components of those contracts qualified as derivatives to be separately accounted for in accordance with ASC 815.

The convertible promissory notes contained put options as follows:

1.)

On or before the maturity date, the principal and accrued interest of the notes will automatically convert into equity securities issued and sold in the initial closing of Adynxx's next qualified equity financing with gross proceeds of at least $5,000,000, exclusive of the conversion of the notes. The number of shares to be issued to the note holders will be equal to dividing the outstanding principal and any unpaid accrued interest by 80% of the price paid per share of the next equity security sold to investors. The discount in share price to note holders is not considered clearly and closely related to the debt host and results in an embedded derivative that must be bifurcated and accounted for separately from the debt host.

2.)

In the event of a change in control prior to repayment, the outstanding principal and unpaid accrued interest will be repaid in cash, plus a repayment premium equal to 100% of the outstanding principal at the time of the change in control. Change in control means (i) a merger, consolidation, or other capital reorganization or business combination transaction of Adynxx, with or into, another corporation after which the shares of the capital stock represent a minority after the close of the transaction, or (ii) any transaction or series of related transactions to which Adynxx is a party in which in excess of 50% of Adynxx's voting power is transferred, or (iii) the sale of all or substantially all of Adynxx's assets or the exclusive license of all or substantially all of Adynxx's material intellectual property. The premium to note holders is not considered clearly and closely related to the debt host and results in an embedded derivative that must be bifurcated and accounted for separately from the debt host.

Accordingly, upon the issuance of the March 2018 convertible promissory notes, the estimated fair value of the embedded derivative was determined using a bond plus option valuation model and assuming a probability of 30% that a qualified financing would occur and a probability of 15% that a change in control would occur. Adynxx recorded the estimated fair value of these put options (embedded derivatives) as a liability of $495,794 with an offsetting amount recorded as debt discount, which offsets the carrying amount of the debt. The debt discount is amortized over the debt's expected term. The derivative liability is revalued at the end of each reporting period and any change in fair value is recognized in other income.

Upon the issuance of the September 2018 convertible promissory notes, the estimated fair value of the embedded derivatives was determined using a bond plus option valuation model and assuming a probability of 40% that a qualified financing would occur and a zero probability that a change in control would occur.

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Adynxx recorded the estimated fair value of these put options (embedded derivatives) as a liability of $368,562 with an offsetting amount recorded as debt discount, which offsets the carrying amount of the debt. The debt discount is amortized over the debt expected term. The derivative liability is revalued at the end of each reporting period and any change in fair value is recognized in other income.

As of September 30, 2018 the estimated fair value of the embedded derivatives was determined assuming a probability of 40% that a qualified financing would occur and a zero probability that a change in control would occur. As a result, Adynxx decreased the fair value of the embedded derivative liability to $652,852, and recorded other income of $211,504.

As of September 30, 2018 Adynxx recorded interest expense for debt discount of $223,030.

The following table summarizes convertible promissory notes as of September 30, 2018 and December 31, 2017:

| | September 30, 2018 | December 31, 2017 |
|---|---|---|
| Convertible note payable, due on March 29, 2019 interest at 8.0% p.a. | $ 1,500,000 | $ — |
| Convertible note payable, due on September 27, 2019 interest at 8.0% p.a. | 1,500,000 | — |
| Accrued interest | 61,808 | — |
| Total | $ 3,061,808 | $ — |
| Less unamortized debt discount | (641,325) | |
| Convertible promissory notes – related party, net of discount and accrued interest | 2,420,483 | — |

6.

Commitments and Contingencies

Operating Leases

Adynxx leases office facilities under a non-cancelable operating lease agreement expiring on December 31, 2019. Future minimum payments under the non-cancelable leases for the period ended September 30, 2018 are as follows:

| Years Ending, | Amount |
|---|---|
| 2018 | $ 58,227 |
| 2019 | 238,733 |
| Total principal payments | $ 296,960 |

Rent expense related to Adynxx's operating leases was $173,552 and $167,991 for the nine months ended September 30, 2018 and 2017, respectively.

Indemnifications

Adynxx has agreed to indemnify its officers and directors for certain events or occurrences arising as a result of the officer's or director's serving in such capacity. Adynxx has a directors and officers liability insurance policy that limits its exposure and enables Adynxx to recover a portion of any future amounts paid resulting from the indemnification of its officers and directors.

Adynxx has not incurred material costs to defend lawsuits or settle claims related to these indemnification agreements. Adynxx's management believes the estimated fair value of these indemnification agreements is minimal and has not recorded a liability for these agreements as of September 30, 2018.

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7.
Stockholders' Equity

Convertible Preferred Stock

As of September 30, 2018, Adynxx had 56,672,658 shares of Series A convertible preferred stock issued and outstanding, including 3,531,889 shares issued as a result of a conversion of notes to investors and accrued interest to Series A convertible preferred stock in 2010 and 51,069,262 shares of Series B convertible preferred stock issued and outstanding, including 6,469,356 shares issued as a result of a conversion of notes to investors and accrued interest to Series B convertible preferred stock in 2016.

The holders of preferred stock have various rights and preferences as follows:

Voting Rights — A holder of each share of Series A and Series B convertible preferred stock shall have the right to one vote for each share of common stock into which such preferred stock could be converted. Series A convertible preferred stock holders voting as a separate class are entitled to elect two directors to Adynxx's Board of Directors as long as shares of Series A convertible preferred stock remain outstanding. Series B convertible preferred stock holders voting as a separate class are entitled to elect one director to Adynxx's Board of Directors as long as at least 10,000,000 shares of Series B convertible preferred stock remain outstanding. Common stockholders voting as a separate class are entitled to elect two directors. The holders of preferred and common stock voting together as a single class on an as-if-converted basis are entitled to elect all remaining directors.

Dividends — Holders of Series B convertible preferred stock, in preference to the holders of Series A preferred and common stock, are entitled to receive noncumulative dividends at the annual rate of $0.0251 per share, when, as, and if declared by the Board of Directors. Holders of Series A convertible preferred stock are entitled to receive noncumulative dividends at the annual rate of $0.0182 per share, when, as, and if declared by the Board of Directors. No dividends on preferred stock have been declared by the Board of Directors during the periods ended September 30, 2018 and December 31, 2017.

Liquidation Preference — In the event of any liquidation, dissolution, or winding up of Adynxx, including a merger, acquisition, or sale of assets, as defined, the holders of Series B convertible preferred stock are entitled to receive an amount of $0.3133 per share (as adjusted for recapitalizations, stock combinations, stock dividends, stock splits, and the like), plus any declared but unpaid dividends prior to and in preference to any distribution to the holders of Series A preferred or common stock.

After distributions have been made to all holders of Series B convertible preferred stock as described above, the remaining assets of Adynxx available for distribution to stockholders shall be distributed to all holders of Series A convertible preferred stock. The holders of Series A convertible preferred stock are entitled to receive an amount of $0.2276 per share (as adjusted for recapitalizations, stock combinations, stock dividends, stock splits, and the like), plus any declared but unpaid dividends prior to and in preference to any distribution to the holders of common stock. The remaining assets of Adynxx available for distribution to stockholders shall be distributed ratably among the holders of the common stock and preferred stock on an as-if-converted basis.

Conversion Rights — Each share of Series A and Series B convertible preferred stock is convertible, at the option of the holder, into shares of common stock on a one for one basis (subject to adjustment for certain events). The preferred stock will also be converted automatically into shares of common stock (1) immediately prior to an initial public offering with aggregate proceeds of at least $40,000,000 and an offering price of not less than $1.00 per common share or (2) upon the date specified by written consent of holders of a majority of the outstanding preferred shares on an as-converted basis.

The Series A and Series B Preferred Stock were classified as temporary equity in the accompanying balance sheets as of September 30, 2018 and December 31, 2017, as shares are subject to redemption upon the occurrence of uncertain events not solely within Adynxx's control. As of September 30, 2018 and December 31, 2017, the Series A and Series B Preferred Stock were not currently redeemable and it was not probable that they will become redeemable.

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Common Stock

Adynxx's articles of incorporation, as amended, authorize Adynxx to issue 148,000,000 shares of $0.001 par value common stock. Common stockholders are entitled to dividends when and if declared by the Board of Directors and after any Series B and Series A convertible preferred shares dividends are fully paid. The holder of each share of common stock is entitled to one vote. At September 30, 2018, no dividends had been declared.

Shares Reserved for Future Issuance

At September 30, 2018 and December 31, 2017, Adynxx has reserved shares of common stock for future issuances as follows:

| | September 30, 2018 | December 31, 2017 |
|---|---|---|
| Series B convertible preferred stock | 51,069,262 | 51,069,262 |
| Series A convertible preferred stock | 56,672,658 | 56,672,658 |
| Warrants for Series A convertible preferred stock | 329,525 | 329,525 |
| Common stock options issued and outstanding | 19,222,027 | 19,222,027 |
| Common stock available for future option grants | 5 | 5 |
| Total | 127,293,477 | 127,293,477 |

8.

Warrants

In connection with convertible notes agreements with investors issued between January 1, 2009 and July 1, 2010, Adynxx issued warrants to purchase such number of shares of Series A convertible preferred stock issued in the next round of equity financing equal to 20% of notes payable principal amounts divided by the price per share of such preferred stock. The warrants are exercisable after closing of each preferred stock financing for five years and expire seven years from the issuance date. At the issuance dates, Adynxx estimated the fair value of issued warrants as minimal due to the uncertainty of the Series A convertible preferred stock financing. Adynxx estimated the fair value of outstanding warrants at the date of closing of the Series A convertible preferred stock financing and used the Black-Scholes model with the following assumptions: expected lives equal to the remaining contractual life in a range of 3.92 to 7 years, risk-free interest rates in a range of 1.46% to 2.66%, expected dividend yield of zero, volatility in the range of 73.6% to 81.5%, and a fair value of Series A convertible preferred stock of $0.2276 per share. As of December 31, 2017, the outstanding warrants had been exercised and $(8,347) was recorded to other income.

In connection with a the Oxford Loan Agreement signed in November 2015, Adynxx issued a warrant to purchase 197,715 shares of Adynxx's preferred stock at an exercise price equal to the Series A preferred stock price of $0.2276. The warrant is exercisable after closing and expires ten years from the issuance date. Adynxx estimated the fair value of the warrant at closing and used the Black-Scholes model with the following assumptions: expected life equal to the remaining contractual life of 10 years, risk-free interest rate of 2.07%, expected dividend yield of zero, volatility of 68.7%, and a fair value of Series A convertible preferred stock of $0.20 per share. Adynxx recorded the fair value of the warrant of $33,386 as a debt discount to be amortized to interest expense over the life of the Term Loan A.

In January 2016, in connection with the Oxford Loan Agreement signed in November 2015, Adynxx issued a warrant to purchase 131,810 shares of Adynxx's preferred stock at an exercise price equal to the Series A preferred stock price of $0.2276. The warrant is exercisable after closing and expires ten years from the issuance date. Adynxx estimated the fair value of the warrant at closing and used the Black-Scholes model with the following assumptions: expected life equal to the remaining contractual life of 10 years, risk-free interest rate of 2.09%, expected dividend yield of zero, volatility of 68.6%, and a fair value of Series A convertible preferred stock of $0.23 per share. Adynxx recorded the fair value of the warrant of $22,259 as a debt discount to be amortized to interest expense over the life of the Term Loan B.

The change in fair value of the warrants issued in connection with Term Loan A and B at September 30, 2018 and September 30, 2017 of $750 and $(4,057), respectively, were recorded to other income. As of September 30, 2018, the

warrants remained outstanding and exercisable.

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The above Black-Scholes model assumptions were determined as follows:

Term — The term represents the remaining contractual term of the warrants.

Risk-free interest rate — The risk-free interest rate is based on the U.S. Treasury yield in effect at the time of grant for zero coupon U.S. Treasury notes with maturities approximately equal the remaining term of the warrants.

Expected volatility — The expected volatility is derived from historical volatilities of several unrelated publicly listed peer companies over a period approximately equal to the remaining term of the warrants because Adynxx has limited information on the volatility of the preferred stock since there is currently no trading history. When making the selections of Adynxx's industry peer companies to be used in the volatility calculation, Adynxx considered the size and operational and economic similarities to Adynxx's principal business operations.

Expected dividend yield — The expected dividend yield is based on Adynxx's history of not paying dividends.

The warrants are classified as a liability as they are exercisable into shares that are potentially redeemable. The fair value of the warrant liability is re-measured at each balance sheet date with the change as other income recorded in the statements of operations.

Warrants outstanding at September 30, 2018, are as follows:

| Issuance Date | Expiration Date | Exercise Price | Number of Shares | Fair Value |
|---|---|---|---|---|
| November 2015 | November 2025 | 0.2276 | 197,715 | 25,461 |
| June 2016 | January 2026 | 0.2276 | 131,810 | 17,296 |
| Total | | | 329,525 | 42,757 |

The fair value of the Series A convertible preferred stock warrants was determined using the following assumptions:

| September 30, | 2018 | 2017 |
|---|---|---|
| Risk-free interest rate | 3.01% | 2.23% – 2.24% |
| Remaining contractual life (in years) | 7.17 – 7.33 | 8.17 – 8.33 |
| Dividend yield | — | — |
| Expected volatility | 75.2% – 76.3% | 70.58% |

9.

Stock Option Plans

In December 2010, Adynxx adopted the 2010 Equity Incentive Plan (the "Plan"). The Plan provides for the granting of stock options to employees and consultants of Adynxx. Options granted under the Plan may be either incentive stock options ("ISOs") or nonqualified stock options ("NSOs"). ISOs may be granted only to Company employees (including officers and directors who are also employees). NSOs may be granted to Company employees and consultants. Adynxx has 19,222,032 shares of common stock reserved for issuance under the Plan as of September 30, 2018. Options under the Plan may be granted for periods of up to 10 years and at prices no less than 100% of the estimated fair value of the underlying shares of common stock on the date of grant as determined by the Board of Directors provided, however, that the exercise price of an ISO and NSO granted to a 10% shareholder shall not be less than 110% of the estimated fair value of the shares on the date of grant. The Plan requires that options be exercised no later than 10 years after the grant. Options granted to employees generally vest ratably on a monthly basis over four years.

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Activity under the Plan is set forth below:

| | | Outstanding Options | | |
|---|---|---|---|---|
| | Shares Available for Grant | Number of Shares | Weighted-Average Exercise Price per Share | Weighted-Average Remaining Contractual Life in Years |
| Balance, December 31, 2017 | 5 | 19,222,027 | 0.10 | 8.4 |
| Additional shares reserved | — | — | | |
| Options granted | — | — | | |
| Balance, September 30, 2018 | 5 | 19,222,027 | 0.10 | 7.5 |

At September 30, 2018, Adynxx had 2,032,761 of stock options vested and exercisable at an exercise price of $0.04 per share, 1,036,602 of stock options vested and exercisable at an exercise price of $0.05 per share and 7,066,791 of stock options vested and exercisable at an exercise price of $0.11 per share. No options were granted in 2017 and for the nine months ended September 30, 2018.

In connection with the grant of stock options to employees, Adynxx recorded stock compensation expense to research and development and general and administrative expenses of $225,150 and $225,150 for the nine months ended September 30, 2018 and 2017, respectively. As of September 30, 2018, unrecognized compensation expense related to employees totaled $662,945 and is expected to be recognized over approximately two years.

10.

Employee Benefit Plan

Adynxx has established a 401(k) Plan (the “401(k) Plan”) that permits participants to make contributions by salary deduction pursuant to Section 401(k) of the IRC. Adynxx may, at its discretion, make matching contributions to the 401(k) Plan. Adynxx has made no contributions to the 401(k) Plan since its inception. Adynxx makes a nonelective 401(k) safe harbor contribution on behalf of each employee equal to 3% of their annual salary. Adynxx’s nonelective safe harbor contributions totaled $44,225 and $49,776 for the nine months ended September 30, 2018 and 2017, respectively.

11.

Subsequent Events

In October 2018, the convertible promissory notes were amended to state that in the event Adynxx consummates a merger on or before the maturity date, and prior to a preferred stock financing, then the principal amount of the convertible promissory notes and unpaid accrued interest will automatically convert in whole into shares of Adynxx’s Series B preferred stock at a conversion price equal to $0.3133 per share immediately prior to the closing of the merger.

Adynxx signed a definitive agreement in October 2018 to commence a merger and reorganization with Alliqua Biomedical, Inc. Adynxx will become the surviving entity upon closing of the merger which is expected to occur by early 2019 at the latest. The former Adynxx security holders are expected to own approximately 86% of the aggregate number of shares of Alliqua common stock issued and outstanding following the consummation of the merger, and the stockholders of Alliqua are expected to own approximately 14% of the aggregate number of post-closing shares. The merger agreement contains customary representations, warranties and covenants made by Alliqua and Adynxx, including covenants relating to obtaining the requisite approvals of the stockholders of the Alliqua and Adynxx, indemnification of directors and officers, and Alliqua’s and Adynxx’s conduct of their respective businesses between the date of signing the merger agreement and the closing of the merger. Consummation of the merger is subject to certain closing conditions, including, among other things, approval by the stockholders of Alliqua and Adynxx. The merger agreement contemplates that Alliqua will also seek approval from its stockholders to effect a reverse stock split, if applicable, with the split ratio to be mutually agreed to by Alliqua and Adynxx within the range approved by

Alliqua's stockholders. In addition, the merger agreement requires Alliqua to use commercially reasonable efforts to consummate a spin-off of its contract manufacturing business prior to the closing of the merger. Concurrently with the execution of the merger agreement, the officers and directors of Alliqua, and the officers, directors and certain stockholders of

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Adynxx, each entered into lock-up agreements pursuant to which they have agreed, among other things, not to sell or dispose of any shares of Company Common Stock which are or will be beneficially owned by them at the closing of the merger with such shares being released from such restrictions 180 days after the effective time.

Adynxx has evaluated subsequent events through November 26, 2018, the date the financial statements were available for general release, for appropriate accounting and financial statement disclosures.

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Annex A

Execution Version

AGREEMENT AND PLAN OF MERGER AND REORGANIZATION

BY AND AMONG

ALLIQUA BIOMEDICAL, INC.,

EMBARK MERGER SUB INC.,

AND

ADYNXX, INC.,

Dated as of October 11, 2018

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Exhibits

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AGREEMENT AND PLAN OF MERGER AND REORGANIZATION

THIS AGREEMENT AND PLAN OF MERGER AND REORGANIZATION, is made and entered into as of October 11, 2018 (this "Agreement"), by and among ALLIQUA BIOMEDICAL, INC. a Delaware corporation ("Parent"), EMBARK MERGER SUB INC., a Delaware corporation ("Merger Sub") and ADYNXX, INC., a Delaware corporation ("Company"). Parent, Merger Sub and Company are each a "Party" and referred to collectively herein as the "Parties." Certain capitalized terms used in this Agreement are defined in Exhibit A.

RECITALS:

WHEREAS, this Agreement contemplates a merger of the Merger Sub with and into Company, with Company remaining as the surviving entity after the merger (the "Merger"), whereby the Company Stockholders will receive Parent Common Stock in exchange for their Company Capital Stock;

WHEREAS, the Parties intend, by approving resolutions authorizing this Agreement, to adopt this Agreement as a plan of reorganization within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended (the "Code"), and the regulations thereunder, and to cause the Merger to qualify as a reorganization under the provisions of Section 368(a) of the Code;

WHEREAS, pursuant to the terms and conditions of this Agreement, the holders of the outstanding equity of Company immediately prior to the Effective Time will own approximately 86% of the outstanding equity of Parent immediately following the Effective Time and the holders of the outstanding equity of Parent immediately prior to the Effective Time will own approximately 14 % of the outstanding equity of Parent immediately following the Effective Time;

WHEREAS, the board of directors of Parent (i) has determined that the Merger is fair to, and in the best interests of, Parent and its stockholders, (ii) has approved this Agreement, the Merger, the issuance of shares of Parent Common Stock to the Company Stockholders pursuant to the terms of this Agreement, the change of control of Parent, and the other actions contemplated by this Agreement, (iii) has approved the Parent Charter Amendment and Reverse Split; and (iv) has determined to recommend that the stockholders of Parent vote to approve the Parent Stockholder Approval Matters and such other actions as contemplated by this Agreement;

WHEREAS, the board of directors of Merger Sub (i) has determined that the Merger is fair to, and in the best interests of, Merger Sub and its sole stockholder, (ii) has approved this Agreement, the Merger, and the other actions contemplated by this Agreement and has deemed this Agreement advisable and (iii) has determined to recommend that its sole stockholder vote to adopt this Agreement and thereby approve the Merger and such other actions as contemplated by this Agreement;

WHEREAS, the board of directors of Company (i) has determined that the Merger is advisable and fair to, and in the best interests of, Company and its stockholders, (ii) has approved this Agreement, the Merger and the other transactions contemplated by this Agreement and the agreements entered into in connection herewith (the "Transactions") and has deemed this Agreement advisable and (iii) has determined to recommend that the Company Stockholders vote or consent to approve the Company Stockholder Matters;

WHEREAS, as a condition to the willingness of, and an inducement to each of Parent and the Company to enter into this Agreement, contemporaneously with the execution and delivery of this Agreement, each of the Company Voting Agreement Signatories is entering into a voting agreement, in favor of Company, in substantially the form of Exhibit B-1 attached hereto (the "Company Voting Agreements"), and each of the Parent Voting Agreement Signatories is entering into a voting agreement, in favor of Parent, in substantially the form of Exhibit B-2 attached hereto (individually, the "Parent Voting Agreements" and collectively, the "Voting Agreement") under which the Voting Agreement Signatories will agree, with respect to a portion of the shares of Company Capital Stock or Parent Capital Stock, as applicable, held thereby, to vote as stockholders in favor of the Company Stockholder Matters or Parent Stockholder Approval Matters, as applicable, pursuant to the terms and conditions of the Voting Agreements, as applicable; and

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WHEREAS, as a condition to the willingness of, and an inducement to each of Parent and Company to enter into this Agreement, contemporaneously with the execution and delivery of this Agreement, each of the Lock-up Signatories is entering into a lock-up agreement, in substantially the form of Exhibit E attached hereto (the "Lock-up Agreements") with respect to the shares of Parent Common Stock held thereby from time to time;

AGREEMENT:

NOW, THEREFORE, in consideration of the foregoing and the representations, warranties and covenants herein contained, and for other good and valuable consideration, the receipt, adequacy and sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:

ARTICLE I.

THE MERGER

Section 1.01 The Merger. Subject to and upon the terms and conditions of this Agreement and Delaware General Corporation Law ("Delaware Law"), Merger Sub will be merged with and into Company at the Effective Time. From and after the Effective Time, the separate corporate existence of Merger Sub will cease, and Company will continue as the surviving corporation. Company as the surviving corporation after the Merger is hereinafter sometimes referred to as the "Surviving Corporation."

Section 1.02 Closing; Effective Time. Unless this Agreement has been terminated and the Transactions herein contemplated have been abandoned pursuant to Section 7.01 of this Agreement, and subject to the satisfaction or waiver of the conditions set forth in Article VI of this Agreement, the consummation of the Merger (the "Closing") will take place at the offices of Haynes and Boone, LLP, 30 Rockefeller Plaza, 26th Floor, New York, NY 10112, at 10:00 a.m. on a date to be specified by the Parties which will be no later than three Business Days after satisfaction or waiver of the conditions set forth in Article VI (other than those conditions that by their nature are to be satisfied at the Closing, but subject to the satisfaction or waiver of each such conditions), or at such other time, date and place as Parent and Company may mutually agree in writing. The date on which the Closing actually takes place is referred to as the "Closing Date". On the Closing Date, the Parties will cause the Merger to be consummated by executing and filing a Certificate of Merger in accordance with the relevant provisions of Delaware Law (the "Certificate of Merger"), in substantially the form of Exhibit C-1 attached hereto, together with any required related certificates, with the Secretary of State of the State of Delaware, in such form as required by, and executed in accordance with the relevant provisions of, Delaware Law. The Merger will become effective at the time of the filing of such Certificate of Merger with the Secretary of State of the State of Delaware or at such later time as may be specified in such Certificate of Merger with the consent of Parent and Company (the time as of which the Merger becomes effective being referred to as the "Effective Time").

Section 1.03 Effect of the Merger. At the Effective Time, the effect of the Merger will be as provided in this Agreement, the Certificate of Merger and the applicable provisions of Delaware Law. Without limiting the generality of the foregoing, and subject thereto, at the Effective Time all the property, rights, privileges, powers and franchises of Company will vest in the Surviving Corporation, and all debts, liabilities, obligations and duties of Company will become the debts, liabilities, obligations and duties of the Surviving Corporation.

Section 1.04 Certificate of Incorporation; Bylaws; Reverse Split; Parent Name Change. Unless otherwise determined by Parent and Company:

(a) the certificate of incorporation of Company will be amended and restated at the Effective Time to read in its entirety as set forth on Exhibit C-2 hereto, and, as so amended and restated, will be the certificate of incorporation of the Surviving Corporation until thereafter amended as provided by Delaware Law and such certificate of incorporation;

(b) the bylaws of Company will be amended and restated to read in the form of the bylaws of Merger Sub, as in effect on the date hereof and, as so amended and restated, will be the bylaws of the Surviving Corporation until thereafter amended as provided by Delaware Law, the certificate of incorporation of the Surviving Corporation and such bylaws; and

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(c) immediately prior to the Effective Time, Parent will amend its certificate of incorporation and take all other actions necessary to (i) cause its name to be changed to Adynxx, Inc. and (ii) effect the Reverse Split to the extent applicable.

Section 1.05 Directors and Officers of the Surviving Corporation and Parent. Unless otherwise determined by Parent and Company, the parties will take all action such that:

(a) unless otherwise determined by the Company prior to the Effective Time, the directors of the Company immediately prior to the Effective Time will be the directors of the Surviving Corporation immediately following the Effective Time until such time as their respective successors are duly elected or appointed;

(b) unless otherwise determined by the Company prior to the Effective Time, the officers of Company immediately prior to the Effective Time will be the officers of the Surviving Corporation immediately following the Effective Time until such time as their respective successors are duly elected or appointed; and

(c) the directors and officers of Parent immediately following the Effective Time shall be elected and appointed in accordance with Section 5.11.

Section 1.06 Conversion of Company Securities. At the Effective Time, by virtue of the Merger and without any action on the part of Parent, Merger Sub, Company, any stockholder of the Company or any other Person:

(a) Conversion of Company Capital Stock. Each share of Company Capital Stock issued and outstanding immediately prior to, and contingent upon the occurrence of, the Effective Time (excluding any shares to be canceled pursuant to Section 1.06(b) or Section 1.06(c) and any Dissenting Shares to be treated in accordance with Section 1.07) will be converted into and represent the right to receive a number of shares of validly issued, fully paid and nonassessable shares of common stock of Parent, $0.001 par value per share ("Parent Common Stock") equal to the Exchange Ratio (the "Merger Consideration"), with any resulting fractional shares to be rounded down to the nearest whole share.

(b) Merger Sub Common Stock. Each share of Merger Sub Common Stock then outstanding will be converted into one share of common stock of the Surviving Corporation. Each stock certificate of Merger Sub evidencing ownership of any such shares will, as of the Effective Time, evidence ownership of such shares of common stock of the Surviving Corporation.

(c) Cancellation. Each share of Company Capital Stock held in the treasury of Company and each share of Company Capital Stock owned by Parent or by any direct or indirect wholly owned Subsidiary of Company or Parent immediately prior to the Effective Time will, by virtue of the Merger and without any action on the part of the holder thereof, cease to be outstanding, be canceled and extinguished without any conversion thereof and without payment of any consideration therefor and cease to exist.

(d) Company Options. Each Company Option under the Company Option Plan that is outstanding and unexercised as of immediately prior to the Effective Time will be subject to Section 5.16. Prior to the Closing Date, and subject to the review and approval of Parent, Company will take all actions necessary to effect the transactions contemplated by this Section 1.06(d) under applicable Legal Requirements and all such Company Options, including delivering all notices required thereby and, if required, entering into termination agreements with the holders of such Company Options. In addition, promptly after the date of this Agreement, and in any event within ten (10) Business Days before the Effective Time, and subject to the review and approval of Parent, Company shall deliver notice to all holders of Company Options setting forth such holders' rights pursuant to this Agreement.

(e) Company Warrants.

(i)

Each Company Warrant that is outstanding and unexercised as of immediately prior to the Effective Time will be subject to Section 5.17.

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(ii)

Prior to the Closing Date, and subject to the review and approval of Parent, Company will take all actions necessary to effect the transactions contemplated by this Section 1.06(e) under applicable Legal Requirements and all Company Warrants, including delivering all notices required thereby, and if required, entering into termination agreements with holders of such Company Warrants. In addition, if required by any applicable Company Warrant, promptly after the date of this Agreement, and in any event within ten (10) Business Days before the Effective Time, and subject to the review and approval of Parent, Company shall deliver notice to the holders of such Company Warrants setting forth such holders' rights pursuant to this Agreement.

(f) Fractional Shares. No fraction of a share of Parent Common Stock will be issued in connection with the Merger, and any fractional shares will be rounded down to the nearest whole share. Company Stockholders will not be entitled to any voting rights, rights to receive any dividends or distributions or other rights as a stockholder of Parent with respect to any such fraction of a share that would have otherwise been issued to such Company Stockholder.

(g) Restrictions. If any shares of Company Capital Stock outstanding immediately prior to the Effective Time are unvested or are subject to a repurchase option, risk of forfeiture or other condition under any applicable restricted stock purchase agreement or other Contract with Company or under which Company has any rights, then the shares of Parent Common Stock issued in exchange for such shares of Company Capital Stock, subject to Section 5.16, will also be unvested and subject to the same repurchase option, risk of forfeiture or other condition, and the book-entry representing such shares of Parent Common Stock may accordingly be marked with appropriate legends. Company will take all action that may be necessary to ensure that, from and after the Effective Time, Parent is entitled to exercise any such repurchase option or other right set forth in any such restricted stock purchase agreement or other Contract.

Section 1.07 Dissenting Shares. For purposes of this Agreement, "Dissenting Shares" mean any shares of Company Capital Stock outstanding immediately prior to the Effective Time and held by a person who has not voted such shares in favor of the adoption of this Agreement and the Merger, has properly demanded appraisal for such shares in accordance with Delaware Law and has not effectively withdrawn or forfeited such demand for appraisal. Notwithstanding anything to the contrary contained herein, Dissenting Shares will not be converted into a right to receive the Merger Consideration unless such holder fails to perfect or withdraws or otherwise loses its rights to appraisal or it is determined that such holder does not have appraisal rights in accordance with Delaware Law. If after the Effective Time, such holder fails to perfect or withdraws or loses its right to appraisal, or if it is determined that such holder does not have appraisal rights, such shares will be treated as if they had been converted as of the Effective Time into the right to receive the Merger Consideration (if any). Company will give Parent prompt notice of any demands received by Company for appraisal of shares of Company Capital Stock, withdrawals of such demands, and any other instruments that relate to such demands received by Company. Company shall control all negotiations and proceedings with respect to such demands, provided, however, (i) Company shall keep Parent reasonably apprised of all material events, circumstance or changes with respect to any such demand following the making thereof (ii) the Company will not, except with prior written consent of Parent (such consent not to be unreasonably withheld, conditioned or delayed), make any payment with respect to, or settle or offer to settle, any such demands, unless and to the extent required to do so under applicable Legal Requirements.

Section 1.08 Exchange Of Certificates.

(a) Exchange Agent. On or prior to the Closing Date, Parent will select Parent's transfer agent or another reputable bank or trust company reasonably acceptable to Company to act as exchange agent in connection with the Merger (the "Exchange Agent"). As soon as practicable after the Effective Time, Parent will issue and cause to be deposited with the Exchange Agent non-certificated shares of Parent Common Stock represented by book-entry issuable pursuant to Section 1.06(a). The shares of Parent Common Stock so deposited with the Exchange Agent, together with any dividends or distributions received by the Exchange Agent with respect to such shares, are referred to collectively as the

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"Exchange Fund." For purposes of clarity, the Parties acknowledge that such shares of Parent Common Stock constituting the Exchange Fund are "restricted securities" within the meaning of the federal securities laws and may be annotated with an appropriate restrictive legend in accordance with Section 5.26.

(b) Exchange Procedures. As soon as reasonably practicable after the Effective Time, Parent will cause the Exchange Agent to mail to the record holders of Company Stock Certificates (i) a letter of transmittal in customary form and containing such provisions on which Parent and the Company may mutually agree (and which will include a provision confirming that delivery of Company Stock Certificates will be effected, and risk of loss and title to Company Stock Certificates will pass, only upon delivery of such Company Stock Certificates to the Exchange Agent), and (ii) instructions for use in effecting the surrender of Company Stock Certificates in exchange for non-certificated shares of Parent Common Stock represented by book-entry issuable pursuant to Section 1.06(a). Upon surrender of a Company Stock Certificate to the Exchange Agent for exchange, together with a duly executed letter of transmittal and such other documents as may be reasonably required by the Exchange Agent or Parent, (A) the holder of such Company Stock Certificate will be entitled to receive in exchange therefor non-certificated shares of Parent Common Stock represented by book-entry (via DRS) equal to the number of whole shares of Parent Common Stock that such holder has the right to receive pursuant to the provisions of Section 1.06(a), and (B) the Company Stock Certificate so surrendered will be canceled. Until surrendered as contemplated by this Section 1.08(b), each Company Stock Certificate held by a Company Stockholder will be deemed, from and after the Effective Time, to represent only the right to receive the Merger Consideration. If any Company Stock Certificate have been lost, stolen or destroyed, the Exchange Agent will require the owner of such lost, stolen or destroyed Company Stock Certificate to provide an appropriate affidavit and to deliver a bond as indemnity against any claim that may be made against the Exchange Agent, Parent or the Surviving Corporation with respect to such Company Stock Certificate.

(c) Distributions with Respect to Unexchanged Shares. No dividends or other distributions declared or made with respect to Parent Common Stock with a record date after the Effective Time will be paid to the holder of any unsurrendered Company Stock Certificate with respect to the shares of Parent Common Stock that such holder has the right to receive in the Merger until such holder surrenders such Company Stock Certificate in accordance with this Section 1.08 (at which time such holder will be entitled, subject to the effect of applicable escheat or similar laws, to receive all such dividends and distributions, without interest).

(d) Transfers of Ownership. If any shares of Parent Common Stock are to be issued in a name other than that in which the Company Stock Certificate surrendered in exchange therefor is registered, it will be a condition of the issuance thereof that the Company Stock Certificate so surrendered will be properly endorsed and otherwise in proper form for transfer and that the Person requesting such exchange will have paid to Parent or any Person designated by it any transfer or other taxes required by reason of the issuance of the shares of Parent Common Stock in any name other than that of the registered holder of the Company Stock Certificate surrendered, or established to the satisfaction of Parent or any agent designated by it that such tax has been paid or is not payable.

(e) Unclaimed Portion of the Exchange Fund.

(i)

Any portion of the Exchange Fund that remains undistributed to holders of Company Stock Certificates as of the date 180 days after the date on which the Merger becomes effective will be delivered to Parent upon demand, and any holders of Company Stock Certificates who have not theretofore surrendered their Company Stock Certificates in accordance with this Section 1.08 will thereafter look only to Parent for satisfaction of their claims for Parent Common Stock and any dividends or distributions with respect to Parent Common Stock.

(ii)

Neither Parent nor the Surviving Corporation will be liable to any holder or former holder of Company Capital Stock or to any other Person with respect to any shares of Parent Common Stock (or dividends or distributions with respect thereto), or for any cash amounts, delivered to any public official pursuant to any applicable abandoned property law, escheat law or similar Legal Requirement.

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(f) Withholding Rights. Each of the Exchange Agent, Parent and the Surviving Corporation will be entitled to deduct and withhold from any consideration payable or otherwise deliverable pursuant to this Agreement to any holder or former holder of Company Capital Stock such amounts as are required to be deducted or withheld therefrom under the Code or any provision of state, local or foreign tax law or under any other applicable Legal Requirement. To the extent such amounts are so deducted or withheld and timely paid to the appropriate Governmental Body, such amounts will be treated for all purposes under this Agreement as having been paid to the Person to whom such amounts would otherwise have been paid.

Section 1.09 Stock Transfer Books. At the Effective Time: (a) all shares of Company Capital Stock outstanding immediately prior to the Effective Time will automatically be canceled and retired and cease to exist, and all holders of Company Capital Stock that were outstanding immediately prior to the Effective Time will cease to have any rights as stockholders of Company; and (b) the stock transfer books of Company will be closed with respect to all shares of Company Capital Stock outstanding immediately prior to the Effective Time. No further transfer of any such shares of Company Capital Stock will be made on such stock transfer books after the Effective Time. If, after the Effective Time, a valid certificate previously representing any shares of Company Capital Stock (a "Company Stock Certificate") is presented to the Exchange Agent or to the Surviving Corporation or Parent, such Company Stock Certificate will be canceled and exchanged as provided in Sections 1.06 and 1.08.

Section 1.10 No Further Rights. The Merger Consideration delivered upon the surrender for exchange of Company Capital Stock in accordance with the terms of this Agreement will be deemed to have been issued in full satisfaction of all rights pertaining to such shares.

Section 1.11 Tax Consequences. For United States federal income tax purposes, the Merger is intended to constitute a reorganization within the meaning of Section 368(a) of the Code. The parties to this Agreement hereby adopt this Agreement as a "plan of reorganization" within the meaning of Sections 1.368-2(g) of the Treasury Regulations, and will report consistently with the foregoing, including by filing the statement required by Section 1.368-3(a) of the Treasury Regulations.

Section 1.12 Parent Common Stock. The shares of Parent Common Stock issued pursuant to the terms of this Agreement will be issued in a transaction exempt from registration under the Securities Act by reason of Section 4(a)(2) thereof and/or Regulation D promulgated under the Securities Act and may not be re-offered or resold other than in conformity with the registration requirements of the Securities Act and such other applicable rules and regulations or pursuant to an exemption therefrom. Until the resale by the holders of Company Capital Stock of their shares of Parent Common Stock has become registered under the Securities Act, or otherwise transferable pursuant to an exemption from such registration otherwise required thereunder, the shares of Parent Common Stock issued pursuant to this Agreement shall be characterized as "restricted securities" under the Securities Act and, if certificated, shall bear the following legend (or if held in book entry form, will be noted with a similar restriction):

"THE SHARES OF STOCK REPRESENTED BY THIS CERTIFICATE HAVE BEEN ACQUIRED FOR INVESTMENT PURPOSES ONLY, AND THE RESALE OF SUCH SHARES HAS NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933. SUCH SHARES MAY NOT BE RESOLD OR OTHERWISE TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION WITHOUT AN EXEMPTION UNDER THE SECURITIES ACT."

Parent agrees to cooperate in a timely manner with the holders of Registrable Securities to remove any restrictive legends or similar transfer instructions from the Registrable Securities upon the registration of the Registrable Securities or in the event that the Registrable Securities are otherwise transferable pursuant to an exemption from registration otherwise required thereunder.

Section 1.13 Additional Actions. If, at any time after the Effective Time, any further action is necessary, desirable or proper to carry out the purposes of this Agreement and to vest the Surviving Corporation with full right, title and possession to all assets, property, rights, privileges, powers and franchises of Company and Merger Sub, the Surviving Corporation and its proper officers and directors or their designees are fully authorized (to the fullest extent allowed under applicable Legal Requirements) to execute and deliver, in the name and on behalf of either Company or Merger Sub, all deeds, bills of sale,

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assignments and assurances and do, in the name and on behalf of Company or Merger Sub, all other acts and things necessary, desirable or proper to vest, perfect or confirm its right, title or interest in, to or under any of the rights, privileges, powers, franchises, properties or assets of Company or Merger Sub, as applicable, and otherwise to carry out the purposes of this Agreement.

ARTICLE II.

REPRESENTATIONS AND WARRANTIES OF COMPANY

Except as set forth in the corresponding sections or subsections of the Company Disclosure Schedule, the Company represents and warrants to Parent and Merger Sub as follows:

Section 2.01 Organization and Qualification; Charter Documents.

(a) Part 2.01(a) of the Company Disclosure Schedule identifies each Subsidiary of Company and indicates its jurisdiction of organization. Neither Company nor any of the Entities identified in Part 2.01(a) of the Company Disclosure Schedule owns any capital stock of, or any equity interest of any nature in, any other Entity, other than the Entities identified in Part 2.01(a) of the Company Disclosure Schedule. None of the Acquired Companies has agreed or is obligated to make, or is bound by any Contract under which it may become obligated to make, any future investment in or capital contribution to any other Entity.

(b) Each of the Acquired Companies is a corporation, limited liability company or similar entity duly organized, validly existing and, in jurisdictions that recognize the concept, is in good standing under the laws of the jurisdiction of its incorporation, formation or other establishment, as applicable, and has all necessary corporate power and authority: (i) to conduct its business in the manner in which its business is currently being conducted; (ii) to own and use its assets in the manner in which its assets are currently owned and used; and (iii) to perform its obligations under all Contracts by which it is bound.

(c) Each of the Acquired Companies (in jurisdictions that recognize the following concepts) is qualified to do business as a foreign corporation, and is in good standing, under the laws of all jurisdictions where the nature of its business requires such qualification except where the failure to be so qualified would not, individually or in the aggregate, have a Company Material Adverse Effect.

(d) Company has made available to Parent accurate and complete copies of: (a) the certificate of incorporation, bylaws and other charter and organizational documents of each Acquired Company, including all amendments thereto; (b) the stock records of each Acquired Company; and (c) the minutes and other records of the meetings and other proceedings (including any actions taken by written consent or otherwise without a meeting) of the stockholders of each Acquired Company, the board of directors of each Acquired Company and all committees of the board of directors of each Acquired Company. The books of account, stock records, minute books and other records of the Acquired Companies are accurate, up-to-date and complete in all material respects, and have been maintained in accordance with prudent business practices.

Section 2.02 Capital Structure.

(a) The authorized capital stock of Company consists of (i) 148,000,000 shares of Company Common Stock, par value $0.001 per share, of which 19,548,969 shares are issued and outstanding as of the date of this Agreement and (ii) 108,071,445 shares of Company Preferred Stock, par value $0.001 per share, (A) 57,002,183 shares are designated as Series A Preferred Stock, of which 56,672,658 shares are issued and outstanding as of the date of this Agreement and (B) 51,069,262 shares of which are designated as Series B Preferred Stock, of which 51,069,262 shares are issued and outstanding as of the date of this Agreement. No shares of capital stock are held in Company's treasury as of the date of this Agreement. All outstanding shares of Company Capital Stock are duly authorized, validly issued, fully paid and non-assessable and were issued in compliance with all applicable federal and state securities Legal Requirements.

(b) As of the date of this Agreement, (i) 19,222,032 shares of Company Common Stock are reserved for issuance to employees, consultants and non-employee directors pursuant to the Company Option Plan, under which options were outstanding for an aggregate of 19,222,027 shares of Company

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Common Stock and five shares or options to purchase shares of Company Common Stock remain available for grant or issuance and (ii) Company has reserved zero shares of Company Common Stock and 329,525 shares of Company Preferred Stock for issuance to holders of Company Warrants upon their exercise. All shares of Company Common Stock or Company Preferred Stock subject to issuance as aforesaid, upon issuance on the terms and conditions specified in the instruments pursuant to which they are issuable, would be duly authorized, validly issued, fully paid and non-assessable. Part 2.02(b) of the Company Disclosure Schedule lists each holder of Company Capital Stock and the number and type of shares of Company Capital Stock held by such holder, each outstanding Company Option and Company Warrant, the name of the holder of such Company Option or Company Warrant, the number of shares subject to such Company Option or Company Warrant, the exercise price of such Company Option or Company Warrant, the vesting schedule of such Company Option or Company Warrant and whether the exercisability of such Company Option or Company Warrant will be accelerated in any way by the transactions contemplated by this Agreement, indicating the extent of acceleration, if any. Except in the case of death or disability, all Company Options terminate if not exercised within 90 days following cessation of service.

(c) Except as set forth on Part 2.02(c) of the Company Disclosure Schedule: (i) none of the outstanding shares of Company Capital Stock are entitled or subject to any preemptive right, right of repurchase or forfeiture, right of participation, right of maintenance or any similar right; (ii) none of the outstanding shares of Company Capital Stock are subject to any right of first refusal in favor of Company or any other Person for which a waiver of such right of first refusal shall have not been obtained; (iii) there are no outstanding bonds, debentures, notes or other indebtedness of the Acquired Companies having a right to vote on any matters on which the Company Stockholders have a right to vote; (iv) there is no Contract to which the Acquired Companies are a party relating to the voting or registration of, or restricting any Person from purchasing, selling, pledging or otherwise disposing of (or from granting any option or similar right with respect to), any shares of Company Capital Stock. Except as set forth on Part 2.02(c) of the Company Disclosure Schedule, none of the Acquired Companies is under any obligation, or is bound by any Contract pursuant to which it may become obligated, to repurchase, redeem or otherwise acquire any outstanding shares of Company Capital Stock or other securities. Each share of Series A Preferred Stock is convertible into one share of Company Common Stock. Each share of Series B Preferred Stock is convertible into one share of Company Common Stock.

Section 2.03 Authority; Non-Contravention; Approvals.

(a) Company has the requisite corporate power and authority to enter into this Agreement and, subject to the Company Stockholder Approval, to perform its obligations hereunder and to consummate the Transactions. The execution and delivery of this Agreement by Company, the performance by Company of its obligations hereunder and the consummation by Company of the Transactions have been duly authorized by all necessary corporate action on the part of Company, subject only to the Company Stockholder Approval and the filing and recordation of the Certificate of Merger pursuant to Delaware Law. The affirmative vote of the holders of (i) a majority of the outstanding shares of all Company Capital Stock voting together on an as converted to Company Common Stock basis and (ii) a majority of the outstanding shares of Company Preferred Stock voting together on an as converted to Company Common Stock basis (the "Company Stockholder Approval"), is the only vote of the holders of any class or series of Company Capital Stock necessary to adopt this Agreement and approve the Merger and the other Transactions. This Agreement has been duly executed and delivered by Company and, assuming the due authorization, execution and delivery by Parent and Merger Sub, constitutes the valid and binding obligation of Company, enforceable in accordance with its terms, except as enforceability may be limited by bankruptcy and other similar laws and general principles of equity.

(b) Company's board of directors, by resolutions duly adopted by vote at a meeting of all directors of Company duly called and held and, as of the date of this Agreement, not subsequently rescinded or modified in any way, has, as of the date of this Agreement (i) approved this Agreement and the Merger, and determined that this Agreement and the Transactions, including the Merger, are

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fair to, and in the best interests of the Company Stockholders, and (ii) resolved to recommend that the Company Stockholders adopt this Agreement and approve the Merger and all other Transactions and directed that such matters be submitted for consideration of the Company Stockholders at the Company Stockholders' Meeting.

(c) The execution and delivery of this Agreement by Company does not, and the performance of this Agreement by Company will not, (i) conflict with or violate the certificate of incorporation or bylaws of Company or the equivalent organizational documents of any of its Subsidiaries, (ii) subject to obtaining the Company Stockholder Approval and compliance with the requirements set forth in Section 2.03(d) below, conflict with or violate any Legal Requirement applicable to Company or any of its Subsidiaries or by which its or any of their respective properties is bound or affected, except for any such conflicts or violations that would not, individually or in the aggregate, have a Company Material Adverse Effect or would not prevent or materially delay the consummation of the Merger, (iii) require an Acquired Company to make any filing with or give any notice to a Person, to obtain any Consent from a Person, or result in any breach of or constitute a default (or an event that with notice or lapse of time or both would become a default) under, or impair Company's rights or alter the rights of obligations of any third party under, or give to others any rights of termination, amendment, acceleration or cancellation of, or result in the creation of a lien or encumbrance on any of the properties or assets of Company or any of its Subsidiaries pursuant to, any Company Contract (as defined below), except as would not, individually or in the aggregate, have a Company Material Adverse Effect or prevent or materially delay the Merger or (iv) result in the creation of any Encumbrance (other than Permitted Liens) on any of the properties or assets of any Acquired Company, except as would not, individually or in the aggregate, have a Company Material Adverse Effect or prevent or materially delay the Merger.

(d) No material consent, approval, order or authorization of, or registration, declaration or filing with any Governmental Body is required by or with respect to the Company in connection with the execution and delivery of this Agreement or the consummation of the Transactions, except for (i) the filing of the Certificate of Merger with the Secretary of State of the State of Delaware; (ii) the filing of the Proxy Statement with the Securities and Exchange Commission ("SEC") in accordance with the Securities Exchange Act of 1934, as amended (the "Exchange Act"); (iii) such Consents, orders, registrations, declarations and filings as may be required under applicable federal and state securities laws and (iv) such Consents as may be required under (A) the HSR Act or (B) any other Legal Requirements that are designed or intended to prohibit, restrict, or regulate actions having the purpose or effect of monopolization or restraint of trade or significant impediments or lessening of competition or creation or strengthening of a dominant position through merger or acquisition ("Foreign Antitrust Laws" and, together with the HSR Act, the "Antitrust Laws"), in any case that are applicable to the transactions contemplated by this Agreement.

Section 2.04 Anti-Takeover Statutes Not Applicable. The board of directors of Company has taken all actions so that no state takeover statute or similar Legal Requirement applies or purports to apply to the execution, delivery or performance of this Agreement or to the consummation of the Merger or the other Transactions. The board of directors of Company has taken all action necessary to render inapplicable to this Agreement and the Transactions Section 203 of Delaware Law.

Section 2.05 Company Financial Statements; No Undisclosed Liabilities.

(a) The audited consolidated financial statements (including any related notes thereto) representing the financial condition of Company as of December 31, 2017 and December 31, 2016 and the unaudited financial statements (including the notes thereto) representing the financial condition of Company as of June 30, 2018 (collectively, the "Company Financials"), including any available quarterly financial statements (including any related notes thereto), (i) were prepared in accordance with United States generally accepted accounting principles ("GAAP") applied on a consistent basis throughout the periods involved (except as may be indicated in the notes thereto), (ii) fairly presented the consolidated financial position of Company and its Subsidiaries as at the respective dates thereof and the consolidated results of its operations and cash flows for the periods indicated, except that the unaudited interim financial statements were or are subject to normal and recurring year-end

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adjustments which were not, or are not expected to be, material in amount, and (iii) are consistent with, and have been prepared from, the books and records of Company. The balance sheet of Company as of June 30, 2018 is hereinafter referred to as the "Company Balance Sheet." Notwithstanding the foregoing, unaudited financial statements are subject to normal recurring year-end adjustments (the effect of which will not, individual or in the aggregate, be material) and the absence of footnotes.

(b) Each of Company and its Subsidiaries maintains a system of internal accounting controls designed to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Company and each of its Subsidiaries maintains internal controls over financial reporting that provides reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP.

(c) Since January 1, 2015 (the "Company Lookback Date"), there have been no formal investigations regarding financial reporting or accounting policies and practices discussed with, reviewed by or initiated at the direction of the chief executive officer, chief financial officer or general counsel of Company, the board of directors of Company or any committee thereof. Since the Company Lookback Date, neither the Company nor its independent auditors have identified (i) any significant deficiency or material weakness in the system of internal accounting controls utilized by Company, (ii) any fraud, whether or not material, that involves Company's management or other employees who have a role in the preparation of financial statements or the internal accounting controls utilized by Company, or (iii) any claim or allegation regarding any of the foregoing.

(d) Except as disclosed in the Company Financials, neither Company nor any of its Subsidiaries has any liabilities, Indebtedness, obligation, expense, claim, deficiency, guaranty, or endorsement of any kind, whether accrued, absolute, contingent, matured, or unmatured (whether or not required to be reflected in the financial statements in accordance with GAAP) (each, a "Liability") except Liabilities (i) identified in the Company Balance Sheet, (ii) incurred in connection with the Transactions, (iii) described on Part 2.05(d) of the Company Disclosure Schedule, (iv) incurred since the date of the Company Balance Sheet in the ordinary course of business consistent with past practices, (v) set forth in any Company Contract or (vi) would not have, individually or in the aggregate, a Company Material Adverse Effect.

Section 2.06 Absence Of Certain Changes Or Events. Since the date of the Company Balance Sheet through the date of this Agreement and other than with respect to the negotiation, execution and performance of this Agreement, each of the Acquired Companies has conducted its business only in the ordinary course of business consistent with past practice, and there has not been: (a) any event that has had a Company Material Adverse Effect, (b) any material change by Company in its accounting methods, principles or practices, except as required by concurrent changes in GAAP or as disclosed in the notes to the Company Financials, (c) any revaluation by Company of any of its assets having a Company Material Adverse Effect, or writing off notes or accounts receivable other than in the ordinary course of business, or (d) any other action, event or occurrence that would have required the consent of Parent pursuant to Section 4.01 of this Agreement had such action, event or occurrence taken place after the execution and delivery of this Agreement.

Section 2.07 Taxes.

(a) Each income and other material Tax Return that any Acquired Company was required to file under applicable Legal Requirements: (i) has been timely filed on or before the applicable due date (including any extensions of such due date) and (ii) is true and complete in all material respects. All material Taxes due and payable by Company or its Subsidiaries have been timely paid, except to the extent such amounts are being contested in good faith by Company or are properly reserved for on the books or records of Company and its Subsidiaries. No extension of time with respect to any date on

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which a Tax Return was required to be filed by an Acquired Company is in force (except where such Tax Return was filed), and no waiver or agreement by or with respect to an Acquired Company is in force for the extension of time for the payment, collection or assessment of any Taxes, and no request has been made by an Acquired Company in writing for any such extension or waiver (except, in each case, in connection with any request for extension of time for filing Tax Returns). There are no liens for Taxes on any asset of an Acquired Company other than liens for Taxes not yet due and payable, Taxes contested in good faith or that are otherwise not material and reserved against in accordance with GAAP. No deficiency with respect to Taxes has been proposed, asserted or assessed in writing against Company or its Subsidiaries which has not been fully paid or adequately reserved or reflected in the Company Financials.

(b) No closing agreements, private letter rulings, technical advice memoranda or similar agreements or rulings have been entered into by any Acquired Company with any taxing authority or issued by any taxing authority to an Acquired Company. There are no outstanding rulings of, or request for rulings with, any Governmental Body addressed to an Acquired Company that are, or if issued would be, binding on an Acquired Company.

(c) No Acquired Company is a party to any Contract with any third party relating to allocating or sharing the payment of, or liability for, Taxes or Tax benefits (other than pursuant to customary provisions included in credit agreements, leases, and agreements entered with employees, in each case, not primarily related to Taxes and entered into in the ordinary course of business). No Acquired Company has any liability for the Taxes of any third party under Treasury Regulation Section 1.1502-6 (or any similar provision of state, local or foreign Legal Requirement) as a transferee or successor or otherwise by operation of Legal Requirements.

(d) None of the Acquired Companies is a “controlled foreign corporation” within the meaning of Section 957 of the Code or “passive foreign investment company” within the meaning of Section 1297 of the Code.

(e) No Acquired Company has participated in, or is currently participating in, a “listed transaction” within the meaning of Treasury Regulation Section 1.6011-4(b)(2). Company has disclosed on its respective United States federal income Tax Returns all positions taken therein that could give rise to a substantial understatement of United States federal income Tax within the meaning of Section 6662 of the Code.

(f) Each Acquired Company is not (and has not been for the five-year period ending at the Effective Time) a “United States real property holding corporation” as defined in Section 897(c)(2) of the Code and the applicable Treasury Regulations.

(g) No Acquired Company has distributed stock of another Person, or has had its stock distributed by another Person, in a transaction that was purported or intended to be governed in whole or in part by Sections 355 or 361 of the Code.

(h) No Acquired Company has taken or agreed to take any action that would prevent the Merger from constituting a reorganization qualifying under Section 368 of the Code. No Acquired Company is aware of any agreement, plan or other circumstance that would prevent the Merger from qualifying as a reorganization under Section 368 of the Code.

Section 2.08 Intellectual Property. To the knowledge of Company, Company and its Subsidiaries own, or have rights to use, all patents, patent applications, trademarks, trademark applications, service marks, trade names, trade dress, trade secrets, know-how, software, inventions, copyrights, licenses and other intellectual property rights that are necessary or required for, or used in connection with, their respective businesses as presently conducted or as presently proposed to be conducted and which the failure to so have would reasonably be expected to have a Company Material Adverse Effect (collectively, the “Company Owned IP Rights”). Neither Company nor any of its Subsidiaries has received any written notice of a claim or otherwise has any knowledge of any claim that any Company Owned IP Right, or that the manufacture, sale, offer for sale, development, use or importation of any product, product candidate or service by or on behalf of Parent or its Subsidiaries, violates, misappropriates, or infringes the rights of any Person, except as would not have or reasonably be expected to have a Company Material Adverse Effect.

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Section 2.09 Compliance with Legal Requirements.

(a) Company and its Subsidiaries are not and have not been at any time in conflict with (i) any Legal Requirement, order, judgment or decree applicable to Company or any of its Subsidiaries or by which Company or any of its Subsidiaries are bound or affected (or to which the parent of Company is bound), or (ii) any Contract to which Company or any of its Subsidiaries is a party or by which Company or any of its Subsidiaries or its or any of their respective properties is bound or affected, except for any immaterial conflicts, defaults or violations. To Company's knowledge, no investigation or review by any Governmental Body is pending or, to the knowledge of Company, threatened against Company or its Subsidiaries, nor any product Commercialized or intended to be Commercialized by Company, nor has any Governmental Body indicated to an Acquired Company or its parent in writing an intention to conduct the same.

(b) Company and its Subsidiaries hold all permits, licenses, registrations, authorizations, variances, exemptions, orders and approvals from Governmental Bodies which are necessary to the operation of the business of Company and its Subsidiaries taken as a whole (collectively, the "Company Permits"). Company and its Subsidiaries are in compliance in all material respects with the terms of the Company Permits. No action, proceeding, revocation proceeding, amendment procedure, writ, injunction or claim is pending or, to the knowledge of Company, threatened, which seeks to revoke or limit any Company Permit. The rights and benefits of each Company Permit will be available to the Surviving Corporation immediately after the Effective Time on terms substantially identical to those enjoyed by Company immediately prior to the Effective Time. Company has made available to Parent all Company Permits and correspondence from the FDA or other comparable Governmental Body.

(c) The Acquired Companies and Persons acting in concert with and on behalf of Company:

(i)

have not used in any capacity the services of any individual or entity debarred, excluded, or disqualified under 21 U.S.C. Section 335a, 42 U.S.C. Section 1320a-7, 21 C.F.R. Section 312.70, or any similar laws, rules or regulations; and

(ii)

have not been convicted of any crime or engaged in any conduct that has resulted, or would reasonably be expected to result, in debarment, exclusion, or disqualification under 21 U.S.C. Section 335a, 42 U.S.C. Section 1320a-7, 21 C.F.R. Section 312.70, or any similar laws, rules regulations.

(d) None of the Acquired Companies, and to the knowledge of Company, no Representative of any of the Acquired Companies on their behalf with respect to any matter relating to any of the Acquired Companies, has: (i) used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses relating to political activity; (ii) made any unlawful payment to foreign or domestic government officials or employees or to foreign or domestic political parties or campaigns or violated any provision of the Foreign Corrupt Practices Act of 1977, as amended or (iii) made any other unlawful payment.

(e) No product or product candidate manufactured, tested, distributed, held, licensed or marketed ("Commercialized") by or on behalf of Company, or by or on behalf of any of the other Acquired Companies, has at any time been recalled, withdrawn, suspended or discontinued (whether voluntarily or otherwise). No Governmental Body or institutional review board or comparable body has commenced, or threatened to initiate, any proceeding seeking the recall, market withdrawal, suspension or withdrawal of approval, or seizure of any such product or product candidate; the imposition of material sales, marketing or production restriction on any such product or product candidate; or the suspension, termination or other restriction of preclinical or clinical research with respect to any such product candidate by or on behalf of any of the Acquired Companies, including any action regarding any investigator participating in any such research, nor is any such proceeding pending. Company has, prior to the execution of this Agreement, provided or made available to Parent all information about adverse drug experiences obtained or otherwise received by Company or by any of the Acquired Companies from any source, in the United States or outside the United States, including information derived from clinical investigations prior to any market authorization approvals, commercial marketing

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experience, postmarketing clinical investigations, postmarketing epidemiological/surveillance studies or registries, reports in the scientific literature, and unpublished scientific papers for any product or product candidate Commercialized by any of the Acquired Companies.

(f) Neither Company nor any of the Acquired Companies, or Persons acting in concert with or on behalf of Company or Acquired Companies or any officers, employees or agents of the same, has with respect to any product that is Commercialized by or on behalf of Company, or, any of the other Acquired Companies, made an untrue statement of a material fact or fraudulent statement to the FDA or any other Governmental Body, failed to disclose a material fact required to be disclosed to the FDA or any other Governmental Body, or committed an act, made a statement, or failed to make a statement that, at the time such disclosure was made, would reasonably be expected to provide a basis for the FDA to invoke its policy respecting "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities" set forth in 56 Fed. Reg. 46191 (September 10, 1991) or any other Governmental Body to invoke any similar policy.

(g) All pre-clinical and clinical studies conducted by or on behalf of Company relating to product or product candidates have been, or are being, conducted in all material respects in compliance with the applicable requirements of the FDA's Good Laboratory Practice and Good Clinical Practice requirements, including regulations under 21 C.F.R. Parts 50, 54, 56, 58, 312 and applicable guidance documents, as amended from time to time, the Animal Welfare Act, and all applicable similar requirements in other jurisdictions, including all requirements relating to protection of human subjects participating in any such clinical studies.

(h) Company and each of the Acquired Companies have, filed with the FDA, any other Governmental Body, and any institutional review board or comparable body, all required notices, supplemental applications, and annual or other reports, including adverse experience reports, with respect to each investigational new drug application or any comparable foreign regulatory application, related to the manufacture, testing, study, or sale of any of its products or product candidates, as applicable.

(i) Company and the Acquired Companies, and their Representatives, are and at all times have been, in compliance with, and the business of Company and the Acquired Companies (including the research, development, labeling, manufacture, testing, storage, use, sale, offer for sale, importation, and other distribution or commercial exploitation of any products Commercialized by or on behalf of Company) has been operated in accordance with, all Legal Requirements relating to health care regulatory matters, including to the extent applicable, each of the following:

(i) all applicable Legal Requirements of any Governmental Body, including the United States Department of Health and Human Services and its constituent agencies, the Centers for Medicare & Medicaid Services, the Office of Inspector General, and the FDA (collectively with other applicable federal, state or foreign regulatory authorities and any Governmental Bodies, "Regulatory Authorities"), including the federal Food, Drug, and Cosmetic Act (21 U.S.C. § 321 et seq.), the federal Anti-Kickback Statute (42 U.S.C. § 1320a-7b(b)), the Anti-Inducement Law (42 U.S.C. § 1320a-7a(a)(5)), the Federal Civil Monetary Penalties Law (42 U.S.C. §§ 1320a-7a and 1320a-7b), the Stark Law (42 U.S.C. § 1395nn), the Health Insurance Portability and Accountability Act of 1996 (42 U.S.C. § 1320d et seq.), the exclusion laws (42 U.S.C. § 1320a-7), the Physician Payments Sunshine Act (42 U.S.C. § 1320a-7h), and the implementing rules, regulations, and guidance documents promulgated pursuant to the foregoing laws, (ii) the applicable Legal Requirements precluding off-label marketing of drugs, devices and other health care products, (iii) all other United States laws and regulations with respect to the marketing, sale, pricing, price reporting, and reimbursement of drugs, devices and other health care products, including the provisions of the Federal False Claims Act, 31 U.S.C. §3729 et seq., the Medicare Program (Title XVIII of the Social Security Act), the Medicaid Program (Title XIX of the Social Security Act), and the regulations promulgated pursuant to such Legal Requirements, and (iv) any state, local or foreign equivalents to any of the foregoing. No event has occurred, and no condition or circumstance exists, that will constitute or result in a violation by Company or the Acquired Companies of, or a failure on the part of Company or the Acquired Companies to comply with, any such Legal Requirements.

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Section 2.10 Legal Proceedings; Orders.

(a) Except as set forth in Part 2.10(a) of the Company Disclosure Schedule, there is no pending Legal Proceeding, and no Person has threatened to commence any Legal Proceeding: (i) that involves any of the Acquired Companies, any business of any of the Acquired Companies or any of the assets owned, leased or used by any of the Acquired Companies; (ii) that challenges, or that may have the effect of preventing, delaying, making illegal or otherwise interfering with, the Merger or any of the other Transactions or (iii) that involves any product Commercialized by any of the Acquired Companies. None of the Legal Proceedings identified in Part 2.10(a) of the Company Disclosure Schedule has had or, if adversely determined, would reasonably be expected to have or result in a Company Material Adverse Effect. To the knowledge of Company, no event has occurred, and no claim, dispute or other condition or circumstance exists, that would reasonably be expected to give rise to or serve as a basis for the commencement of any Legal Proceeding of the type described in clause "(i)" or clause "(ii)" of the first sentence of this Section 2.10(a).

(b) There is no Order to which any of the Acquired Companies, or the assets owned or used by any of the Acquired Companies (including, without limitation, any product Commercialized or intended to be Commercialized by any of the Acquired Companies), is subject. To the knowledge of Company, no officer or other key employee of any of the Acquired Companies is subject to any Order that prohibits such officer or other employee from engaging in or continuing any conduct, activity or practice relating to the business of any of the Acquired Companies.

Section 2.11 Brokers' And Finders' Fees. Except as set forth in Part 2.11 of the Company Disclosure Schedule, no broker, finder or investment banker is entitled to any brokerage, finder's or other fee or commission in connection with the Merger or any of the other Transactions based upon arrangements made by or on behalf of any of the Acquired Companies.

Section 2.12 Employee Benefit Plans.

(a) Part 2.12(a) of the Company Disclosure Schedule sets forth, as of the date of this Agreement, a complete and accurate list of each material Employee Benefit Plan which is currently sponsored, maintained, contributed to, or required to be contributed to or with respect to which any potential liability is borne by any Acquired Company or any ERISA Affiliate of any Acquired Company (collectively, the "Company Employee Plans"). No Acquired Company nor, to the knowledge of Company, any other person or entity, has made any commitment to modify, change or terminate any Company Employee Plan, other than with respect to a modification, change or termination required by Legal Requirements. With respect to each material Company Employee Plan, Company has made available to Parent, accurate and complete copies of the following documents: (i) the plan document and any related trust agreement, including amendments thereto; (ii) any current summary plan descriptions and other material communications to participants relating to the plan; (iii) each plan trust, insurance, annuity or other funding contract or service provider agreement related thereto; (iv) the most recent plan financial statements and actuarial or other valuation reports prepared with respect thereto, if any; (v) the most recent IRS determination or opinion letter, if any; (vi) copies of the most recent plan year nondiscrimination and coverage testing results for each plan subject to such testing requirements; and (vii) the most recent annual reports (Form 5500) and all schedules attached thereto for each Company Employee Plan that is subject to ERISA and Code reporting requirements.

(b) Each Company Employee Plan is being, and has been, administered in accordance with its terms and in compliance with the requirements prescribed by any and all Legal Requirements (including ERISA and the Code), in all material respects. No Acquired Company is in material default under or material violation of, and has no knowledge of any material defaults or material violations by any other party to, any of Company Employee Plans. All contributions required to be made by any Acquired Company or any ERISA Affiliate of any Acquired Company to any Company Employee Plan have been timely paid or accrued on the most recent Company Financials on file with the SEC, if required under GAAP. Any Company Employee Plan intended to be qualified under Section 401(a) of the Code has either obtained from the Internal Revenue Service a favorable determination letter or opinion letter as to its qualified status under the Code, and to the knowledge of Company, no event has occurred and no condition exists with respect to the form or operation of such Company Employee Plan that would cause the loss of such qualification.

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(c) No Company Employee Plan provides retiree medical or other retiree welfare benefits to any person, except as required by COBRA. No suit, administrative proceeding or action has been brought, or to the knowledge of Company, is threatened against or with respect to any such Company Employee Plan, including any audit or inquiry by the Internal Revenue Service or the United States Department of Labor (other than routine claims for benefits arising under such plans).

(d) No Acquired Company nor any ERISA Affiliate of any Acquired Company has, during the past six (6) years from the date hereof, maintained, established, sponsored, participated in or contributed to, or is obligated to contribute to, or otherwise incurred any obligation or liability (including any contingent liability) under, any "multiemployer plan" (as defined in Section 3(37) of ERISA) or any "pension plan" (as defined in Section 3(2) of ERISA) subject to Title IV of ERISA or Section 412 of the Code. No Acquired Company nor any ERISA Affiliate of any Acquired Company has, as of the date of this Agreement, any actual or potential withdrawal liability (including any contingent liability) for any complete or partial withdrawal (as defined in Sections 4203 and 4205 of ERISA) from any multiemployer plan.

(e) Except as set forth in Part 2.12(e) of the Company Disclosure Schedule, consummation of the Merger will not (i) entitle any current or former employee or other service provider of any Acquired Company or any ERISA Affiliate of any Acquired Company to severance benefits or any other payment (including unemployment compensation, golden parachute, bonus or benefits under any Company Employee Plan); (ii) accelerate the time of payment or vesting of any such benefits or increase the amount of compensation due any such employee or service provider; (iii) result in the forgiveness of any indebtedness; (iv) result in any obligation to fund future benefits under any Company Employee Plan; or (v) result in the imposition of any restrictions with respect to the amendment or termination of any of Company Employee Plans. No benefit payable or that may become payable by any Acquired Company pursuant to any Company Employee Plan in connection with the transactions as a result of or arising under this Agreement will constitute an "excess parachute payment" (as defined in Section 280G(b)(1) of the Code) subject to the imposition of an excise Tax under Section 4999 of the Code or the deduction for which would be disallowed by reason of Section 280G of the Code.

Section 2.13 Title to Assets; Real Property.

(a) The Acquired Companies own, and have good, valid and marketable title to, or, in the case of leased assets, valid leasehold interests in or other rights to use, all tangible assets purported to be owned or leased by them. All of said assets are owned by the Acquired Companies free and clear of any Encumbrances, except for Permitted Liens.

(b) All material items of equipment and other tangible assets owned by or leased to the Acquired Companies are adequate for the uses to which they are being put, are in good condition and repair (ordinary wear and tear excepted) and are adequate for the conduct of the business of the Acquired Companies in the manner in which such businesses are currently being conducted immediately prior to the Effective Time. The Acquired Companies do not own and have never owned any real property or any interest in real property. Part 2.13(b) of the Company Disclosure Schedule sets forth a complete and accurate list of all real property leases to which Company is a party.

Section 2.14 Environmental Matters.

(a) No substance that has been designated by any Governmental Body or by applicable federal, state or local Legal Requirement, to be radioactive, toxic, hazardous or otherwise a danger to health (through exposure in the environment) or the environment, including, without limitation, PCBs, asbestos, petroleum, urea-formaldehyde and all substances listed as hazardous substances pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, or defined as a hazardous waste pursuant to the United States Resource Conservation and Recovery Act of 1976, as amended, and the regulations promulgated pursuant to said laws (a "Hazardous Material"), has been released, as a result of the deliberate actions of Company or any of its Subsidiaries, or, to Company's knowledge, as a result of any actions of any third party or otherwise, in,

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on or under any property, including the land and the improvements, ground water and surface water thereof, that Company or any of its Subsidiaries currently owns, operates, occupies or leases, in such quantities as would cause a Company Material Adverse Effect.

(b) Neither Company nor any of its Subsidiaries has, since the Company Lookback Date, transported, stored, used, manufactured, disposed of, or released Hazardous Materials (collectively, "Hazardous Material Activities") in material violation of any Legal Requirement in effect on or before the date hereof.

(c) Company and its Subsidiaries currently hold all environmental approvals, permits, licenses, clearances and consents (the "Company Environmental Permits") necessary for the conduct of Company's and its Subsidiaries' Hazardous Material Activities and other businesses of Company and its Subsidiaries as such activities and businesses are currently being conducted, except where the failure to so hold would not have a Company Material Adverse Effect.

(d) No material action, proceeding, revocation proceeding, amendment procedure, writ, injunction or claim is pending, or to the knowledge of Company, threatened concerning any Company Environmental Permit, Hazardous Material or any Hazardous Material Activity of Company or any of its Subsidiaries.

Section 2.15 Labor Matters.

(a) To the Company's knowledge, no key employee or group of employees has threatened to terminate employment with Company or has plans to terminate such employment.

(b) The Company is not a party to or bound by any collective bargaining agreement, nor has it experienced any strikes, grievances, claims of unfair labor practices or other collective bargaining disputes.

(c) Except as disclosed in Part 2.15(c) of the Company Disclosure Schedule, neither Company nor any of its Subsidiaries is a party to any written or oral: (i) agreement with any current or former employee the benefits of which are contingent upon, or the terms of which will be materially altered by, the consummation of the Merger or other Transactions; (ii) agreement with any current or former employee of Company providing any term of employment or compensation guarantee extending for a period longer than one year from the date hereof or for the payment of compensation in excess of $100,000 per annum; or (iii) agreement or plan the benefits of which will be increased, or the vesting of the benefits of which will be accelerated, upon the consummation of the Merger.

Section 2.16 Company Contracts.

(a) Except for Excluded Contracts or as set forth in Part 2.16 of the Company Disclosure Schedule, neither Company nor any of its Subsidiaries is a party to or is bound by:

(i)

any management, employment, severance, retention, transaction bonus, change in control, consulting, relocation, repatriation or expatriation agreement or other similar Contract between: (i) any of the Acquired Companies or any of their ERISA Affiliates; and (ii) any active, retired or former employees, directors or consultants of any Acquired Company or any of their ERISA Affiliates, other than any such Contract that is terminable "at will" (or following a notice period imposed by applicable Legal Requirements) without any obligation on the part of any Acquired Company or any of their ERISA Affiliates to make any severance, termination, change in control or similar payment or to provide any benefit, other than severance payments required to be made by any Acquired Company under applicable foreign Legal Requirements;

(ii)

any Contracts identified or required to be identified in Part 2.13(b) of the Company Disclosure Schedule;

(iii)

any Contract with any distributor, reseller or sales representative with an annual value in excess of $50,000;

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(iv)
any Contract with any manufacturer, vendor, or other Person for the supply of materials or performance of services by such third party to Company in relation to the manufacture of the Company's products or product candidates with an annual value in excess of $50,000;

(v)
any agreement or plan, including, without limitation, any stock option plan, stock appreciation right plan or stock purchase plan, any of the benefits of which will be increased, or the vesting of benefits of which will be accelerated, by the occurrence of any of the Transactions or the value of any of the benefits of which will be calculated on the basis of any of the Transactions;

(vi)
any Contract incorporating or relating to any guaranty, any warranty, any sharing of liabilities or any indemnity not entered into in the ordinary course of business, including any indemnification agreements between Company or any of its Subsidiaries and any of its officers or directors;

(vii)
any Contract imposing, by its express terms, any material restriction on the right or ability of any Acquired Company: (A) to compete with any other Person; (B) to acquire any product or other asset or any services from any other Person; or (C) to develop, sell, supply, distribute, offer, support or service any product or any technology or other asset to or for any other Person;

(viii)
any Contract currently in force relating to the disposition or acquisition of assets not in the ordinary course of business or any ownership interest in any corporation, partnership, joint venture or other business enterprise;

(ix)
any mortgages, indentures, loans or credit agreements, security agreements or other agreements or instruments relating to the borrowing of money or extension of credit in excess of $50,000;

(x)
any joint marketing or development agreement;

(xi)
any commercial Contract that would reasonably be expected to have a material effect on the ability of the Company to perform any of its material obligations under this Agreement, or to consummate any of the transactions contemplated by this Agreement, that is not set forth on Part 2.03 of the Company Disclosure Schedule;

(xii)
any Contract that provides for: (A) any right of first refusal, right of first negotiation, right of first notification or similar right with respect to any securities or assets of any Acquired Company for which a waiver of such right shall have not been obtained; or (B) any "no shop" provision or similar exclusivity provision with respect to any securities or assets of any Acquired Company; or

(xiii)
any Contract that contemplates or involves the payment or delivery of cash or other consideration in an amount or having a value in excess of $50,000 or more in the aggregate, or contemplates or involves the performance of services having a value in excess of $50,000 in the aggregate other than any arrangement or agreement expressly contemplated or provided for under this Agreement.

(b) Company has made available to Parent an accurate and complete copy of each Contract listed or required to be listed in Part 2.16 of the Company Disclosure Schedule (any such Contract, a "Company Contract"). Neither Company nor any of its Subsidiaries, nor to the Company's knowledge any other party to a Company Contract, has breached or violated in any material respect or materially defaulted under, or received written notice that it has breached, violated or defaulted under, any of the terms or conditions of any of the Company Contracts. To the knowledge of Company, no event has occurred, and no circumstance or condition exists, that (with or without notice or lapse of time) would reasonably be expected to: (i) result in a violation or breach in any material respect of any of the provisions of any Company Contract; (ii) give any Person the right to declare a default in any material respect under any Company Contract; (iii) give any Person the right to receive or require a rebate, chargeback, penalty or change in delivery schedule under any Company Contract; (iv) give any Person

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the right to accelerate the maturity or performance of any Company Contract; or (v) give any Person the right to cancel, terminate or modify any Company Contract. Each Company Contract is valid, binding, enforceable and in full force and effect, except as enforceability may be limited by bankruptcy and other similar laws and general principles of equity.

Section 2.17 Books And Records. The minute books of Company and its Subsidiaries made available to Parent or counsel for Parent are the only minute books of Company and contain accurate summaries, in all material respects, of all meetings of directors (or committees thereof) and stockholders or actions by written consent since the time of incorporation of Company or such Subsidiaries, as the case may be. The books and records of Company accurately reflect in all material respects the assets, liabilities, business, financial condition and results of operations of Company and have been maintained in accordance with good business and bookkeeping practices.

Section 2.18 Insurance.

(a) The Company or its Subsidiaries maintain all policies of fire, theft, casualty, general liability, workers compensation, business interruption, environmental, product liability and automobile insurance policies and bond and surety arrangements and other forms of insurance (the "Company Insurance Policies") in such amounts, with such deductibles and against such risks and losses that are necessary for the operation of the Company's and its Subsidiaries' businesses in all material respects. The Company Insurance Policies are in full force and effect, maintained with reputable companies against loss relating to the business, operations and properties and such other risks as companies engaged in similar business as the Acquired Companies would, in accordance with good business practice, customarily insure. All premiums due and payable under such Company Insurance Policies have been paid on a timely basis and each Acquired Company is in compliance in all material respects with all other terms thereof. True, complete and correct copies, of such Company Insurance Policies, or summaries of all terms material thereof, have been made available to Parent.

(b) There are no material claims pending under any Company Insurance Policies as to which coverage has been questioned, denied or disputed. All material claims thereunder have been filed in a due and timely fashion and no Acquired Company has been refused insurance for which it has applied or had any policy of insurance terminated (other than at its request), nor has any Acquired Company received notice from any insurance carrier that: (i) such insurance will be canceled or that coverage thereunder will be reduced or eliminated; or (ii) premium costs with respect to such insurance will be increased, other than premium increases in the ordinary course of business applicable on their terms to all holders of similar policies.

Section 2.19 Government Contracts. Company has not been suspended or debarred from bidding on contracts with any Governmental Body, and no such suspension or debarment has been initiated or threatened. The consummation of the Merger and other Transactions will not result in any such suspension or debarment of Company or Parent (other than any such suspension or debarment to the extent resulting from the Company becoming a subsidiary of Parent).

Section 2.20 Interested Party Transactions. No event has occurred during the past three years that would be required to be reported by Company as a Certain Relationship or Related Transaction pursuant to Item 404 of Regulation S-K, if Company were required to report such information in periodic reports pursuant to the Exchange Act.

Section 2.21 Disclosure; Company Information. The information relating to Company or its Subsidiaries to be supplied by or on behalf of Company for inclusion or incorporation by reference in the Proxy Statement will not, on the date the Proxy Statement is first mailed to the Parent stockholders or at the time of the Parent Stockholders' Meeting or at the time of any amendment or supplement thereof, contain any untrue statement of any material fact, or omit to state any material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they are made, not false or misleading at the time and in light of the circumstances under which such statement is made. Notwithstanding the foregoing, no representation is made by Company with respect to the information that has been or will be supplied by Parent and Merger Sub or any of their Representatives for inclusion in the Proxy Statement.

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ARTICLE III.

REPRESENTATIONS AND WARRANTIES OF PARENT AND MERGER SUB

Except as set forth in the corresponding sections or subsections of the Company Disclosure Schedule and except for any disclosure set forth in any of the Parent SEC Documents (excluding any "risk factor" sections thereof), Parent and Merger Sub represent and warrant to Company as follows:

Section 3.01 Organization and Qualification.

(a) Part 3.01(a) of the Parent Disclosure Schedule identifies each Subsidiary of Parent and indicates its jurisdiction of organization. Neither Parent nor any of the Entities identified in Part 3.01(a) of the Parent Disclosure Schedule owns any capital stock of, or any equity interest of any nature in, any other Entity, other than the Entities identified in Part 3.01(a) of the Parent Disclosure Schedule. None of the Acquiring Companies has agreed or is obligated to make, or is bound by any Contract under which it may become obligated to make, any future investment in or capital contribution to any other Entity.

(b) Parent is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware, Merger Sub is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware, and Parent and Merger Sub have all necessary corporate power and authority: (i) to conduct their businesses in the manner in which their businesses are currently being conducted; (ii) to own and use their assets in the manner in which their assets are currently owned and used; and (iii) to perform their obligations under all Contracts by which they are bound.

(c) Each of Parent and Merger Sub (in jurisdictions that recognize the following concepts) is qualified to do business as a foreign corporation, and is in good standing, under the laws of all jurisdictions where the nature of its business requires such qualification, except as would not have and would not reasonably be expected to have or result in a Parent Material Adverse Effect.

(d) The copies of the certificate of incorporation and bylaws of Parent which are incorporated by reference as exhibits to Parent's Annual Report on Form 10-K for the year ended December 31, 2017 are complete and correct copies of such documents and contain all amendments thereto as in effect on the date of this Agreement.

Section 3.02 Capital Structure.

(a) The authorized capital stock of Parent consists of 95,000,000 shares of Parent Common Stock, par value, $0.001, of which 5,005,210 shares are issued and outstanding (which includes 1,509,019 shares of restricted stock) as of the close of business on the day prior to the date hereof and 1,000,000 shares of Preferred Stock, par value $0.001 per share ("Parent Preferred Stock"), of which no shares are issued and outstanding as of the close of business on the day prior to the date hereof. No shares of capital stock are held in Parent's treasury. All outstanding shares of Parent Capital Stock are duly authorized, validly issued, fully paid and non-assessable and were issued in compliance with all applicable federal and state securities laws.

(b) As of the date of this Agreement, Parent had reserved an aggregate of 483,745 shares of Parent Common Stock, net of exercises, for issuance to employees, consultants and non-employee directors pursuant to the Parent Stock Option Plans, under which options were outstanding for an aggregate of 343,573 shares. 399,621 shares of Parent Common Stock, net of exercises, were reserved for issuance to holders of warrants to purchase Parent Common Stock upon their exercise. All shares of Parent Common Stock subject to issuance as aforesaid, upon issuance on the terms and conditions specified in the instruments pursuant to which they are issuable, would be duly authorized, validly issued, fully paid and non-assessable. Part 3.02(b) of the Parent Disclosure Schedule lists each outstanding option to purchase shares of Parent Capital Stock (a "Parent Option"), and the name of the holder thereof, the number of shares subject thereto, the exercise price thereof and the vesting schedule and post-termination exercise period thereof.

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(c) The shares of Parent Common Stock issuable as Merger Consideration, upon issuance on the terms and conditions contemplated in this Agreement, would be duly authorized, validly issued, fully paid and non-assessable.

(d) Except as set forth in Part 3.02(d) of the Parent Disclosure Schedule: (i) none of the outstanding shares of Parent Capital Stock are entitled or subject to any preemptive right, right of repurchase or forfeiture, right of participation, right of maintenance or any similar right; (ii) none of the outstanding shares of Parent Capital Stock are subject to any right of first refusal in favor of Parent; (iii) there are no outstanding bonds, debentures, notes or other indebtedness of the Acquiring Companies having a right to vote on any matters on which the stockholders of Parent have a right to vote; (iv) there is no Contract to which the Acquiring Companies are a party relating to the voting or registration of, or restricting any Person from purchasing, selling, pledging or otherwise disposing of (or from granting any option or similar right with respect to), any shares of Parent Capital Stock. None of the Acquiring Companies is under any obligation, or is bound by any Contract pursuant to which it may become obligated, to repurchase, redeem or otherwise acquire any outstanding shares of Parent Capital Stock or other securities.

Section 3.03 Authority; Non-Contravention; Approvals.

(a) Parent has the requisite corporate power and authority to enter into this Agreement and, subject to Parent Stockholder Approval, to perform its obligations hereunder and to consummate the Parent Transactions. The execution and delivery by Parent of this Agreement, the performance by Parent of its obligations hereunder and the consummation by Parent of the Parent Transactions have been duly authorized by all necessary corporate action on the part of Parent and Merger Sub, subject only to Parent Stockholder Approval, to adoption of this Agreement by Parent as sole stockholder of Merger Sub immediately following the execution hereof, the filing and recordation of the a certificate of amendment reflecting the matters contemplated pursuant to Section 1.04(c) (the "Parent Charter Amendment") and the filing and recordation of the Certificate of Merger pursuant to Delaware Law. The affirmative vote of the holders of a majority in voting power of the outstanding shares of Parent Common Stock outstanding on the applicable record date ("Parent Stockholder Approval") is the only vote of the holders of any class or series of Parent Capital Stock necessary to adopt or approve the Parent Stockholder Approval Matters. This Agreement has been duly executed and delivered by Parent and Merger Sub and, assuming the due authorization, execution and delivery of this Agreement by Company, this Agreement constitutes the valid and binding obligation of Parent and Merger Sub, enforceable in accordance with its terms, except as enforceability may be limited by bankruptcy and other similar laws and general principles of equity.

(b) Parent's board of directors, by resolutions duly adopted by a unanimous vote at a meeting of all directors of Parent duly called and held, or by unanimous written consent of the board of directors of Parent, and, as of the date of this Agreement, not subsequently rescinded or modified in any way, has, as of the date of this Agreement (i) approved this Agreement and the Merger, and determined that this Agreement and the Parent Transactions, including the Merger, are fair to, and in the best interests of Parent's stockholders, and (ii) resolved to recommend that Parent's stockholders approve the Parent Stockholder Approval Matters and directed that such matters be submitted for consideration of the stockholders of Parent at the Parent Stockholders' Meeting. The board of directors of Merger Sub has approved and declared advisable this Agreement and the Merger and submitted this Agreement to Parent, as its sole stockholder for adoption thereby. Immediately following the execution of this Agreement, Parent in its capacity as the sole stockholder of Merger Sub, shall execute a written consent adopting this Agreement.

(c) The execution and delivery of this Agreement by Parent and Merger Sub does not, and the performance of this Agreement by Parent or Merger Sub will not, (i) conflict with or violate the certificate of incorporation or bylaws of Parent or Merger Sub, (ii) subject to obtaining Parent Stockholder Approval and compliance with the requirements set forth in Section 3.03(d) below, conflict with or violate any Legal Requirement, order, judgment or decree applicable to Parent or Merger Sub or by which their respective properties are bound or affected, except for any such conflicts or violations that would not have a Parent Material Adverse Effect or would not prevent or materially

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delay the consummation of the Merger, or (iii) require an Acquiring Company to make any filing with or give any notice to or obtain any Consent from a Person pursuant to any Parent Contract, result in any breach of or constitute a default (or an event that with notice or lapse of time or both would become a default) under, or impair Parent's rights or alter the rights or obligations of any third party under, or give to others any rights of termination, amendment, acceleration or cancellation of, or result in the creation of a lien or encumbrance on any of the properties or assets of Parent pursuant to, any Parent Contract.

(d) No consent, approval, order or authorization of, or registration, declaration or filing with any Governmental Body is required by or with respect to Parent in connection with the execution and delivery of this Agreement or the consummation of the Parent Transactions, except for (i) the filing with the SEC of any outstanding periodic reports due under the Exchange Act, (ii) the filing of the Certificate of Merger with the Secretary of State of the State of Delaware, (iii) the filing of the Proxy Statement with the SEC in accordance with the Exchange Act, (iv) the filing of Current Reports on Form 8-K with the SEC within four business days after the execution of this Agreement and the Closing Date, (v) the filing of the Parent Charter Amendment with the Secretary of State of the State of Delaware in accordance with Section 5.15, (vii) such approvals as may be required under applicable state securities or "blue sky" laws or the rules and regulations of Nasdaq or other applicable national securities exchange or over-the-counter market and (viii) such consents as may be required under the Antitrust Laws, in any case that are applicable to the transactions contemplated by this Agreement.

Section 3.04 Anti-Takeover Statutes Not Applicable. The board of directors of Parent has taken all actions so that no state takeover statute or similar Legal Requirement applies or purports to apply to the execution, delivery or performance of this Agreement or to the consummation of the Merger or the other Transactions. The board of directors of Parent has taken all action necessary to render inapplicable to this Agreement and the Transactions Section 203 of Delaware Law.

Section 3.05 SEC Filings; Parent Financial Statements; No Undisclosed Liabilities.

(a) Parent has made available to Company accurate and complete copies of all registration statements, proxy statements, Certifications (as defined below) and other statements, reports, schedules, forms and other documents filed by Parent with or furnished by Parent to the SEC since January 1, 2015 (the "Parent Lookback Date") (the "Parent SEC Documents"), other than such documents that can be obtained on the SEC's website at www.sec.gov (the "SEC Website"). All Parent SEC Documents have been timely filed and, as of the time a Parent SEC Document was filed with the SEC (or, if amended or superseded by a filing prior to the date of this Agreement, then on the date of such filing): (i) each of the Parent SEC Documents complied in all material respects with the applicable requirements of the Securities Act of 1933, as amended (the "Securities Act"), or the Exchange Act (as the case may be) and (ii) none of the Parent SEC Documents contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. Each of the certifications and statements relating to the Parent SEC Documents required by: (1) the SEC's Order dated June 27, 2002 pursuant to Section 21(a)(1) of the Exchange Act (File No. 4-460); (2) Rule 13a-14 or 15d-14 under the Exchange Act; or (3) 18 U.S.C. §1350 (Section 906 of the Sarbanes-Oxley Act) is accurate and complete (the "Certifications"), and complied as to form and content with all applicable Legal Requirements in effect at the time such Parent Certification was filed with or furnished to the SEC. As used in this Section 3.05, the term "file" and variations thereof will be broadly construed to include any manner in which a document or information is furnished, supplied or otherwise made available to the SEC.

(b) Except for such comment letters or correspondence as can be obtained on the SEC Website or which Parent has made available in a data room for review by Company, from the Parent Lookback Date through the date hereof, Parent has not received any comment letter from the SEC or the staff thereof or any correspondence from the Nasdaq or the staff thereof relating to the delisting or maintenance of listing of the Parent Common Stock on the Nasdaq. Except as disclosed in the Parent

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SEC Documents or documents which Parent has made available in a data room for review by Company, Parent has no unresolved SEC comments. As of the date of this Agreement, Parent is in compliance in all material respects with the applicable listing and governance rules and regulations of the Nasdaq.

(c) Since the Parent Lookback Date, there have been no formal internal investigations regarding financial reporting or accounting policies and practices discussed with, reviewed by or initiated at the direction of the chief executive officer or chief financial officer of Parent, the board of directors of Parent or any committee thereof, other than ordinary course audits or reviews of accounting policies and practices or internal controls required by the Sarbanes-Oxley Act.

(d) Parent is in compliance in all material respects with the applicable provisions of the Sarbanes-Oxley Act that are effective as of the date of this Agreement.

(e) Parent and its Subsidiaries maintain disclosure controls and procedures required by Rule 13a-15 or 15d-15 under the Exchange Act. Such disclosure controls and procedures are designed to ensure that all material information (both financial and non-financial) required to be disclosed by Parent in the reports that it files, submits or furnishes under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC, and that all such information is accumulated and communicated to Parent's management as appropriate to allow timely decisions regarding required disclosure and to make the Certifications.

(f) The financial statements (including any related notes) contained or incorporated by reference in the Parent SEC Documents (the "Parent Financials"): (i) complied as to form in all material respects with the published rules and regulations of the SEC applicable thereto; (ii) were prepared in accordance with GAAP (except as may be indicated in the notes to such financial statements or, in the case of unaudited financial statements, as permitted the SEC, and except that the unaudited financial statements may not contain footnotes and are subject to normal and recurring year-end adjustments that are not reasonably expected to be material in amount) applied on a consistent basis unless otherwise noted therein throughout the periods indicated; (iii) fairly present the consolidated financial position of Parent as of the respective dates thereof and the consolidated results of operations and cash flows of Parent for the periods covered thereby. Parent has not effected any securitization transactions or "off-balance sheet arrangements" (as defined in Item 303(c) of SEC Regulation S-K). Other than as expressly disclosed in the Parent SEC Documents filed prior to the date hereof, there has been no material change in Parent's accounting methods or principles that would be required to be disclosed in Parent's Financials in accordance with GAAP.

(g) Except as disclosed in the Parent Financials, neither Parent nor any of its Subsidiaries has any Liabilities which are, individually or in the aggregate, material to the business, results of operations or financial condition of Parent and its Subsidiaries taken as a whole, except Liabilities (i) identified in the Parent Financials, (ii) incurred in connection with the Parent Transactions, (iii) disclosed in Part 3.05(g) of the Parent Disclosure Schedule, (iv) set forth in any Parent Contract, or (v) incurred since the date of the Parent Unaudited Interim Balance Sheet in the ordinary course of business.

Section 3.06 Absence Of Certain Changes Or Events. Since the date of the most recent periodic report on Form 10-Q filed by Parent with the SEC through the date of this Agreement, each of the Acquiring Companies has conducted its business in the ordinary course of business, and (a) there has not been any event that has had a Parent Material Adverse Effect; (b) no Acquiring Company has entered into or amended any material terms of any Contract, in each case providing for new obligations in excess of $100,000 or (c) incurred any Indebtedness.

Section 3.07 Taxes.

(a) Each of the income and other material Tax Returns that any Acquiring Company was required to file under applicable Legal Requirements: (i) has been timely filed on or before the applicable due date (including any extensions of such due date) and (ii) is true and complete in all material respects. All material Taxes due and payable by Parent or its Subsidiaries have been timely paid, except to the extent such amounts are being contested in good faith by Parent or are properly reserved for on the books or records of Parent and its Subsidiaries. No extension of time with respect to any date on

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which a Tax Return was required to be filed by an Acquiring Company is in force (except where such Tax Return was filed), and no waiver or agreement by or with respect to an Acquiring Company is in force for the extension of time for the payment, collection or assessment of any Taxes, and no request has been made by an Acquiring Company in writing for any such extension or waiver (except, in each case, in connection with any request for extension of time for filing Tax Returns). There are no liens for Taxes on any asset of an Acquiring Company other than liens for Taxes not yet due and payable, Taxes contested in good faith or that are otherwise not material and reserved against in accordance with GAAP. No deficiency with respect to Taxes has been proposed, asserted or assessed in writing against Parent or its Subsidiaries which has not been fully paid or adequately reserved or reflected in the SEC Documents.

(b) No closing agreements, private letter rulings, technical advice memoranda or similar agreements or rulings have been entered into by any Acquiring Company with any taxing authority or issued by any taxing authority to an Acquiring Company. There are no outstanding rulings of, or request for rulings with, any Governmental Body addressed to an Acquiring Company that are, or if issued would be, binding on any Acquiring Company.

(c) No Acquiring Company is a party to any Contract with any third party relating to allocating or sharing the payment of, or liability for, Taxes or Tax benefits (other than pursuant to customary provisions included in credit agreements, leases, and agreements entered with employees, in each case, not primarily related to Taxes and entered into in the ordinary course of business). No Acquiring Company has any liability for the Taxes of any third party under Treasury Regulation Section 1.1502-6 (or any similar provision of state, local or foreign Legal Requirement) as a transferee or successor or otherwise by operation of Legal Requirements.

(d) None of the Acquiring Companies is a “controlled foreign corporation” within the meaning of Section 957 of the Code or a “passive foreign investment company” within the meaning of Section 1297 of the Code.

(e) No Acquiring Company has participated in, or is currently participating in, a “listed transaction” within the meaning of Treasury Regulation Section 1.6011-4(b)(2). Parent has disclosed on its respective United States federal income Tax Returns all positions taken therein that could give rise to a substantial understatement of United States federal income Tax within the meaning of Section 6662 of the Code.

(f) Each Acquiring Company is not (and has not been for the five-year period ending at the Effective Time) a “United States real property holding corporation” as defined in Section 897(c)(2) of the Code and the applicable Treasury Regulations.

(g) No Acquiring Company has distributed stock of another Person, or has had its stock distributed by another Person, in a transaction that was purported or intended to be governed in whole or in part by Sections 355 or 361 of the Code.

(h) No Acquiring Company has taken or agreed to take any action that would prevent the Merger from constituting a reorganization qualifying under Section 368 of the Code. No Acquiring Company is aware of any agreement, plan or other circumstance that would prevent the Merger from qualifying as a reorganization under Section 368 of the Code.

Section 3.08 Intellectual Property. To the knowledge of Parent, Parent and its Subsidiaries have, or own rights to use, all patents, patent applications, trademarks, trademark applications, service marks, trade names, trade dress, trade secrets, know-how, software, inventions, copyrights, licenses and other intellectual property rights that are necessary or required for, or used in connection with their respective businesses as presently conducted and as presently proposed to be conducted and which the failure to so have would reasonably be expected to have a Parent Material Adverse Effect (collectively, the “Parent Owned IP Rights”). Neither Parent nor any of its Subsidiaries has received any written notice of a claim or otherwise has any knowledge of any claim that any Parent Owned IP Right, or that the manufacture, sale, offer for sale, development, use or importation of any product, product candidate or service by or on behalf of Parent or its Subsidiaries, violates, misappropriates or infringes upon rights of any Person, except as would not have or reasonably be expected to have a Parent Material Adverse Effect.

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Section 3.09 Compliance with Legal Requirements.

(a) Parent and its Subsidiaries are not and have not been at any time in conflict with (i) any Legal Requirement, order, judgment or decree applicable to Parent or any of its Subsidiaries or by which Parent or any of its Subsidiaries are bound or affected), or (ii) any Contract to which Parent or any of its Subsidiaries is a party or by which Parent or any of its Subsidiaries or its or any of their respective properties is bound or affected, except for any immaterial conflicts, defaults or violations. To Parent's knowledge, no investigation or review by any Governmental Body is pending or, to the knowledge of Parent, threatened against Parent or its Subsidiaries, nor any product Commercialized or intended to be Commercialized by Parent, nor has any Governmental Body indicated to an Acquiring Company or its parent in writing an intention to conduct the same.

(b) Parent and its Subsidiaries hold all permits, licenses, registrations, authorizations, variances, exemptions, orders and approvals from Governmental Bodies which are necessary to the operation of the business of Parent and its Subsidiaries taken as a whole (collectively, the "Parent Permits"). Parent and its Subsidiaries are in compliance in all material respects with the terms of the Parent Permits. No action, proceeding, revocation proceeding, amendment procedure, writ, injunction or claim is pending or, to the knowledge of Parent, threatened, which seeks to revoke or limit any Parent Permit. Except as set forth in Part 3.09(b) of the Parent Disclosure Schedule, the rights and benefits of each Parent Permit will be available to the Surviving Corporation immediately after the Effective Time on terms substantially identical to those enjoyed by Parent immediately prior to the Effective Time. Parent has made available to Company all Parent Permits and correspondence from the FDA or other comparable Governmental Body.

(c) The Acquiring Companies and Persons acting in concert with and on behalf of Parent:

(i)

have not used in any capacity the services of any individual or entity debarred, excluded, or disqualified under 21 U.S.C. Section 335a, 42 U.S.C. Section 1320a-7, 21 C.F.R. Section 312.70, or any similar laws, rules or regulations; and

(ii)

have not been convicted of any crime or engaged in any conduct that has resulted, or would reasonably be expected to result, in debarment, exclusion, or disqualification under 21 U.S.C. Section 335a, 42 U.S.C. Section 1320a-7, 21 C.F.R. Section 312.70, or any similar laws, rules regulations.

(d) None of the Acquiring Companies, and to the knowledge of Parent, no Representative of any of the Acquiring Companies on their behalf with respect to any matter relating to any of the Acquiring Companies, has: (i) used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses relating to political activity; (ii) made any unlawful payment to foreign or domestic government officials or employees or to foreign or domestic political parties or campaigns or violated any provision of the Foreign Corrupt Practices Act of 1977, as amended or (iii) made any other unlawful payment.

(e) No product or product candidate Commercialized by or on behalf of Parent, or by or on behalf of any of the other Acquiring Companies, has at any time been recalled, withdrawn, suspended or discontinued (whether voluntarily or otherwise). No Governmental Body or institutional review board or comparable body has commenced, or threatened to initiate, any proceeding seeking the recall, market withdrawal, suspension or withdrawal of approval, or seizure of any such product or product candidate; the imposition of material sales, marketing or production restriction on any such product or product candidate; or the suspension, termination or other restriction of preclinical or clinical research with respect to any such product candidate by or on behalf of any of the Acquiring Companies, including any action regarding any investigator participating in any such research, nor is any such proceeding pending. Parent has, prior to the execution of this Agreement, provided or made available to Company all information about adverse drug experiences obtained or otherwise received by Parent or by any of the Acquiring Companies from any source, in the United States or outside the United States, including information derived from clinical investigations prior to any market authorization

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approvals, commercial marketing experience, postmarketing clinical investigations, postmarketing epidemiological/surveillance studies or registries, reports in the scientific literature, and unpublished scientific papers relating to any product or product candidate Commercialized by any of the Acquiring Companies.

(f) Neither Parent nor any of the other Acquiring Companies, or Persons acting in concert with or on behalf of Parent or any of the other Acquiring Companies or any officers, employees or agents of the same, has with respect to any product that is Commercialized by or on behalf of the Parent, or, any of the other Acquiring Companies, made an untrue statement of a material fact or fraudulent statement to the FDA or any other Governmental Body, failed to disclose a material fact required to be disclosed to the FDA or any other Governmental Body, or committed an act, made a statement, or failed to make a statement that, at the time such disclosure was made, would reasonably be expected to provide a basis for the FDA to invoke its policy respecting "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities" set forth in 56 Fed. Reg. 46191 (September 10, 1991) or any other Governmental Body to invoke any similar policy.

(g) All pre-clinical and clinical studies relating to Parent product or product candidates have been, or are being, conducted in all material respects in compliance with the applicable requirements of the FDA's Good Laboratory Practice and Good Clinical Practice requirements, including regulations under 21 C.F.R. Parts 50, 54, 56, 58, 312 and applicable guidance documents, as amended from time to time, the Animal Welfare Act, and all applicable similar requirements in other jurisdictions, including all requirements relating to protection of human subjects participating in any such clinical studies.

(h) Parent has, and each of the other Acquiring Companies have, filed with the FDA, any other Governmental Body, and any institutional review board or comparable body, all required notices, supplemental applications, and annual or other reports, including adverse experience reports, with respect to each investigational new drug application or any comparable foreign regulatory application, related to the manufacture, testing, study, or sale of any of its products or product candidates, as applicable.

(i) Parent and the other Acquiring Companies, and their Representatives, are and at all times have been, in compliance with, and the business of Parent and the other Acquiring Companies (including the research, development, labeling, manufacture, testing, storage, use, sale, offer for sale, importation, and other distribution or commercial exploitation of any products Commercialized by or on behalf of Parent) has been operated in accordance with, all Legal Requirements relating to health care regulatory matters, including to the extent applicable, each of the following:

(i) all applicable Legal Requirements of any Regulatory Authorities, including the federal Food, Drug, and Cosmetic Act (21 U.S.C. § 321 et seq.), the federal Anti-Kickback Statute (42 U.S.C. § 1320a-7b(b)), the Anti-Inducement Law (42 U.S.C. § 1320a-7a(a)(5)), the Federal Civil Monetary Penalties Law (42 U.S.C. §§ 1320a-7a and 1320a-7b), the Stark Law (42 U.S.C. § 1395nn), the Health Insurance Portability and Accountability Act of 1996 (42 U.S.C. § 1320d et seq.), the exclusion laws (42 U.S.C. § 1320a-7), the Physician Payments Sunshine Act (42 U.S.C. § 1320a-7h), and the implementing rules, regulations, and guidance documents promulgated pursuant to the foregoing laws, (ii) the applicable Legal Requirements precluding off-label marketing of drugs, devices and other health care products, (iii) all other United States laws and regulations with respect to the marketing, sale, pricing, price reporting, and reimbursement of drugs, devices and other health care products, including the provisions of the Federal False Claims Act, 31 U.S.C. §3729 et seq., the Medicare Program (Title XVIII of the Social Security Act), the Medicaid Program (Title XIX of the Social Security Act), and the regulations promulgated pursuant to such Legal Requirements, and (iv) any state, local or foreign equivalents to any of the foregoing. No event has occurred, and no condition or circumstance exists, that will constitute or result in a violation by Parent or the other Acquiring Companies of, or a failure on the part of Parent or the other Acquiring Companies to comply with, any such Legal Requirements.

Section 3.10 Legal Proceedings; Orders.

(a) Except as set forth in Part 3.10(a) of the Parent Disclosure Schedule, there is no pending Legal Proceeding, and no Person has threatened in writing to commence any Legal Proceeding: (i) that involves any of the Acquiring Companies, any business of any of the Acquiring Companies or any of

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the assets owned, leased or used by any of the Acquiring Companies or (ii) that challenges, or that may have the effect of preventing, delaying, making illegal or otherwise interfering with, the Merger or any of the other Parent Transactions. Except as set forth in Part 3.10(a)(i) of the Parent Disclosure Schedule, none of the Legal Proceedings identified in Part 3.10(a) of the Parent Disclosure Schedule has had or, if adversely determined, would reasonably be expected to have or result in a Parent Material Adverse Effect. To the knowledge of Parent, no event has occurred, and no claim, dispute or other condition or circumstance exists, that would reasonably be expected to give rise to or serve as a basis for the commencement of any Legal Proceeding of the type described in clause "(i)" or clause "(ii)" of the first sentence of this Section 3.10(a).

(b) There is no Order to which any of the Acquiring Companies, or any material assets owned or used by any of the Acquiring Companies, is subject. To the knowledge of Parent, no officer or other key employee of any of the Acquiring Companies is subject to any Order that prohibits such officer or other key employee from engaging in or continuing any conduct, activity or practice relating to the business of any of the Acquiring Companies.

Section 3.11 Brokers' And Finders' Fees. Except as set forth in Part 3.11 of the Parent Disclosure Schedule, no broker, finder or investment banker is entitled to any brokerage, finder's or other fee or commission in connection with the Merger or any of the other Transactions based upon arrangements made by or on behalf of any of the Acquiring Companies.

Section 3.12 Employee Benefit Plans.

(a) Part 3.12(a) of the Parent Disclosure Schedule sets forth, as of the date of this Agreement, a complete and accurate list of each material Employee Benefit Plan which is currently sponsored, maintained, contributed to, or required to be contributed to or with respect to which any potential liability is borne by Parent or any ERISA Affiliate of Parent (collectively, the "Parent Employee Plans"). Neither Parent nor, to the knowledge of Parent, any other person or entity, has made any commitment to modify, change or terminate any Parent Employee Plan, other than with respect to a modification, change or termination required by Legal Requirements. With respect to each material Parent Employee Plan, Parent has made available to Company, accurate and complete copies of the following documents: (i) the plan document and any related trust agreement, including amendments thereto; (ii) any current summary plan descriptions and other material communications to participants relating to the plan; (iii) each plan trust, insurance, annuity or other funding contract or service provider agreement related thereto; (iv) the most recent plan financial statements and actuarial or other valuation reports prepared with respect thereto, if any; (v) the most recent IRS determination or opinion letter, if any; (vi) copies of the most recent plan year nondiscrimination and coverage testing results for each plan subject to such testing requirements; and (vii) the most recent annual reports (Form 5500) and all schedules attached thereto for each Parent Employee Plan that is subject to ERISA and Code reporting requirements.

(b) Each Parent Employee Plan is being, and has been, administered in accordance with its terms and in compliance with the requirements prescribed by any and all Legal Requirements (including ERISA and the Code), in all material respects. Parent is not in material default under or material violation of, and have no knowledge of any material defaults or material violations by any other party to, any of Parent Employee Plans. All contributions required to be made by Parent or any ERISA Affiliate to any Parent Employee Plan have been timely paid or accrued on the most recent Parent Financials on file with the SEC, if required under GAAP. Any Parent Employee Plan intended to be qualified under Section 401(a) of the Code has either obtained from the Internal Revenue Service a favorable determination letter or opinion letter as to its qualified status under the Code, and to the knowledge of Parent, no event has occurred and no condition exists with respect to the form or operation of such Parent Employee Plan that would cause the loss of such qualification.

(c) No Parent Employee Plan provides retiree medical or other retiree welfare benefits to any person, except as required by COBRA. No suit, administrative proceeding or action has been brought, or to the knowledge of Parent, is threatened against or with respect to any such Parent Employee Plan, including any audit or inquiry by the Internal Revenue Service or the United States Department of Labor (other than routine claims for benefits arising under such plans).

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(d) Neither Parent nor any ERISA Affiliate of Parent has, during the past six (6) years from the date hereof, maintained, established, sponsored, participated in or contributed to, or is obligated to contribute to, or otherwise incurred any obligation or liability (including any contingent liability) under, any "multiemployer plan" (as defined in Section 3(37) of ERISA) or any "pension plan" (as defined in Section 3(2) of ERISA) subject to Title IV of ERISA or Section 412 of the Code. Neither Parent nor any ERISA Affiliate has, as of the date of this Agreement, any actual or potential withdrawal liability (including any contingent liability) for any complete or partial withdrawal (as defined in Sections 4203 and 4205 of ERISA) from any multiemployer plan.

(e) Except as set forth in Part 3.12(e) of the Parent Disclosure Schedule, consummation of the Merger will not (i) entitle any current or former employee or other service provider of Parent or any ERISA Affiliate to severance benefits or any other payment (including unemployment compensation, golden parachute, bonus or benefits under any Parent Employee Plan); (ii) accelerate the time of payment or vesting of any such benefits or increase the amount of compensation due any such employee or service provider; (iii) result in the forgiveness of any indebtedness; (iv) result in any obligation to fund future benefits under any Parent Employee Plan; or (v) result in the imposition of any restrictions with respect to the amendment or termination of any of Parent Employee Plans. No benefit payable or that may become payable by Parent pursuant to any Parent Employee Plan in connection with the Parent Transactions or as a result of or arising under this Agreement will constitute an "excess parachute payment" (as defined in Section 280G(b)(1) of the Code) subject to the imposition of an excise Tax under Section 4999 of the Code or the deduction for which would be disallowed by reason of Section 280G of the Code.

Section 3.13 Title to Assets; Real Property.

(a) The Acquiring Companies own, and have good, valid and marketable title to, or, in the case of leased assets, valid leasehold interests in or other rights to use, all tangible assets purported to be owned or leased by them. All of said assets are owned or leased by the Acquiring Companies free and clear of any Encumbrances, except for Permitted Liens.

(b) The Acquiring Companies do not own and have not, since the Parent Lookback Date, owned any real property or any interest in real property, except for the leaseholders created under the real property leases identified in Part 3.13(b) of the Parent Disclosure Schedule.

Section 3.14 Environmental Matters.

(a) No Hazardous Material has been released as a result of the deliberate actions of Parent or any of its Subsidiaries, or, to Parent's knowledge, as a result of any actions of any third party or otherwise, in, on or under any property, including the land and the improvements, ground water and surface water thereof, that Parent or any of its Subsidiaries currently owns, operates, occupies or leases, in such quantities as would cause a Parent Material Adverse Effect.

(b) Neither Parent nor any of its Subsidiaries has engaged in Hazardous Material Activities in material violation of any Legal Requirement in effect on or before the date hereof.

(c) Parent and its Subsidiaries currently hold all environmental approvals, permits, licenses, clearances and consents (the "Parent Environmental Permits") necessary for the conduct of Parent's and its Subsidiaries' Hazardous Material Activities and other businesses of Parent and its Subsidiaries as such activities and businesses are currently being conducted, except where the failure to so hold would not have a Parent Material Adverse Effect.

(d) No material action, proceeding, revocation proceeding, amendment procedure, writ, injunction or claim is pending, or to the knowledge of Parent, threatened concerning any Parent Environmental Permit, Hazardous Material or any Hazardous Material Activity of Parent or any of its Subsidiaries.

Section 3.15 Parent Contracts.

(a) Except for Excluded Contracts or as set forth in the most recent exhibit list on Parent's Form 10-K for the year ended December 31, 2017 or subsequently filed with the SEC pursuant to any current or periodic report and available on the SEC Website or Parts 3.08(b) or 3.14 of the Parent Disclosure Schedule, neither Parent nor any of its Subsidiaries is a party to or is bound by:

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(i)
any management, employment, severance, retention, transaction bonus, change in control, material consulting, relocation, repatriation or expatriation agreement or other similar Contract between: (i) any of the Acquiring Companies and (ii) any active, retired or former employees, directors or material consultants of any Acquiring Company, other than any such Contract that is (x) terminable "at will" (or following a notice period imposed by applicable Legal Requirements or, in the case of consulting agreements, following the notice period required in the Contract), or (y) without any obligation on the part of any Acquiring Company, other than severance payments required to be made by any Acquiring Company under applicable Legal Requirements;

(ii)
any Contracts identified or required to be identified in Part 3.13(b) of the Parent Disclosure Schedule;

(iii)
any Contract with any distributor, reseller or sales representative with an annual value in excess of $100,000;

(iv)
any Contract with any manufacturer, vendor, or other Person for the supply of materials or performance of services by such third party to Parent in relation to the manufacture of the Parent's products or product candidates with an annual value in excess of $100,000;

(v)
any agreement or plan, including, without limitation, any stock option plan, stock appreciation right plan or stock purchase plan, any of the benefits of which will be increased, or the vesting of benefits of which will be accelerated, by the occurrence of any of the Parent Transactions or the value of any of the benefits of which will be calculated on the basis of any of the Parent Transactions;

(vi)
any Contract incorporating or relating to any guaranty, any warranty, any sharing of liabilities or any indemnity not entered into in the ordinary course of business, including any indemnification agreements between Parent or any of its Subsidiaries and any of its officers or directors;

(vii)
any Contract imposing, by its express terms, any material restriction on the right or ability of any Acquiring Company: (A) to compete with any other Person; (B) to acquire any product or other asset or any services from any other Person; or (C) to develop, sell, supply, distribute, offer, support or service any product or any technology or other asset to or for any other Person;

(viii)
any Contract currently in force relating to the disposition or acquisition of assets not in the ordinary course of business or any ownership interest in any corporation, partnership, joint venture or other business enterprise;

(ix)
any mortgages, indentures, loans or credit agreements, security agreements or other agreements or instruments relating to the borrowing of money or extension of credit;

(x)
any joint marketing or development agreement;

(xi)

any commercial Contract that would reasonably be expected to have a material effect on the ability of Parent to perform any of its material obligations under this Agreement, or to consummate any of the transactions contemplated by this Agreement, that is not set forth on Part 3.03 of the Company Disclosure Schedule;

(xii)
any Contract that provides for: (A) any right of first refusal, right of first negotiation, right of first notification or similar right with respect to any securities or assets of any Acquiring Company; or (B) any "no shop" provision or similar exclusivity provision with respect to any securities or assets of any Acquiring Company;

(xiii)
any Contract that contemplates or involves the payment or delivery of cash or other consideration in an amount or having a value in excess of $100,000 in the aggregate, or

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contemplates or involves the performance of services having a value in excess of $100,000 in the aggregate, in each case following the date of this Agreement, other than any arrangement or agreement expressly contemplated or provided for under this Agreement; or

(xiv)

any Contract that does not allow Parent or Subsidiary to terminate the Contract for convenience with no more than sixty (60) days prior notice to the other party and without the payment of any rebate, chargeback, penalty or other amount to such third party in connection with any such termination in an amount or having a value in excess of $100,000 in the aggregate.

(b) Parent has made available to Company an accurate and complete copy of each Contract listed or required to be listed in Part 3.14 of the Parent Disclosure Schedule (any such Contract, including any Contract that would be listed in Part 3.14 but for its inclusion in the most recent exhibit list of Parent's Form 10-K for the year ended December 31, 2017 or as an exhibit to any current or periodic report subsequently filed with the SEC, but excluding Excluded Contracts, a "Parent Contract"). Neither Parent nor any of its Subsidiaries, nor to Parent's knowledge any other party to a Parent Contract, has, since the Parent Lookback Date, breached or violated in any material respect or materially defaulted under, or received written notice that it has breached, violated or defaulted under, any of the terms or conditions of any of the Parent Contracts. To the knowledge of Parent, no event has occurred, and, no circumstance or condition exists, that (with or without notice or lapse of time) would reasonably be expected to: (i) result in a violation or breach in any material respect of any of the provisions of any Parent Contract or (ii) give any Person the right to declare a default in any material respect under any Parent Contract, except for any immaterial violations, breaches or defaults. To Parent's knowledge, each Parent Contract is valid, binding, enforceable and in full force and effect, except as enforceability may be limited by bankruptcy and other similar laws and general principles of equity.

Section 3.16 Insurance.

(a) Part 3.16(a) of the Parent Disclosure Schedule sets forth each material insurance policy (the "Parent Insurance Policies") to which Parent or its Subsidiaries is a party. Parent or its Subsidiaries maintain all Parent Insurance Policies in such amounts, with such deductibles and against such risks and losses that are reasonably adequate for the operation of Parent's and its Subsidiaries' businesses in all material respects. To Parent's knowledge, such Parent Insurance Policies are in full force and effect, maintained with reputable companies against loss relating to the business, operations and properties and such other risks as companies engaged in similar business as the Acquiring Companies would, in accordance with good business practice, customarily insure. Since the Parent Lookback Date, all premiums due and payable under such Parent Insurance Policies have been paid on a timely basis and each Acquiring Company is in compliance in all material respects with all other terms thereof. True, complete and correct copies, of such Parent Insurance Policies, or summaries of all terms material thereof, have been made available to the Company.

(b) There are no material claims pending under any Parent Insurance Policies as to which coverage has been questioned, denied or disputed. Since the Parent Lookback Date, all material claims thereunder have been filed in a due and timely fashion and no Acquiring Company has been refused insurance for which it has applied or had any policy of insurance terminated (other than at its request), nor has any Acquiring Company received notice from any insurance carrier that: (i) such insurance will be canceled or that coverage thereunder will be reduced or eliminated; or (ii) premium costs with respect to such insurance will be increased, other than premium increases in the ordinary course of business applicable on their terms to all holders of similar policies.

Section 3.17 Interested Party Transactions. Except as set forth in the SEC Documents, no event has occurred during the Parent Lookback Period that would be required to be reported by Parent as a Certain Relationship or Related Transaction pursuant to Item 404 of Regulation S-K.

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Section 3.18 Opinion of Financial Advisor. The board of directors of Parent has received an opinion of H.C. Wainwright & Co., financial advisor to Parent, dated the date of this Agreement, to the effect that the Exchange Ratio is fair to Parent from a financial point of view. Parent will furnish an accurate and complete copy of said opinion to Company for informational purposes only promptly after the date hereof.

Section 3.19 Shell Company Status. Parent is not an issuer identified in Rule 144(i)(1)(i) of the Securities Act.

Section 3.20 Valid Issuance. The Parent Common Stock to be issued in the Merger will, when issued in accordance with the provisions of this Agreement be validly issued, fully paid and nonassessable.

Section 3.21 Disclosure; Parent Information. The information relating to Parent or its Subsidiaries to be supplied by or on behalf of Parent for inclusion or incorporation by reference in the Proxy Statement will not, on the date the Proxy Statement is first mailed to Parent stockholders or at the time of the Parent Stockholders' Meeting, contain any untrue statement of any material fact, or omit to state any material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they are made, not false or misleading at the time and in light of the circumstances under which such statement is made. The Proxy Statement will comply in all material respects as to form with the requirements of the Exchange Act and the rules and regulations thereunder. Notwithstanding the foregoing, no representation is made by Parent or Merger Sub with respect to the information that has been or will be supplied by the Company or any of it Representatives for inclusion in the Proxy Statement.

ARTICLE IV.

CONDUCT OF BUSINESS PENDING THE MERGER

Section 4.01 Conduct of Company Business. During the period from the date of this Agreement and continuing until the earlier of the termination of this Agreement pursuant to its terms or the Effective Time (the "Pre-Closing Period"), Company agrees, except to the extent that Parent consents in writing (such consent not to be unreasonably withheld, conditioned or delayed), as set forth on Part 4.01 of the Company Disclosure Schedule, as expressly permitted by this Agreement, in connection with a Permitted Financing or by applicable Legal Requirements, to carry on its business in accordance with good commercial practice and to carry on its business in the usual, regular and ordinary course, consistent with past practice, to pay its debts and Taxes when due subject to good faith disputes over such debts or Taxes, to pay or perform other obligations when due, and use its commercially reasonable efforts consistent with past practices and policies to preserve intact its present business organization, keep available the services of its present officers and employees and preserve its relationships with customers, suppliers, distributors, licensors, licensees, and others with which it has business dealings. In addition, without limiting the foregoing, other than as expressly contemplated by this Agreement or in connection with a Permitted Financing, without obtaining the written consent of Parent, which shall not be unreasonably withheld (and in which event, if Parent has not objected in writing to any request for consent within 3 calendar days of its receipt thereof, such consent shall be deemed irrevocably granted), Company will not, and will not permit its Subsidiaries to, do any of the following:

(a) amend or otherwise change its certificate of incorporation or bylaws, or otherwise alter its corporate structure through merger, liquidation, reorganization or otherwise, except in connection with a Permitted Financing;

(b) issue, sell, pledge, dispose of or encumber, or authorize the issuance, sale, pledge, disposition or encumbrance of, any shares of capital stock of any class, or any options, warrants, convertible securities or other rights of any kind to acquire any shares of capital stock, or any other ownership interest (including, without limitation, any phantom interest), except for (i) the issuance of shares of Company Capital Stock issuable pursuant to employee stock options under currently existing employee stock option plans or pursuant to currently outstanding warrants or other rights to convert into or exercise for shares of Company Capital Stock, as the case may be, which options, warrants or rights, as the case may be, are outstanding on the date hereof and (ii) in connection with a Permitted Financing;

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(c) redeem, repurchase or otherwise acquire, directly or indirectly, any shares of Company Capital Stock (other than pursuant a repurchase right in favor of the Company with respect to unvested shares at no more than cost);

(d) incur any Indebtedness or sell any debt securities or guarantee any debt securities or other obligations of others or sell, pledge, dispose of or create an Encumbrance over any assets;

(e) (i) declare, set aside, make or pay any dividend or other distribution (whether in cash, stock or property or any combination thereof) in respect of any of its capital stock, except that a wholly owned Subsidiary may declare and pay a dividend to its parent; (ii) split, combine or reclassify any of its capital stock or issue or authorize or propose the issuance of any other securities in respect of, in lieu of or in substitution for shares of its capital stock or (iii) amend the terms of, repurchase, redeem or otherwise acquire, or permit any Subsidiary to repurchase, redeem or otherwise acquire, any of its securities or any securities of its Subsidiaries (except pursuant to any Contract to which an Acquired Company is a party as of the date of this Agreement), or propose to do any of the foregoing;

(f) accelerate, amend or change the period (or permit any acceleration, amendment or change) of exercisability of options or warrants or authorize cash payments in exchange for any options, except as may be required under any Company Stock Option Plan, Contract or this Agreement or as may be required by applicable Legal Requirements;

(g) sell, assign, transfer, license, sublicense or otherwise dispose of any Company IP Rights;

(h) (i) acquire (by merger, consolidation, or acquisition of stock or assets) any corporation, partnership or other business organization or division thereof or any other material property or assets, in each case with an individual value in excess of $50,000; (ii) enter into or amend any material terms of any Company Contract or grant any release or relinquishment of any material rights under any Company Contract, with new obligations or losses of rights in excess of $50,000; (iii) authorize any capital expenditures or purchase of fixed assets which are, in the aggregate, in excess of $50,000, taken as a whole or (iv) enter into or amend any contract, agreement, commitment or arrangement to effect any of the matters prohibited by this Section 4.01(h);

(i) forgive any loans to any Person, including its employees, officers, directors or Affiliates;

(j) take any action, other than as required by applicable Legal Requirements or GAAP, to change accounting policies or procedures;

(k) (i) increase the wages, salary, commissions, fringe benefits or other compensation or remuneration payable or to become payable to its directors, officers, employees or consultants; (ii) grant any severance or termination pay to, or enter into or amend any employment or severance agreement with, any director, officer, employee or consultant; (iii) establish, adopt, enter into, or amend any Employee Benefit Plan, except, in each of the subsections (i) – (iii) for bonus awards in the ordinary course of business consistent with past practice or bonus awards contingent upon the completion of the Transactions or payments, including any severance, termination or change of control payments, in compliance with any such agreements or plans existing as of the date of this Agreement and the plans, agreements or terms of which were made available to the Parent prior to the date hereof, or except as required by Legal Requirements;

(l) hire any directors, officers, employees or consultants or terminate any directors or officers, except in each case, in the ordinary course of business and in a manner consistent with past practice;

(m) make or change any material Tax election inconsistent with past practices, adopt or change any Tax accounting method, or settle or compromise any material federal, state, local or foreign Tax liability or agree to an extension of a statute of limitations for any assessment of any Tax;

(n) pay, discharge or satisfy any claims, liabilities or obligations (absolute, accrued, asserted or unasserted, contingent or otherwise), other than the payment, discharge or satisfaction in the ordinary course of business and consistent with past practice;

(o) otherwise take any actions other than in the ordinary course of business consistent with past practice;

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(p) enter into any material partnership arrangements, joint development agreements or strategic alliances;
(q) initiate any litigation, action, suit, proceeding, claim or arbitration or settle or agree to settle any litigation, action, suit, proceeding, claim or arbitration, in each case where the Company and its Subsidiaries are claiming, or would be reasonably likely to receive or become obligated for a liability, of more than $100,000 individually;
(r) except to the extent expressly permitted by this Agreement, take any action that is intended or that would reasonably be expected to, individually or in the aggregate, prevent, materially delay, or materially impede the consummation of the Merger, or the other Transactions; or
(s) take, or agree in writing or otherwise to take, any of the actions described in Sections 4.01(a) through (r) above.

Section 4.02 Conduct of Parent Business. During the Pre-Closing Period, Parent agrees, except to the extent that Company consents in writing (such consent not to be unreasonably withheld, conditioned or delayed), as set forth on Part 4.02 of the Company Disclosure Schedule, as expressly permitted by this Agreement, in connection with the Spin-Off (effected in compliance with the provisions of Section 5.29), in connection with the implementation of any alternative structures resulting in only the pre-Effective Time Parent shareholders of record receiving any interest in the Spin-Off (to the extent the Spin-Off is not consummated prior to, or concurrently with, the Effective Time) or by applicable Legal Requirements, to carry on its business in accordance with good commercial practice and to carry on its business in the usual, regular and ordinary course, in substantially the same manner as heretofore conducted, to pay its debts and Taxes when due subject to good faith disputes over such debts or Taxes, to pay or perform other material obligations when due, and use its commercially reasonable efforts consistent with past practices and policies to preserve intact its present business organization, preserve its relationships with key customers, suppliers, distributors, licensors, licensees and others with which it has business dealings. In addition, without limiting the foregoing, other than as set forth on Part 4.02 of the Company Disclosure Schedule or as expressly contemplated by this Agreement, without obtaining the written consent of Company, which shall not be unreasonably withheld, conditioned or delayed (and in which event, if Company has not objected in writing to any request for consent within 3 calendar days of its receipt thereof, such consent shall be deemed irrevocably granted), Parent will not, and will not permit its Subsidiaries to, do any of the following:
(a) except for the Parent Charter Amendment, amend or otherwise change its certificate of incorporation or bylaws, or otherwise alter its corporate structure through merger, liquidation, reorganization or otherwise, or form any subsidiary;
(b) issue, sell, pledge, dispose of or encumber, or authorize the issuance, sale, pledge, disposition or encumbrance of, any shares of capital stock of any class, or any options, warrants, convertible securities or other rights of any kind to acquire any shares of capital stock, or any other ownership interest (including, without limitation, any phantom interest), other than the issuance of shares of common stock issuable pursuant to employee stock options under currently existing employee stock option plans or pursuant to currently outstanding warrants, as the case may be, which options, warrants or rights, as the case may be, are outstanding on the date hereof) to the extent such issuances comply with all applicable Legal Requirements;
(c) redeem, repurchase or otherwise acquire, directly or indirectly, any shares of Parent Capital Stock;
(d) incur any Indebtedness or sell, pledge, dispose of or create an Encumbrance over any assets (except for (i) sales of assets in the ordinary course of business and in a manner consistent with past practice, and (ii) dispositions of obsolete or worthless assets);
(e) accelerate, amend or change the period (or permit any acceleration, amendment or change) of exercisability of options or warrants or authorize cash payments in exchange for any options, except as may be required under any Parent Stock Option Plan, Contract or this Agreement or as may be required by applicable Legal Requirements;

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(f) except for the Cash Dividend , (i) declare, set aside, make or pay any dividend or other distribution (whether in cash, stock or property or any combination thereof) in respect of any of its capital stock; (ii) split, combine or reclassify any of its capital stock or issue or authorize or propose the issuance of any other securities in respect of, in lieu of or in substitution for shares of its capital stock or (iii) amend the terms of, repurchase, redeem or otherwise acquire, or permit any Subsidiary to repurchase, redeem or otherwise acquire, any of its securities or any securities of its Subsidiaries (except pursuant to any Contract to which an Acquiring Company is a party as of the date of this Agreement), or propose to do any of the foregoing;

(g) sell, assign, transfer, license, sublicense or otherwise dispose of any Parent IP Rights (other than non-exclusive licenses in the ordinary course of business consistent with past practice);

(h) (i) acquire (by merger, consolidation, or acquisition of stock or assets) any corporation, partnership or other business organization or division thereof or any other material property or assets, or allow any material property or assets to become subject to any Encumbrance; (ii) other than with respect to the Yardley Lease, enter into or amend any material terms of any Parent Contract (other than solely to decrease any payment obligation of the Acquiring Company) or grant any release or relinquishment of any material rights under any Parent Contract, with new obligations or losses of rights in excess of $50,000 in the aggregate; (iii) authorize any capital expenditures or purchase of fixed assets which are, in the aggregate, in excess of $50,000, taken as a whole; or (iv) other than with respect to the Yardley Lease, enter into or amend any contract, agreement, commitment or arrangement to effect any of the matters prohibited by this Section 4.02(h);

(i) forgive any loans to any Person, including its employees, officers, directors or Affiliates;

(j) (i) increase the wages, salary, commissions, fringe benefits or other compensation or remuneration payable or to become payable to its directors, officers, employees or consultants; (ii) grant any severance or termination pay to, or enter into or amend any employment or severance agreement with, any director, officer, employee or consultant; (iii) establish, adopt, enter into, or amend any Employee Benefit Plan, except, in each of the subsections (i) – (iii) for bonus awards in the ordinary course of business consistent with past practice or bonus awards contingent upon the completion of the Transactions or payments, including any severance, termination or change of control payments, in compliance with any such agreements or plans existing as of the date of this Agreement and the plans, agreements or terms of which were made available to the Company prior to the date hereof, or except as required by Legal Requirements;

(k) hire any directors, officers, employees or consultants or terminate any directors or officers, except in each case, in the ordinary course of business and in a manner consistent with past practice;

(l) take any action, other than as required by applicable Legal Requirements or GAAP, to change accounting policies or procedures;

(m) make or change any material Tax election inconsistent with past practices, adopt or change any Tax accounting method, or settle or compromise any material federal, state, local or foreign Tax liability or agree to an extension of a statute of limitations for any assessment of any Tax;

(n) pay, discharge, satisfy, modify or renegotiate any claims or Liabilities, other than the payment, discharge or satisfaction of liabilities reflected or reserved against in the financial statements of Company, or payments, discharges or satisfactions made in the ordinary course of business and consistent with past practice;

(o) enter into any material partnership arrangements, joint development agreements or strategic alliances;

(p) accelerate the collection of, or otherwise modify Parent's customary accounting or treatment of, any receivables outside the ordinary course of business consistent with past practice,

(q) initiate any litigation, action, suit, proceeding, claim or arbitration or settle or agree to settle any litigation, action, suit, proceeding, claim or arbitration, in each case where Parent is claiming, or would be reasonably likely to receive or become obligated for a liability, of more than $100,000 individually;

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(r) dispose of any assets or otherwise take any actions other than in the ordinary course of business consistent with past practice;

(s) take any action that would cause the representation in Section 3.20 to become inaccurate;

(t) other than with respect to the Yardley Lease (provided, that, the Company has a reasonable opportunity to review and consent to any modification with respect to the Yardley Lease), enter into or amend or modify any Parent Contract or any lease with respect to material real estate or any other Contract or lease that, if in effect as of the date hereof would constitute a Parent Contract or lease with respect to material real estate hereunder; or

(u) except to the extent expressly permitted by this Agreement, take any action that is intended or that would reasonably be expected to, individually or in the aggregate, prevent, materially delay, or materially impede the consummation of the Merger, or the other Transactions;

(v) take, or agree in writing or otherwise to take, any of the actions described in Sections 4.02(a) through 4.02(u) above.

ARTICLE V.

ADDITIONAL AGREEMENTS

Section 5.01 Proxy Statement.

(a) As promptly as practicable after the date of this Agreement, the Parties shall prepare and cause to be filed with the SEC a preliminary Proxy Statement. Reasonably promptly following (i) confirmation by the SEC that it has no further comments or (ii) expiration of the 10-day waiting period contemplated by Rule 14a-6(a) promulgated under the Exchange Act, (A) Parent will cause the Proxy Statement in definitive form to be mailed to the stockholders of Parent and (B) Company will cause the Proxy Statement in definitive form to be mailed to stockholders of Company.

(b) Parent covenants and agrees that the Proxy Statement, including any pro forma financial statements included therein (and the letter to stockholders, notice of meeting and form of proxy included therewith), will not, at the time that the Proxy Statement or any amendment or supplement thereto is filed with the SEC or is first mailed to the stockholders of Parent, at the time of the Parent Stockholders' Meeting and at the Effective Time, contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements made therein, in light of the circumstances under which they were made, not misleading. Company represents, covenants and agrees that the information provided by Company or its Subsidiaries to Parent for inclusion in the Proxy Statement (including the Company Financials) will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make such information not misleading. Notwithstanding the foregoing, Parent makes no covenant, representation or warranty with respect to statements made in the Proxy Statement (and the letter to stockholders, notice of meeting and form of proxy included therewith), if any, based on information furnished in writing by Company specifically for inclusion therein. Each of the Parties shall use commercially reasonable efforts to cause the Proxy Statement to comply with the applicable rules and regulations promulgated by the SEC and to respond promptly to any comments of the SEC or its staff. Each of the Parties shall use commercially reasonable efforts to cause the Proxy Statement to be mailed to Parent's stockholders as promptly as practicable after the SEC concludes its review of the preliminary Proxy Statement or expiration of the 10-day waiting period contemplated by Rule 14a-6(a) promulgated under the Exchange Act. Each Party shall promptly furnish to the other Party all information concerning such Party and such Party's subsidiaries and such Party's stockholders that may be required or reasonably requested in connection with any action contemplated by this Section 5.01. If any event relating to Parent or Company occurs, or if Parent or Company becomes aware of any information, that should be disclosed in an amendment or supplement to the Proxy Statement, then Parent or Company, as applicable, shall promptly inform the other party thereof and shall cooperate with one another in filing such amendment or supplement with the SEC and, if appropriate, in mailing such amendment or supplement to Parent's stockholders. No filing of, or amendment or supplement to, the Proxy Statement will be made by Parent without the

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prior written consent of Company, which shall not be unreasonably withheld, conditioned or delayed. The Proxy Statement shall constitute a disclosure document for the offer and issuance of the shares of Parent Common Stock pursuant to this Agreement. Company and Parent shall each use commercially reasonable efforts to cause the Proxy Statement to comply with applicable federal and state securities laws requirements.

(c) Company shall reasonably cooperate with Parent and provide, and require its Representatives, advisors, accountants and attorneys to provide, Parent and its Representatives, advisors, accountants and attorneys, with all true, correct and complete information regarding Company that is required by law to be included in the Proxy Statement or reasonably requested from Company to be included in the Proxy Statement. The information provided by the Company to be included in the Proxy Statement shall not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements made therein, in light of the circumstances under which they were made, not misleading. Without limiting the foregoing, Company will use commercially reasonable efforts to cause to be delivered to Parent a letter of Company's independent accounting firm, dated no more than two (2) Business Days after the date of this Agreement.

Section 5.02 Company Stockholder Written Consent.

(a) As promptly as practicable, and in any event within five business days, following the earlier to occur of (i) confirmation by the SEC that it has no further comments on the Proxy Statement or (ii) expiration of the 10-day waiting period contemplated by Rule 14a-6(a) promulgated under the Exchange Act (the "Company Vote Deadline"), the Company shall obtain the approval by written consent from Company stockholders sufficient for the Company Stockholder Approval in lieu of a meeting pursuant to Section 228 of the DGCL ("Company Stockholder Written Consent") for purposes of (i) adopting this Agreement and approving the Merger, and all other Transactions (ii) acknowledging that the approval given thereby is irrevocable and that such Company Stockholder is aware of its rights to demand appraisal for its shares pursuant to Section 262 of Delaware Law, a copy of which was attached thereto, and that such Company Stockholder has received and read a copy of Section 262 of Delaware Law and (iii) acknowledging that by its approval of the Merger it is not entitled to appraisal rights with respect to its shares in connection with the Merger and thereby waives any rights to receive payment of the fair value of its Company Capital Stock under Delaware Law (collectively, the "Company Stockholder Matters"). Under no circumstances shall the Company assert that any other approval or consent is necessary by its stockholders to approve this Agreement and the Transactions. Without the prior written approval of Parent (not to be unreasonably withheld, conditioned or delayed), the Company Stockholder Written Consent shall not include any other approval or consent other than with respect to the Company Stockholder Matters and other any ancillary or related approvals customary or required in connection therewith.

(b) In connection with the solicitation of the Company Stockholder Written Consent, Company shall furnish to Parent, as promptly as possible, and in any event by the Company Vote Deadline, a copy of such executed Company Stockholder Written Consent.

(c) Company agrees that, subject to Section 5.02(d): (i) Company's board of directors shall recommend that the holders of Company Capital Stock vote (or take action by written consent) to approve the Company Stockholder Approval Matters and shall use commercially reasonable efforts to solicit such approval within the timeframe set forth in Section 5.02(a) above (the recommendation of Company's board of directors that Company's stockholders vote to approve the Company Stockholder Approval Matters being referred to as the "Company Board Recommendation"); and (ii) the Company Board Recommendation shall not be withdrawn or modified in a manner adverse to Parent, and no resolution by the board of directors of Company or any committee thereof to withdraw or modify the Company Board Recommendation in a manner adverse to Parent shall be adopted or proposed.

(d) Notwithstanding anything to the contrary contained in Section 5.02(c), at any time prior to the approval of the Company Stockholder Approval Matters by the Company Stockholder Approval, the Company Board Recommendation may be withdrawn or modified (a "Company Change in Recommendation") if the board of directors of Company concludes in good faith, after having

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consulted with Company's outside legal counsel and financial advisors, that as a result of Company's receipt of an Acquisition Proposal that did not result from a violation of Section 5.12 that constitutes a Company Superior Offer, and the withdrawal or modification of the Company Board Recommendation is required in order for the board of directors of Company to comply with its fiduciary obligations to Company's stockholders under applicable Legal Requirements; provided, however, that prior to taking any action permitted under this Section 5.02(d), Parent shall provide Company with four (4) Business Days' prior written notice advising Parent that it intends to effect such withdrawal or modification to the Company Board Recommendation and specifying, in reasonable detail, the reasons therefor (including, in the case of an Acquisition Proposal, the information required by Section 5.12(b) and during such four (4) Business Day period, (i) Company shall negotiate, and cause its Representatives to negotiate, with Parent in good faith (to the extent Parent wishes to negotiate) to enable Parent to determine whether to propose revisions to the terms of this Agreement such that it would obviate the need for Company's board of directors to effect such withdrawal or modification, and (ii) Company shall consider in good faith any proposal by Parent to amend the terms and conditions of this Agreement in a manner that would obviate the need to effect such withdrawal or change of the Company Board Recommendation.

(e) Notwithstanding the occurrence of any Company Change in Recommendation, Company shall nonetheless solicit the Company Stockholder Written Consent.

(f) Nothing contained in this Agreement shall prohibit Company or its board of directors from (i) taking and disclosing to the stockholders of Company a position as contemplated by Rule 14e-2(a) under the Exchange Act or complying with the provisions of Rule 14d-9 under the Exchange Act (other than Rule 14d-9(f) under the Exchange Act) or (ii) making a "stop, look and listen" communication to the stockholders of Company pursuant to Rule 14d-9(f) under the Exchange Act, in each case provided Company has otherwise complied with the terms of this Section 5.02, provided, however, that any disclosure made by Company or its board of directors pursuant to Rules 14d-9 or 14e-2(a) will be limited to a statement that Company is unable to take a position with respect to the bidder's tender offer unless the board of directors of Comapny determines in good faith, after consultation with its outside legal counsel, that such statement would result in a breach of its fiduciary duties under applicable Legal Requirements; provided, further, that (A) in the case of each of the foregoing clauses (i) and (ii), any such disclosure or public statement shall be deemed to be a Company Change in Recommendation subject to the terms and conditions of this Agreement unless Company's board of directors reaffirms the Company Board Recommendation in such disclosure or public statement; and (B) Company shall not affect a Company Change in Recommendation unless specifically permitted pursuant to the terms of Section 5.02(d).

(g) Promptly following receipt of the Company Stockholder Approval, the Company shall prepare and mail a notice (the "Stockholder Notice") to every stockholder of the Company that did not execute the Company Stockholder Written Consent. The Stockholder Notice shall (i) be a statement to the effect that the Company Board determined that the Merger is advisable in accordance with Section 251(b) of Delaware Law and in the best interests of the stockholders of the Company and approved and adopted this Agreement, the Merger and the other Transactions, (ii) provide the stockholders of the Company to whom it is sent with notice of the actions taken in the Company Stockholder Written Consent, including the adoption and approval of this Agreement, the Merger and the other Transactions in accordance with Section 228(e) of Delaware Law and the certificate of incorporation and bylaws of the Company and (iii) include a description of the appraisal rights of the Company's stockholders available under Delaware Law, along with such other information as is required thereunder and pursuant to applicable Law and a copy of Section 262 of Delaware Law. All materials (including any amendments thereto) submitted to the stockholders of the Company in accordance with this Section 5.02(b) shall be subject to Parent's advance review and reasonable approval.

Section 5.03 Parent Stockholders' Meeting.

(a) Parent shall (i) take all action necessary under applicable Legal Requirements to call, give notice of and hold a meeting of the holders of Parent Common Stock (such meeting, the "Parent Stockholders' Meeting") to vote on the Merger, the issuance of Parent Common Stock in the Merger,

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the Parent Charter Amendment, including for purposes of effectuating Reverse Split, and, to the extent required by the rules and regulations of Nasdaq(collectively, the "Parent Stockholder Approval Matters") and (ii) mail to Parent Stockholders as of the record date established for the Parent Stockholders' Meeting, the Proxy Statement. The Parent Stockholders' Meeting shall be held as promptly as practicable, and in any event within 50 days, following the earlier to occur of (A) confirmation by the SEC that it has no further comments or (B) expiration of the 10-day waiting period contemplated by Rule 14a-6(a) promulgated under the Exchange Act (as extended pursuant to any adjournment or postponement permitted below, the "Parent Vote Deadline"). Parent shall take reasonable measures to ensure that all proxies solicited in connection with the Parent Stockholders' Meeting are solicited in compliance with all applicable Legal Requirements. Notwithstanding anything to the contrary contained herein, if on a date preceding the date on which or the date on which the Parent Stockholders' Meeting is scheduled, Parent reasonably believes that (A) it will not receive proxies sufficient to obtain the Parent Stockholder Approval, whether or not a quorum would be present or (B) it will not have sufficient shares of Parent Common Stock represented (either in person or by proxy) to constitute a quorum necessary to conduct the business of the Parent Stockholders' Meeting, Parent may, in its sole discretion, postpone or adjourn, or make one or more successive postponements or adjournments of, the Parent Stockholders' Meeting as long as the date of the Parent Stockholders' Meeting is not postponed or adjourned more than an aggregate of 60 calendar days in connection with any postponements or adjournments in reliance on the preceding sentence.

(b) Parent agrees that, subject to Section 5.03(c): (i) Parent's board of directors shall recommend that the holders of Parent Common Stock vote to approve the Parent Stockholder Approval Matters and shall use commercially reasonable efforts to solicit such approval within the timeframe set forth in Section 5.03(a) above; (ii) the Proxy Statement shall include a statement to the effect that the board of directors of Parent recommends that Parent's stockholders vote to approve the Parent Stockholder Approval Matters (the recommendation of Parent's board of directors that Parent's stockholders vote to approve the Parent Stockholder Approval Matters being referred to as the "Parent Board Recommendation"); (iii) the Parent Board Recommendation shall not be withdrawn or modified in a manner adverse to Company, and no resolution by the board of directors of Parent or any committee thereof to withdraw or modify the Parent Board Recommendation in a manner adverse to Company shall be adopted or proposed; and (iv) Parent shall use its reasonable best efforts to obtain from its stockholders the Parent Stockholder Approval, including by soliciting proxies in favor thereof.

(c) Notwithstanding anything to the contrary contained in Section 5.03(b), at any time prior to the approval of the Parent Stockholder Approval Matters by the Parent Stockholder Approval, the Parent Board Recommendation may be withdrawn or modified (a "Parent Change in Recommendation") if the board of directors of Parent concludes in good faith, after having consulted with Parent's outside legal counsel and financial advisors, that as a result of Parent's receipt of an Acquisition Proposal that did not result from a violation of Section 5.13 that constitutes a Superior Offer, and the withdrawal or modification of the Parent Board Recommendation is required in order for the board of directors of Parent to comply with its fiduciary obligations to Parent's stockholders under applicable Legal Requirements; provided, however, that prior to Parent taking any action permitted under this Section 5.03(c), Parent shall provide Company with four (4) Business Days' prior written notice advising the Company that it intends to effect such withdrawal or modification to the Parent Board Recommendation and specifying, in reasonable detail, the reasons therefor (including, in the case of an Acquisition Proposal, the information required by Section 5.13(b) and during such four (4) Business Day period, (i) Parent shall negotiate, and cause its Representatives to negotiate, with Company in good faith (to the extent Company wishes to negotiate) to enable Company to determine whether to propose revisions to the terms of this Agreement such that it would obviate the need for Parent's board of directors to effect such withdrawal or modification, and (ii) Parent shall consider in good faith any proposal by Company to amend the terms and conditions of this Agreement in a manner that would obviate the need to effect such withdrawal or change of the Parent Board Recommendation.

(d) Notwithstanding the occurrence of any Parent Change in Recommendation, Parent shall nonetheless submit this Agreement to the Parent Stockholders for adoption at the Parent Stockholders Meeting unless this Agreement is terminated in accordance with Article VII prior to the Parent Stockholders Meeting.

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(e) Nothing contained in this Agreement shall prohibit Parent or its board of directors from (i) taking and disclosing to the stockholders of Parent a position as contemplated by Rule 14e-2(a) under the Exchange Act or complying with the provisions of Rule 14d-9 under the Exchange Act (other than Rule 14d-9(f) under the Exchange Act) or (ii) making a "stop, look and listen" communication to the stockholders of Parent pursuant to Rule 14d-9(f) under the Exchange Act, in each case provided Parent has otherwise complied with the terms of this Section 5.03, provided, however, that any disclosure made by Parent or its board of directors pursuant to Rules 14d-9 or 14e-2(a) will be limited to a statement that Parent is unable to take a position with respect to the bidder's tender offer unless the board of directors of Parent determines in good faith, after consultation with its outside legal counsel, that such statement would result in a breach of its fiduciary duties under applicable Legal Requirements; provided, further, that (A) in the case of each of the foregoing clauses (i) and (ii), any such disclosure or public statement shall be deemed to be a Parent Change in Recommendation subject to the terms and conditions of this Agreement unless Parent's board of directors reaffirms the Parent Board Recommendation in such disclosure or public statement; and (B) Parent shall not affect a Parent Change in Recommendation unless specifically permitted pursuant to the terms of Section 5.03(c).

Section 5.04 Access to Information; Confidentiality. During the Pre-Closing Period, and upon reasonable notice and subject to restrictions contained in confidentiality agreements to which such party is subject, Company and Parent will each afford to the officers, employees, accountants, counsel and other Representatives of the other party, reasonable access, during the Pre-Closing Period, to all its properties, books, contracts, commitments and records (including, without limitation, Tax records) and, during such period, Company and Parent each will furnish promptly to the other all information concerning its business, properties and personnel as such other party may reasonably request, and each will make available to the other the appropriate individuals (including attorneys, accountants and other professionals) for discussion of the other's business, properties and personnel as either party may reasonably request; provided, that each of Company and Parent reserves the right to withhold any information if access to such information would be reasonably likely to result in any such party forfeiting attorney-client privilege between it and its counsel with respect to such information, in which event such party shall cause such information to be delivered in a form or summary, including any redactions that may be necessary, so as to provide as much requested information as reasonably practicable while retaining such privilege. Without limiting the generality of the foregoing, during the Pre-Closing Period, the Company and Parent will promptly provide the other party with copies of: (a) all material operating and financial reports prepared by Company or Parent (or their respective Representatives), as applicable, for such party's senior management, including copies of any sales forecasts, marketing plans, development plans, discount reports, write-off reports, hiring reports and capital expenditure reports; (b) any written materials or communications sent by or on behalf of such party to its stockholders; (c) any material notice, document or other communication sent by or on behalf of any of such party to any third party to any Company Contract or Parent Contract, as applicable, or sent to Company or Parent by any third party to any Company Contract or Parent Contract, as applicable, (other than any communication that relates solely to routine commercial transactions and that is of the type sent in the ordinary course of business and consistent with past practices); (d) any notice, report or other document filed with or sent to any Governmental Body in connection with the Merger or any of the other Transactions; and (e) any material notice, report or other document received from any Governmental Body. Each party will keep such information confidential in accordance with the terms of the currently effective confidentiality agreement (the "Confidentiality Agreement") between Parent and Company; provided, that the Company may make disclosure of such information to its stockholders or other third parties as may be reasonably necessary to enable the Company to comply with its obligations under this Agreement, including without limitation under Section 5.02 hereof.

Section 5.05 Regulatory Approvals and Related Matters. Each Party shall use commercially reasonable efforts to file or otherwise submit, as soon as practicable after the date of this Agreement, all applications, notices, reports and other documents reasonably required to be filed by such Party with or otherwise submitted by such Party to any Governmental Body with respect to the Merger, and to submit promptly any additional information requested by any such Governmental Body. Without limiting the generality of the foregoing, the Parties shall, promptly after the date of this Agreement, prepare and file, if any, (a) the

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notification and report forms required to be filed under the HSR Act and (b) any notification or other document required to be filed in connection with the Merger under any applicable foreign Legal Requirement relating to antitrust or competition matters. Parent and Company shall respond as promptly as is practicable to respond in compliance with: (i) any inquiries or requests received from the Federal Trade Commission or the Department of Justice for additional information or documentation; and (ii) any inquiries or requests received from any state attorney general, foreign antitrust or competition authority or other Governmental Body in connection with antitrust or competition matters.

Section 5.06 Director Indemnification and Insurance.

(a) From and after the Effective Time, Parent and the Surviving Corporation will fulfill and honor in all respects the obligations of Company and Parent which exist prior to the date hereof to indemnify Company's and Parent's present and former directors and officers and their heirs, executors and assigns (each, a "D&O Indemnified Party"). The Company directors and officers who become directors and officers of the Surviving Corporation and Parent will enter into Parent's standard indemnification agreement, which will be in addition to any other contractual rights to indemnification. The certificate of incorporation and bylaws of the Surviving Corporation will contain provisions at least as favorable as the provisions relating to the indemnification and elimination of liability for monetary damages set forth in the certificate of incorporation and bylaws of Company, and the provisions relating to the indemnification and elimination of liability for monetary damages set forth in the certificate of incorporation and bylaws of Company and Parent will not be amended, repealed or otherwise modified for a period of six (6) years from the Effective Time in any manner that would adversely affect the rights thereunder of individuals who, at the Effective Time, were directors, officers, employees or agents of Company or Parent, unless such modification is required by Legal Requirements.

(b) Effective as of the Effective Time, Company may, at Company's sole expense, secure a "tail" policy on Company's existing directors and officer's liability insurance policy for a period of six (6) years.

(c) Effective as of the Effective Time, Parent will secure a directors and officers liability "tail" policy on Parent's existing directors and officers for a period of six (6) years.

(d) This Section 5.06 will survive any termination of this Agreement and the consummation of the Merger at the Effective Time, is intended to benefit Company, the Surviving Corporation, Parent and the D&O Indemnified Parties, and will be binding on all successors and assigns of Parent and the Surviving Corporation.

Section 5.07 Notification of Certain Matters.

(a) Company will give prompt notice to Parent, and Parent will give prompt notice to Company, of (i) the occurrence, or non-occurrence, of any event the occurrence, or non-occurrence, of which would be reasonably likely to cause any representation or warranty contained in this Agreement to be untrue or inaccurate such that the conditions set forth in Section 6.02(a) or Section 6.03(a), as applicable, would fail to be satisfied as of the Closing; (ii) any failure of Company or Parent, as the case may be, materially to comply with or satisfy any covenant, condition or agreement to be complied with or satisfied by it hereunder such that the conditions set forth in Section 6.02(b) or Section 6.03(b), as applicable, would fail to be satisfied as of the Closing and (iii) whether any holder of shares of Parent Capital Stock or any security or other right convertible into or exercisable for shares of Parent Capital Stock has made any demand or request for the repurchase of any such share, security or right; provided, however, that the delivery of any notice pursuant to this Section 5.07 will not limit or otherwise affect the remedies available hereunder to the party receiving such notice.

(b) Each of Company and Parent will give prompt notice to the other of: (i) any notice or other communication from any person alleging that the consent of such person is or may be required in connection with the Merger or other Transactions; (ii) any notice or other communication from any Governmental Body in connection with the Merger or other Transactions; (iii) any litigation relating to or involving or otherwise affecting Company or Parent that relates to the Merger or other

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Transactions; (iv) the occurrence of a default or event that, with notice or lapse of time or both, will become a default under a Company Contract; and (v) any change that would be considered reasonably likely to result in a Company Material Adverse Effect or Parent Material Adverse Effect.

Section 5.08 Stockholder Litigation. From and after the date of this Agreement until the earlier of the Effective Time or the date, if any, on which this Agreement is terminated pursuant to Article VII, Parent shall promptly notify Company of any litigation brought, or threatened, against Parent and/or members of the board of directors of Parent or any of its officers relating to the Transactions or otherwise and shall keep Company informed on a reasonably current basis with respect to the status thereof. From and after the date of this Agreement until the earlier of the Effective Time or the date, if any, on which this Agreement is terminated pursuant to Article VII, Company shall promptly notify Parent of any litigation brought, or threatened, against Company and/or members of the board of directors of Company or any of its officers relating to the Transactions or otherwise and shall keep Parent informed on a reasonably current basis with respect to the status thereof. Each Party shall give the other Party the right to review and comment on all material filings or responses to be made by such Party in connection with the foregoing and, no settlement shall be agreed to in connection with the foregoing without the other Party's prior written consent (such consent not to be unreasonably withheld, conditioned or delayed).

Section 5.09 Public Announcements. Parent and Company will consult with each other before issuing any press release or otherwise making any public statements with respect to the Merger or this Agreement and will not issue any such press release or make any disclosure (to any customers or employees of such Party, to the public or otherwise) regarding this Agreement and/or the Transactions without the prior consent of the other party, which will not be unreasonably withheld or delayed; provided, however, that, on the advice of legal counsel, Parent may comply with any SEC requirements under the Securities Act or Exchange Act which requires any disclosure, without the consent or review of Company.

Section 5.10 Conveyance Taxes. Parent and Company will cooperate in the preparation, execution and filing of all returns, questionnaires, applications or other documents regarding any real property transfer or gains, sales, use, transfer, value added, stock transfer and stamp taxes, any transfer, recording, registration and other fees, and any similar taxes which become payable in connection with the Transactions that are required or permitted to be filed on or before the Effective Time.

Section 5.11 Board of Directors and Officers of Parent.

Parent will take all actions necessary to cause the board of directors of Parent, immediately after the Effective Time, to consist of the members as determined by Company, it being understood that Parent shall have the right to designate one member. Prior to the mailing of the Proxy Statement, Parent shall provide executed resignation letters (effective as of the Effective Time) for all members of the board of directors who will no longer be members of the board of directors of Parent effective immediately after the Effective Time; provided, however, the parties acknowledge that so long as Parent remains a public reporting company, the board of directors of Parent will continue to satisfy applicable securities laws, including, without limitation, maintaining an independent audit committee, and the nominations by Company and Parent hereunder will allow Parent to comply with such applicable Legal Requirements. Each new member of the board of directors of Parent that was not a member of the board of directors of Parent immediately before the Effective Time shall enter into an indemnification agreement with Parent, on a form to be determined by Company (and absent such agreement, on Parent's form indemnification agreement), within fifteen (15) days of their appointment.

Section 5.12 Non-Solicitation by Company.

(a) Beginning on the date hereof and continuing until the earlier of the Effective Time or the date, if any, on which this Agreement is terminated pursuant to Article VII, the Company will not and will not authorize or permit any of its Subsidiaries or any Representative of Company or its Subsidiaries, directly or indirectly, other than in connection with a Permitted Financing, to, (i) solicit, initiate, knowingly encourage, induce or facilitate the making, submission or announcement of any Acquisition Proposal or take any action that would reasonably be expected to lead to an Acquisition Proposal, (ii) furnish any nonpublic information regarding Company or its Subsidiaries to any Person in connection with or in response to an Acquisition Proposal or an inquiry or indication of interest that

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could lead to an Acquisition Proposal, (iii) engage in discussions or negotiations with any Person with respect to any Acquisition Proposal, (iv) approve, endorse or recommend any Acquisition Proposal or (v) enter into any letter of intent or similar document or any agreement contemplating or otherwise relating to any Acquisition Transaction (other than an Acceptable Company Confidentiality Agreement); provided, however, that prior to the adoption of this Agreement by the Company Stockholder Approval, this Section 5.12(a) will not prohibit Company from furnishing nonpublic information regarding Company and its Subsidiaries to, entering into discussions with, any Person in response to any bona fide written Acquisition Proposal that, after consultation with a financial advisor and outside legal counsel, Company's board of directors determines in good faith is, or would reasonably be expected to result in, a Company Superior Offer (and is not withdrawn) if (1) such Acquisition Proposal did not result from a breach of this Section 5.12(a); (2) the board of directors of Company concludes in good faith, after having taken into account the advice of its outside legal counsel, that, in light of such Acquisition Proposal and the terms of this Agreement, failure to take such action would result in a breach of its fiduciary obligations to Company's stockholders under applicable Legal Requirements; (3) at least two (2) Business Days prior to furnishing any such information to, or entering into discussions with, such Person, Parent gives Company written notice of the identity of such Person, the terms and conditions of any proposals or offers (including, if applicable, copies of any written requests, proposals or offers, including proposed agreements) made thereby and of Company's intention to furnish information to, or enter into discussions with, such Person, and Company receives from such Person an executed confidentiality agreement on terms no less favorable to Company than the confidentiality agreement between Parent and Company and containing customary limitations on the use and disclosure of all nonpublic written and oral information furnished to such Person by or on behalf of Company as well as customary "standstill" provisions (an, "Acceptable Company Confidentiality Agreement") and (4) substantially contemporaneous with furnishing any such information to such Person, Company furnishes such nonpublic information to Parent (to the extent such nonpublic information has not been previously furnished by Company to Parent). Without limiting the generality of the foregoing, Company acknowledges and agrees that in the event any Representative of Company (or its Subsidiaries), whether or not such Representative is purporting to act on behalf of Company (or its Subsidiaries), takes any action that, if taken by Company (or its Subsidiaries), would constitute a breach of this Section 5.12, the taking of such action by such Representative will be deemed to constitute a breach of this Section 5.12 by Parent for purposes of this Agreement..

(b) Company will promptly (and in no event later than 48 hours after receipt of any Acquisition Proposal, any inquiry or indication of interest that could lead to an Acquisition Proposal or any request for nonpublic information) advise Parent orally and in writing of any Acquisition Proposal, any inquiry or indication of interest that could lead to an Acquisition Proposal or any request for nonpublic information relating to Company or its Subsidiaries (including the identity of the Person making or submitting such Acquisition Proposal, inquiry, indication of interest or request, the material terms thereof and copies of any written material submitted therewith) that is made or submitted by any Person during the Pre-Closing Period. Company will keep Parent informed on a prompt basis in all material respects with respect to the status of any such Acquisition Proposal, inquiry, indication of interest or request and any modification or proposed modification thereto and shall deliver copies of any written material submitted therewith.

(c) Company will immediately cease and cause to be terminated any existing discussions with any Person that relate to any Acquisition Proposal and will promptly request from each person that has executed a confidentiality agreement in connection with its consideration of making an Acquisition Proposal prior to the date hereof to return or destroy (as provided in the terms of such confidentiality agreement) all confidential information concerning the Company or any of its Subsidiaries and promptly terminate all physical and electronic data access previously granted to such person.

Section 5.13 Non-Solicitation by Parent.

(a) Beginning on the date hereof and continuing until the earlier of the Effective Time or the date, if any, on which this Agreement is terminated pursuant to Article VII, Parent will not and will not authorize or permit any of its Subsidiaries or any Representative of Parent or its Subsidiaries, directly

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or indirectly, to, (i) solicit, initiate, knowingly encourage, induce or facilitate the making, submission or announcement of any Acquisition Proposal or take any action that would reasonably be expected to lead to an Acquisition Proposal; (ii) furnish any nonpublic information regarding Parent or its Subsidiaries to any Person in connection with or in response to an Acquisition Proposal or an inquiry or indication of interest that could lead to an Acquisition Proposal; (iii) engage in discussions or negotiations with any Person with respect to any Acquisition Proposal; (iv) approve, endorse or recommend any Acquisition Proposal or (v) enter into any letter of intent or similar document or any agreement contemplating or otherwise relating to any Acquisition Transaction (other than an Acceptable Parent Confidentiality Agreement); provided, however, that prior to the adoption of this Agreement by the Parent Stockholder Approval, this Section 5.13(a) will not prohibit Parent from furnishing nonpublic information regarding Parent and its Subsidiaries to, entering into discussions with, any Person in response to any bona fide written Acquisition Proposal that, after consultation with a financial advisor and outside legal counsel, Parent's board of directors determines in good faith is, or would reasonably be expected to result in, a Parent Superior Offer (and is not withdrawn) if (1) such Acquisition Proposal did not result from a breach of this Section 5.13(a); (2) the board of directors of Parent concludes in good faith, after having taken into account the advice of its outside legal counsel, that, in light of such Acquisition Proposal and the terms of this Agreement, failure to take such action would result in a breach of its fiduciary obligations to Parent's stockholders under applicable Legal Requirements; (3) at least two (2) Business Days prior to furnishing any such information to, or entering into discussions with, such Person, Parent gives Company written notice of the identity of such Person, the terms and conditions of any proposals or offers (including, if applicable, copies of any written requests, proposals or offers, including proposed agreements) made thereby and of Parent's intention to furnish information to, or enter into discussions with, such Person, and Parent receives from such Person an executed confidentiality agreement on terms no less favorable to Parent than the confidentiality agreement between Parent and Company and containing customary limitations on the use and disclosure of all nonpublic written and oral information furnished to such Person by or on behalf of Parent as well as customary "standstill" provisions (an, "Acceptable Parent Confidentiality Agreement") and (4) substantially contemporaneous with furnishing any such information to such Person, Parent furnishes such nonpublic information to Company (to the extent such nonpublic information has not been previously furnished by Parent to Company). Without limiting the generality of the foregoing, Parent acknowledges and agrees that in the event any Representative of Parent (or its Subsidiaries), whether or not such Representative is purporting to act on behalf of Parent (or its Subsidiaries), takes any action that, if taken by Parent (or its Subsidiaries), would constitute a breach of this Section 5.13, the taking of such action by such Representative will be deemed to constitute a breach of this Section 5.13 by Parent for purposes of this Agreement.

(b) Parent will promptly (and in no event later than 48 hours after receipt of any Acquisition Proposal, any inquiry or indication of interest that could lead to an Acquisition Proposal or any request for nonpublic information) advise Company orally and in writing of any Acquisition Proposal, any inquiry or indication of interest that could lead to an Acquisition Proposal or any request for nonpublic information relating to Parent or its Subsidiaries (including the identity of the Person making or submitting such Acquisition Proposal, inquiry, indication of interest or request, the material terms thereof and copies of any written material submitted therewith) that is made or submitted by any Person during the Pre-Closing Period. Parent will keep Company informed on a prompt basis in all material respects with respect to the status of any such Acquisition Proposal, inquiry, indication of interest or request and any modification or proposed modification thereto and shall deliver copies of any written material submitted therewith.

(c) Parent will immediately cease and cause to be terminated any existing discussions with any Person that relate to any Acquisition Proposal and will promptly request from each person that has executed a confidentiality agreement in connection with its consideration of making an Acquisition Proposal prior to the date hereof to return or destroy (as provided in the terms of such confidentiality agreement) all confidential information concerning Company or any of its Subsidiaries and promptly terminate all physical and electronic data access previously granted to such person.

Section 5.14 Section 16 Matters. Subject to the following sentence, prior to the Effective Time, Parent and Company will take all such steps as may be required (to the extent permitted under applicable Legal

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Requirements and no-action letters issued by the SEC) to cause any acquisition of Parent Common Stock (including derivative securities with respect to Parent Common Stock) by each individual who is or will be subject to the reporting requirements of Section 16(a) of the Exchange Act with respect to Parent, to be exempt under Rule 16b-3 under the Exchange Act. At least thirty (30) days prior to the Closing Date, Company will furnish the following information to Parent for each individual who, immediately after the Effective Time, will become subject to the reporting requirements of Section 16(a) of the Exchange Act with respect to Parent: (a) the number of shares of Company Capital Stock held by such individual and expected to be exchanged for shares of Parent Common Stock pursuant to the Merger and (b) the number of other derivative securities (if any) with respect to Company Capital Stock held by such individual and expected to be converted into shares of Parent Common Stock or derivative securities with respect to Parent Common Stock in connection with the Merger.

Section 5.15 Parent Charter Amendment. Immediately prior to the Effective Time, Parent will file the Parent Charter Amendment with the Secretary of State of the State of Delaware to become effective immediately prior to the Effective Time.

Section 5.16 Company Options; Restricted Shares.

(a) At the Effective Time, each Company Option that is outstanding and unexercised immediately prior to the Effective Time under the Company Option Plan, whether or not vested, will be converted into and become an option to purchase Parent Common Stock, and Parent shall assume the Company Option Plan. All rights with respect to Company Common Stock under Company Options assumed by Parent will thereupon be converted into rights with respect to Parent Common Stock. Accordingly, from and after the Effective Time: (i) each Company Option assumed by Parent may be exercised solely for shares of Parent Common Stock; (ii) the number of shares of Parent Common Stock subject to each Company Option assumed by Parent will be determined by multiplying (x) the number of shares of Company Common Stock that were subject to such Company Option, as in effect immediately prior to the Effective Time by (y) the Exchange Ratio and rounding the resulting number down to the nearest whole number of shares of Parent Common Stock; (iii) the per share exercise price for the Parent Common Stock issuable upon exercise of each Company Option assumed by Parent will be determined by dividing (x) the per share exercise price of Company Common Stock subject to such Company Option, as in effect immediately prior to the Effective Time, by (y) the Exchange Ratio and rounding the resulting exercise price up to the nearest whole cent; and (iv) any restriction on the exercise of any Company Option assumed by Parent will continue in full force and effect and the term, exercisability, vesting schedule, status as an “incentive stock option” under Section 422 of the Code, if applicable, and other provisions of such Company Option will otherwise remain unchanged; provided, however, that: (1) to the extent provided under the terms of a Company Option, such Company Option assumed by Parent in accordance with this Section 5.16(a) will, in accordance with its terms, be subject to further adjustment as appropriate to reflect any stock split, division or subdivision of shares, stock dividend, reverse stock split, consolidation of shares, reclassification, recapitalization or other similar transaction with respect to Parent Common Stock subsequent to the Effective Time; and (2) Parent’ board of directors or a committee thereof will succeed to the authority and responsibility of Company’s board of directors or any committee thereof with respect to each Company Option assumed by Parent. Notwithstanding anything to the contrary in this Section 5.16(a), the conversion of each Company Option (regardless of whether such option qualifies as an “incentive stock option” within the meaning of Section 422 of the Code) into an option to purchase shares of Parent Common Stock will be made in a manner consistent with Treasury Regulation Section 1.424-1, such that the conversion of a Company Option will not constitute a “modification” of such Company Option for purposes of Section 409A or Section 424 of the Code. It is the intention of the parties that each Company Option so assumed by Parent shall qualify following the Effective Time as an incentive stock option as defined in Section 422 of the Code to the extent permitted under Section 422 of the Code and to the extent such Company Option qualified as an incentive stock option prior to the Effective Time.

(b) At the Effective Time, each unvested Company Restricted Share that is outstanding immediately prior to the Effective Time under the Company Option Plan will be exchanged for restricted shares of Parent Common Stock that shall have, and be subject to, the same terms and

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conditions (including vesting terms) set forth in the applicable Company Option Plan and the applicable Company Restricted Share agreements relating thereto, as in effect immediately prior to the Effective Time, in an amount equal to the number of Company Restricted Shares outstanding with respect to such Company Restricted Share award immediately prior to the Effective Time multiplied by the Exchange Ratio, with the result rounded down to the nearest whole number of shares of Parent Common Stock.

Section 5.17 Company Warrants. At the Effective Time, each Company Warrant that is outstanding and unexercised immediately prior to the Effective Time, will be converted into and become a warrant to purchase Parent Common Stock. All rights with respect to Company Common Stock under Company Warrants assumed by Parent will thereupon be converted into rights with respect to Parent Common Stock. Accordingly, from and after the Effective Time: (i) each Company Warrant assumed by Parent may be exercised solely for shares of Parent Common Stock; (ii) the number of shares of Parent Common Stock subject to each Company Warrant assumed by Parent will be determined by multiplying (x) the number of shares of Company Common Stock that were subject to such Company Warrant, as in effect immediately prior to the Effective Time by (y) the Exchange Ratio and rounding the resulting number down to the nearest whole number of shares of Parent Common Stock; (iii) the per share exercise price for the Parent Common Stock issuable upon exercise of each Company Warrant assumed by Parent will be determined by dividing (x) the per share exercise price of Company Common Stock subject to such Company Warrant, as in effect immediately prior to the Effective Time, by (y) the Exchange Ratio and rounding the resulting exercise price up to the nearest whole cent; and (iv) any restriction on the exercise of any Company Warrant assumed by Parent will continue in full force and effect and the term, exercisability and other provisions of such Company Warrant will otherwise remain unchanged; provided, however, that to the extent provided under the terms of a Company Warrant, such Company Warrant assumed by Parent in accordance with this Section 5.17(a) will, in accordance with its terms, be subject to further adjustment as appropriate to reflect any stock split, division or subdivision of shares, stock dividend, reverse stock split, consolidation of shares, reclassification, recapitalization or other similar transaction with respect to Parent Common Stock subsequent to the Effective Time.

Section 5.18 Parent Warrants. If required by any applicable Parent Warrant, promptly after the date of this Agreement, and in any event within twenty (20) Business Days before the Effective Time, Parent shall deliver notice to the holders of such Parent Warrants with respect to the Transactions and the rights of the holders thereof in connection therewith, subject to the review and approval of Company (not to be unreasonably withheld).

Section 5.19 Allocation Certificate; Indebtedness; Invoices; Parent Certificate.

(a) Company will prepare and deliver to Parent at least two (2) Business Days prior to the Closing Date a certificate signed by the Chief Financial Officer and Secretary of Company in a form reasonably acceptable to Parent which sets forth (i) a true and complete list of the Company Stockholders immediately prior to the Effective Time and the number and type of shares of Company Capital Stock owned by each such Company Stockholder and (ii) the allocation of the Merger Consideration among the Company Stockholders pursuant to the Merger (the “Allocation Certificate”).

(b) At least five (5) Business Days prior to the Closing Date, Parent shall, to the extent applicable, deliver to Company an accurate and complete copy of: one or more payoff letters, each dated no more than five Business Days prior to the Closing Date, with respect to all outstanding Indebtedness of Parent, to: (A) satisfy such Indebtedness as of the Closing; and (B) terminate and release any Encumbrances related thereto; and (ii) Parent Invoices with respect to all Transaction Costs estimated to be due and payable by Parent as of the Closing Date.

(c) Parent will prepare and deliver to Company at least five (5) Business Days prior to the Closing Date a certificate signed by the Chief Financial Officer and Secretary of Parent in a form reasonably acceptable to Company which sets forth the calculation of (i) Parent Closing Cash and Working Capital, together, in each case, with reasonable supporting detail and (ii) the Cash Dividend (the “Parent Certificate”), which Parent Certificate shall be subject to the reasonable review and approval of Company. Following delivery of the Parent Certificate until the Closing, Company and its accountants

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shall, upon reasonable notice and during normal business hours, be permitted to discuss with Parent and its accountants the calculation of Parent Closing Cash and Working Capital and the other components of the Cash Dividend and shall be provided complete and accurate copies of, and have reasonable access, upon reasonable notice at reasonable times during normal business hours, to the work papers and supporting records of Parent and its accountants so as to allow Company and its accountants to verify the accuracy of the Parent Closing Cash and Working Capital and the other components of the Cash Dividend.

Section 5.20 Employees; Employee Benefit Matters.

(a) Effective as of immediately prior to the Closing, at Company's request, Parent shall terminate, in compliance with applicable Legal Requirements, the employment of any employee of Parent as requested by Company. Parent shall be responsible for the payment of all final payments, wages, salary and benefits and other remuneration, including, any severance, bonus, accrued vacation, payment in lieu of notice period and vacation pay or other payments or amounts due to such employees, whether under Legal Requirements or Contract with respect to their services as employees of Parent and the termination of their employment, and all such payments shall be made to each such employee prior to the Closing and be considered Transaction Costs.

(b) For purposes of vesting, eligibility to participate, and level of benefits under the benefit plans, programs, contracts or arrangements of Parent or any of its Subsidiaries (including, following the Closing, the Company and its Subsidiaries) providing benefits to any Continuing Employee after the Closing (the "Post-Closing Plans"), each employee who continues to be employed by Parent, the Company or any of their respective Subsidiaries immediately following the Closing ("Continuing Employees") shall be credited with his or her years of service with Parent, Company or any of their respective Subsidiaries and their respective predecessors; provided, however, that the foregoing shall not apply to the extent that its application would result in a duplication of benefits. In addition, and without limiting the generality of the foregoing, for purposes of each Post-Closing Plan providing medical, dental, pharmaceutical and/or vision benefits to a Continuing Employee, Parent shall cause all pre-existing condition exclusions and actively-at-work requirements of such Post-Closing Plan to be waived for such Continuing Employee and his or her covered dependents to the extent and unless such conditions would have been waived or satisfied under the employee benefit plan whose coverage is being replaced under the Post-Closing Plan, and Parent shall use commercially reasonable efforts to cause any eligible expenses incurred by a Continuing Employee and his or her covered dependents during the portion of such plan year in which coverage is replaced with coverage under a Post-Closing Plan to be taken into account under such Post-Closing Plan with respect to the plan year in which participation in such Post-Closing Plan begins for purposes of satisfying all deductible, coinsurance and maximum out-of-pocket requirements applicable to such Continuing Employee and his or her covered dependents for such plan year as if such amounts had been paid in accordance with such Post-Closing Plan.

Section 5.21 Company and Parent Disclosure Schedules. Each of Company and Parent may in its discretion, for informational purposes only, supplement the information set forth on the Company Disclosure Schedule or Parent Disclosure Schedule, as applicable, with respect to any matter now existing or hereafter arising that, if existing or occurring at or prior to the date of this Agreement, would have been required to be set forth or described in the Company Disclosure Schedule or Parent Disclosure Schedule, as applicable, on the date of this Agreement or that is necessary to correct any information in the Company Disclosure Schedule or Parent Disclosure Schedule, as applicable, which has been rendered inaccurate thereby promptly following discovery thereof. Any such amended or supplemented disclosure shall not be deemed to modify the representations and warranties of Company, Parent or Merger Sub for purposes of Section 6.02(a) and 6.03(a) of this Agreement.

Section 5.22 Tax Matters. Parent, Merger Sub and Company shall treat, and shall not take any Tax reporting position inconsistent with the treatment of, the Merger as a reorganization within the meaning of Section 368(a) of the Code for U.S. federal, state and other relevant Tax purposes, unless otherwise required pursuant to a "determination" within the meaning of Section 1313(a) of the Code.

Section 5.23 Reverse Split. If applicable, Parent shall submit to the holders of Parent Common Stock at the Parent Stockholders' Meeting a proposal to approve and adopt the Parent Charter Amendment

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authorizing the board of directors of Parent to effect a reverse stock split of all outstanding shares of Parent Common Stock at a reverse stock split ratio as mutually agreed to by Parent and Company (the "Reverse Split") and within the range approved by the holders of Parent Common Stock. If applicable, Parent shall cause the Reverse Split to be implemented and take effect immediately prior to the Effective Time.

Section 5.24 Lock-up Agreements. During the Pre-Closing Period, Company shall deliver a Company Lock-up Agreement to each of the Company Stockholders and shall use its commercially reasonable efforts to cause its Company Stockholders to enter into such Company Lock-up Agreement.

Section 5.25 Listing. Parent shall use its commercially reasonable efforts, (a) to the extent required by the rules and regulations of Nasdaq, to prepare and submit to Nasdaq a notification form for the listing of the shares of Parent Common Stock to be issued in connection with the Transactions, and to cause such shares to be approved for listing (subject to official notice of issuance) and (b) to the extent required by Nasdaq Marketplace Rule 5110, to file an initial listing application for the Parent Common Stock on Nasdaq (the "Nasdaq Listing Application") and to cause such Nasdaq Listing Application to be conditionally approved prior to the Effective Time. The Parties will use commercially reasonable efforts to coordinate with respect to compliance with Nasdaq rules and regulations. Parent agrees to pay all Nasdaq fees associated with the Nasdaq Listing Application. The Company will cooperate with Parent as reasonably requested by Parent with respect to the Nasdaq Listing Application and promptly furnish to Parent all information concerning the Company and its stockholders that may be required or reasonably requested in connection with any action contemplated by this Section 5.25.

Section 5.26 Legends. Parent shall place customary restrictive legends on the book entries and/or certificates evidencing the shares of Parent Common Stock to be received in the Merger.

Section 5.27 Company Financial Statements. Within two (2) Business Days following the date of this Agreement, Company will furnish to Parent (i) audited financial statements for the fiscal years ended 2016 and 2017, if any, for inclusion in the Proxy Statement (the "Company Audited Financial Statements") and (ii) unaudited interim financial statements for each interim period completed prior to Closing that would be required to be included in the Proxy Statement or any periodic report due prior to the Closing if the Company were subject to the periodic reporting requirements under the Securities Act or the Exchange Act (the "Company Interim Financial Statements"). Each of the Company Audited Financial Statements and the Company Interim Financial Statements will be suitable for inclusion in the Proxy Statement and prepared in accordance with GAAP as applied on a consistent basis during the periods involved (except in each case as described in the notes thereto) and on that basis will present fairly, in all material respects, the financial position and the results of operations, changes in stockholders' equity, and cash flows of the Company as of the dates of and for the periods referred to in the Company Audited Financial Statements or the Company Interim Financial Statements, as the case may be.

Section 5.28 Further Assurances. Prior to the Effective Time, the Parties will exercise their reasonable best efforts to cause to be satisfied those conditions set forth under Article VI. At and after the Effective Time, the officers and directors of the Surviving Corporation shall be authorized to execute and deliver, in the name and on behalf of the Company or Merger Sub, any deeds, bills of sale, assignments, or assurances and to take and do, in the name and on behalf of the Company or Merger Sub, any other actions and things to vest, perfect, or confirm of record or otherwise in the Surviving Corporation any and all right, title, and interest in, to and under any of the rights, properties, or assets of the Company acquired or to be acquired by the Surviving Corporation as a result of, or in connection with, the Merger.

Section 5.29 Contract Manufacturing Business. During the Pre-Closing Period, Parent shall use commercially reasonable efforts to consummate the Spin-Off, which shall be effective immediately prior to the Closing, in accordance with applicable Legal Requirements. Parent shall provide the Company a reasonable opportunity to review all documents and agreements related to the Spin-Off, which documents and agreements shall be reasonably acceptable to Company. Prior to effecting the Spin-Off, Parent shall (a) seek and obtain written agreements in form and substance reasonably acceptable to Company from all parties to Contracts that are distributed in connection with the Spin-Off releasing Parent from any and all liabilities and obligations under such Contracts, (b) obtain an independent third party valuation from a credible firm reasonably acceptable to Company, which valuation shall be in form and substance reasonably

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acceptable to Company, of the equity interests in the Spin-Off to be distributed to holders of Parent Common Stock in connection with the Spin-Off and with a valuation date of the date of the Spin-Off (the "Spin-Off Valuation"), (c) provide evidence reasonably satisfactory to Company that no material Tax will arise to Parent as a result of the Spin-Off and (d) deliver to Company a schedule, which schedule shall be reasonably acceptable to Company, setting forth the list of Contracts and other assets and all related liabilities and obligations to be transferred to SpinCo. Not later than 30 days prior to the proposed date of the Spin-Off, Parent will deliver to Company a draft of the Spin-Off Valuation for Company's review and comment, and Parent will instruct the independent valuation firm to consider such comments in good faith. Parent will use best efforts to deliver or cause to be delivered to Company, not later than three Business Days before the date of the Spin-Off, a final version of the Spin-Off Valuation in respect of Parent's equity interest in Spinco. Parent shall not effect the Spin-Off without Company's written consent, such consent not to be unreasonably withheld. For the avoidance of doubt, so long as Parent exercised commercially reasonable efforts to cause the Spin-Off to occur concurrently with the Effective Time, the occurrence of the Spin-Off is not a condition of the Company's obligations to the consummate the transactions contemplated by this Agreement.

ARTICLE VI.

CONDITIONS TO THE MERGER

Section 6.01 Conditions To Obligation Of Each Party To Effect The Merger. The respective obligations of each party to effect the Merger will be subject to the satisfaction at or prior to the Effective Time of the following conditions:

(a) No Injunctions or Restraints; Illegality. No temporary restraining order, preliminary or permanent injunction or other order (whether temporary, preliminary or permanent) issued by any court of competent jurisdiction or other legal restraint or prohibition preventing the consummation of the Merger will be in effect, nor will any proceeding brought by any administrative agency or commission or other Governmental Body or instrumentality, domestic or foreign, seeking any of the foregoing be pending; and there will not be any action taken, or any statute, rule, regulation or order enacted, entered, enforced or deemed applicable to the Merger, which makes the consummation of the Merger illegal.

(b) Governmental Approvals. Any waiting period applicable to the consummation of the Merger under the HSR Act will have expired or been terminated.

(c) Stockholder Approvals. This Agreement will have been duly adopted and the Merger will have been duly approved by the Company Stockholder Approval and the Parent Stockholder Approval Matters will have been duly adopted and approved by the Parent Stockholder Approval.

(d) Stock Exchange Listing. The shares of Parent Common Stock to be issued in the Merger shall have been approved for listing on the Nasdaq, subject to official notice of issuance.

Section 6.02 Additional Conditions to Obligations of Parent. The obligations of Parent to effect the Merger are also subject to the following conditions:

(a) Representations and Warranties. The representations and warranties of Company (i) that constitute the Company Fundamental Representations shall have been true and correct in all respects as of the date of this Agreement and shall be true and correct in all respects on and as of the Closing Date with the same force and effect as if made on and as of such date (except to the extent such representations and warranties are specifically made as of a particular date, in which case such representations and warranties shall be true and correct as of such date) and (ii) contained in this Agreement (other than the Company Fundamental Representations) will be true and correct in all respects on and as of the Closing Date, with the same force and effect as if made on and as of the Closing Date (except for those representations and warranties which address matters only as of a particular date, in which case such representations and warranties shall be true and correct as of such date), except for those inaccuracies that, individually or in the aggregate, do not constitute a Company Material Adverse Effect; provided, however, for purposes of this clause (ii), all "Company Material

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Adverse Effect" qualifications and other materiality qualifications limiting the scope of the representations and warranties of Company contained in this Agreement will be disregarded. Parent will have received a certificate to such effect signed by an officer of Company.

(b) Agreements and Covenants. Company will have performed or complied with in all material respects its agreements and covenants required by this Agreement to be performed or complied with by it on or prior to the Effective Time. Parent will have received a certificate to such effect signed by and officer of Company.

(c) Officer's Certificate. Parent shall have received a certificate executed by the Chief Executive Officer or Chief Financial Officer of Company certifying (i) that the conditions set forth in Sections 6.02(a), (b) and (d) have been duly satisfied and (ii) that the information set forth in the Allocation Certificate delivered by Company in accordance with Section 5.19(a) is true and accurate in all respects as of the Closing Date.

(d) Company Material Adverse Effect. Since the date of this Agreement, there will have been no change, occurrence or circumstance in the business, results of operations or financial condition of Company or any Subsidiary of Company having, individually or in the aggregate, a Company Material Adverse Effect.

(e) FIRPTA Certificate. Parent will have received from Company applicable FIRPTA documentation, consisting of (i) a notice to the IRS, in accordance with the requirements of Section 1.897-2(h)(2) of the Treasury Regulations, dated as of the Closing Date and executed by Company, together with written authorization for Parent to deliver such notice form to the IRS on behalf of Company after the Closing, and (ii) a FIRPTA Notification Letter, in substantially the form of Exhibit D attached hereto, dated as of the Closing Date and executed by Company.

(f) Dissenting Shares. No holders of the shares of Company Capital Stock (on an as-converted to Company Common Stock basis) will have demanded appraisal rights.

(g) Allocation Certificate. The Chief Financial Officer of Company will have executed and delivered to Parent the Allocation Certificate.

(h) Lock-up Agreements. The Lock-up Agreements executed by each of the Company Lock-up Signatories and each executive officer and director of the Company who is elected or appointed, as applicable, as an executive officer and director of Parent as of immediately following the Closing shall be in full force and effect.

(i) Company Board of Directors Resignation Letters. Parent will have received a duly executed copy of a resignation letter from each of the resigning members of the board of directors of Company and each of its Subsidiaries contemplated by Section 5.11, pursuant to which each such person will resign as a member of the board of directors of Company immediately following the Effective Time.

Section 6.03 Additional Conditions to Obligations Of Company. The obligation of Company to effect the Merger is also subject to the following conditions:

(a) Representations and Warranties. The representations and warranties of Parent and Merger Sub (i) set forth in Sections 3.02 (Capital Structure) and 3.03 (Authority; Non-Contravention; Approvals) will be true and correct in all material respects on and as of the Closing Date, with the same force and effect as if made on and as of the Closing Date, except for those representations and warranties which address matters only as of a particular date (which will remain true and correct in all material respects as of such date) and (ii) contained in this Agreement (other than those set forth in Sections 3.02 (Capital Structure) and 3.03 (Authority; Non-Contravention; Approvals)) will be true and correct in all respects on and as of the Closing Date, with the same force and effect as if made on and as of the Closing Date (except for those representations and warranties which address matters only as of a particular date, in which case such representations and warranties shall be true and correct as of such date), except for those inaccuracies that, individually or in the aggregate, do not constitute and would not reasonably be expected to constitute a Parent Material Adverse Effect; provided, however, for purposes of this clause (ii), all "Parent Material Adverse Effect" qualifications and other materiality

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qualifications limiting the scope of the representations and warranties of Parent and Merger Sub contained in this Agreement will be disregarded. Company will have received a certificate to such effect signed by an officer of each of Parent and Merger Sub.

(b) Agreements and Covenants. Parent and Merger Sub will have performed or complied with in all material respects its agreements and covenants required by this Agreement to be performed or complied with by them on or prior to the Effective Time. Company will have received a certificate to such effect signed by an officer of Parent.

(c) Officer's Certificate. Company shall have received a certificate executed by the Chief Executive Officer or Chief Financial Officer of Parent certifying (i) that the conditions set forth in Sections 6.03(a), (b) and (d) have been duly satisfied and (ii) that the information set forth in the Parent Certificate delivered by Parent in accordance with Section 5.19(d) is true and accurate in all respects as of the Closing Date.

(d) Parent Material Adverse Effect. Since the date of this Agreement, there will have been no change, occurrence or circumstance in the business, results of operations or financial condition of Parent or any Subsidiary of Parent having, individually or in the aggregate, a Parent Material Adverse Effect, that is continuing.

(e) Parent Board of Directors Resignation Letters. Company will have received a duly executed copy of a resignation letter from each of the resigning members of the board of directors of Parent contemplated by Section 5.11 and each of the Parent Subsidiaries, as applicable, pursuant to which each such person will resign as a member of the board of directors of Parent immediately following the Effective Time.

(f) Parent Certificate. The Chief Financial Officer of Parent will have executed and delivered to Company the Parent Certificate.

(g) Lock-Up Agreements. The Lock-Up Agreements executed by each of the Parent Lock-Up Signatories and each executive officer and director of Parent who is elected or appointed, as applicable, as an executive officer and director of Parent as of immediately following the Closing, each of which shall be in full force and effect.

(h) Parent Invoices. Company will have received written acknowledgements pursuant to which Parent's outside legal counsel and any financial advisor, accountant or other Person who performed services for or on behalf of Parent, or who is otherwise entitled to any compensation from Parent that in each case is owed Transaction Costs from Parent: (i) the total amount of Transaction Costs that are payable to such Person; and (ii) that, upon receipt of the amount referred to in clause "(i)" above, such party will have been paid in full and is not (and will not be) owed any other Transaction Costs (collectively, the "Parent Invoices").

(i) Employee Matters. Company will have received evidence reasonably satisfactory to it as to compliance by Parent with the provisions of Section 5.20(a).

ARTICLE VII.

TERMINATION

Section 7.01 Termination. This Agreement may be terminated and the Merger may be abandoned, at any time prior to the Effective Time, notwithstanding approval thereof by the stockholders of Company and Parent:

(a) by mutual written consent of Company and Parent duly authorized by each of their respective boards of directors;

(b) by either Parent or Company if the Merger has not been consummated by the End Date (provided that the right to terminate this Agreement under this Section 7.01(b) will not be available to any party whose failure to fulfill any obligation under this Agreement has been a primary cause of the

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failure of the Merger to occur on or before such date); provided, however, in the event that the SEC has not concluded its review of the preliminary Proxy Statement by the date which is sixty (60) days prior to the End Date, then Parent shall be entitled to extend the End Date for an additional sixty (60) days;

(c) by either Parent or Company if a court of competent jurisdiction or governmental, regulatory or administrative agency or commission will have issued a non-appealable final order, decree or ruling or taken any other action, in each case having the effect of permanently restraining, enjoining or otherwise prohibiting the Merger;

(d) by Parent if the Company Stockholder Approval shall not have been obtained by the Company Vote Deadline; provided, however, that once the Company Stockholder Approval has been obtained, Parent may not terminate this Agreement pursuant to this Section 7.01(d); provided, further, that the right to terminate this Agreement under this Section 7.01(d) will not be available if Parent's failure to fulfill any obligation under this Agreement has been a primary cause of the failure of the Company Stockholder Approval to be obtained at or before such time;

(e) by Company if the Parent Stockholder Approval shall not have been obtained by the Parent Vote Deadline; provided, however, that once the Parent Stockholder Approval has been obtained, Company may not terminate this Agreement pursuant to this Section 7.01(e); provided, further, that the right to terminate this Agreement under this Section 7.01(e) will not be available if Company's failure to fulfill any obligation under this Agreement has been a primary cause of the failure of the Parent Stockholder Approval to be obtained at or before such time;

(f) by either Parent or Company, if the Parent Stockholder's Meeting shall have been held (subject to any adjournment or postponement permitted by Section 5.03(a)) and the Parent Stockholder Approval contemplated by this Agreement will not have been obtained thereat (provided that the right to terminate this Agreement under this Section 7.01(f) will not be available to any party whose failure to fulfill any obligation under this Agreement has been a primary cause of the failure of the Parent Stockholder Approval to be obtained thereat);

(g) by Parent if (i) the Board of Directors of Company has effected a Company Change in Recommendation and (ii) the Company Stockholder Approval shall not have been obtained by the Company Vote Deadline;

(h) by Company if (A) the Board of Directors of Parent has effected a Parent Change in Recommendation and (B) the Parent Stockholder Approval shall not have been obtained by the Parent Vote Deadline;

(i) by Parent upon breach of any of the representations, warranties, covenants or agreements on the part of Company set forth in this Agreement, or if any representation or warranty of Company will have become inaccurate, in either case such that the conditions set forth in Section 6.02(a) or Section 6.02(b) would not be satisfied as of the time of such breach or as of the time such representation or warranty will have become inaccurate; provided, however, if such breach or inaccuracy is curable by Company, then this Agreement will not terminate pursuant to this Section 7.01(f) as a result of such particular breach or inaccuracy unless the breach or inaccuracy remains uncured as of the tenth (10th) Business Day following the date of written notice given by Parent to Company of such breach or inaccuracy and its intention to terminate the agreement pursuant to this Section 7.01(f); provided, further that no termination may be made pursuant to this Section 7.01(f) solely as a result of the failure of Company to obtain the Company Stockholder Approval (in which case such termination must be made pursuant to Section 7.01(d));

(j) by Company upon breach of any of the representations, warranties, covenants or agreements on the part of Parent or Merger Sub set forth in this Agreement, or if any representation or warranty of Parent or Merger Sub will have become inaccurate, in either case such that the conditions set forth in Section 6.03(a) or Section 6.03(b) would not be satisfied as of the time of such breach or as of the time such representation or warranty will have become inaccurate; provided, however, if such breach or inaccuracy is curable by Parent or Merger Sub, then this Agreement will not terminate pursuant to this Section 7.01(g) as a result of such particular breach or inaccuracy unless the breach or inaccuracy remains uncured as of the tenth (10th) Business Day following the date of written notice given by

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Company to Parent of such breach or inaccuracy and its intention to terminate the agreement pursuant to this Section 7.01(g); provided, further, that no termination may be made pursuant to this Section 7.01(g) solely as a result of the failure of Parent to obtain the Parent Stockholder Approval (in which case such termination must be made pursuant to Section 7.01(e)).

Section 7.02 Effect Of Termination. In the event of the termination of this Agreement pursuant to Section 7.01, this Agreement will forthwith become void and there will be no liability on the part of any party hereto or any of its Affiliates, directors, officers or stockholders except (i) as set forth in Sections 7.02, and Article VIII hereof and (ii) for any liability for any willful breach of any representation, warranty, covenant or obligation contained in this Agreement (for purposes of this Section 7.02, a "willful breach" is an act or omission with the actual knowledge that such act or omission would cause a breach of this Agreement). No termination of this Agreement will affect the obligations of the parties contained in the Confidentiality Agreement, all of which obligations will, in addition to this Article VII and Article VIII, survive termination of this Agreement in accordance with its terms.

Section 7.03 Expenses; Termination Fees.

(a) Except as set forth in this Section 7.03 or specifically set forth elsewhere in this Agreement, all Transaction Costs shall be paid by the Party incurring such expenses, whether or not the Merger is consummated.

(b) If this Agreement is terminated by Parent pursuant to Section 7.01(d), Section 7.01(f) or Section 7.01(g), (i) then Company shall pay to Parent an amount equal to $249,000 (the "Termination Fee"), plus any amount payable to Company pursuant to Section 7.03(d).

(c) If this Agreement is terminated by Company pursuant to Section 7.1(e), Section 7.1(f) or Section 7.1(h), then Parent shall pay to Company the Termination Fee, plus any amount payable to Parent pursuant to Section 7.03(d).

(d) If either Party fails to pay when due any amount payable by it under this Section 7.03, then (i) such Party shall reimburse the other Party for reasonable costs and expenses (including reasonable fees and disbursements of counsel) incurred in connection with the collection of such overdue amount and the enforcement by the other Party of its rights under this Section 7.03 and (ii) such Party shall pay to the other Party interest on such overdue amount (for the period commencing as of the date such overdue amount was originally required to be paid and ending on the date such overdue amount is actually paid to the other Party in full) at a rate per annum equal to the "prime rate" (as announced by Bank of America or any successor thereto) in effect on the date such overdue amount was originally required to be paid plus three percent.

ARTICLE VIII.

GENERAL PROVISIONS

Section 8.01 Notices. Any notice or other communication required or permitted to be delivered to any party under this Agreement will be in writing and will be deemed properly delivered, given and received: (a) if delivered by hand, when delivered; (b) if sent on a Business Day by email before 11:59 p.m. (recipient's time), when transmitted; (c) if sent by email on a day other than a Business Day, or if sent by email after 11:59 p.m. (recipient's time), on the Business Day following the date when transmitted; (d) if sent by registered, certified or first class mail, the third Business Day after being sent; and (e) if sent by overnight delivery via a national courier service, one Business Day after being sent, in each case to the address set forth beneath the name of such party below (or to such other address as such party shall have specified in a written notice given to the other parties hereto):

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(a)
If to Parent or Merger Sub:

Alliqua BioMedical, Inc.
2150 Cabot Blvd., West, Suite B
Langhorne, PA 19047
Attn: David Johnson
E-Mail: djohnson@alliqua.com

With a copy to:

Haynes and Boone, LLP
30 Rockefeller Plaza
26th Floor
New York, NY 10112
Attn.: Rick A. Werner
Greg Kramer
E-Mail: rick.werner@haynesboone.com
greg.kramer@haynesboone.com

(b)
If to Company:

Adynxx, Inc.
100 Pine Street, Suite 500
San Francisco, CA 94111
Attention: Rick Orr
Email: rorr@adynxx.com

With a copy to:
Cooley LLP
3175 Hanover Street
Palo Alto, CA 94304
Attention: Laura Medina
John McKenna
Email: lmedina@cooley.com
jmckenna@cooley.com

Section 8.02 Amendment. This Agreement may be amended by the parties hereto by action taken by or on behalf of their respective boards of directors at any time prior to the Effective Time; provided, however, that, after approval of the Merger by the Company Stockholder Approval or the Parent Stockholder Approval, as applicable, no amendment may be made which by Legal Requirements requires further approval by such stockholders without such further approval. This Agreement may not be amended except by an instrument in writing signed by the parties hereto.
Section 8.03 Headings. The headings contained in this Agreement are for reference purposes only and will not affect in any way the meaning or interpretation of this Agreement.
Section 8.04 Severability. If any term or other provision of this Agreement is invalid, illegal or incapable of being enforced by any rule of law, or public policy, all other conditions and provisions of this Agreement will nevertheless remain in full force and effect so long as the economic or legal substance of the Transactions is not affected in any manner adverse to any party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto will negotiate in good faith to modify this Agreement so as to effect the original

intent of the parties as closely as possible in an acceptable manner to the end that Transactions are fulfilled to the extent possible.

Section 8.05 Entire Agreement. This Agreement constitutes the entire agreement and supersede all prior agreements and undertakings (other than the Confidentiality Agreement), both written and oral, among the parties, or any of them, with respect to the subject matter hereof and, except as otherwise expressly provided herein, are not intended to confer upon any other person any rights or remedies hereunder.

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Section 8.06 Successors and Assigns. This Agreement will be binding upon: (a) Company and its successors and assigns (if any); (b) Parent and its successors and assigns (if any); (c) Merger Sub and its successors and assigns (if any); and (d) the Company Stockholders. This Agreement will inure to the benefit of: (i) Company; (ii) Parent; (iii) Merger Sub; (iv) the other Parent Indemnified Persons; and (v) the respective successors and assigns (if any) of the foregoing. No party may assign this Agreement or any of its rights, interests or obligations hereunder without the prior written approval of the other parties hereto.

Section 8.07 Parties In Interest. This Agreement will be binding upon and inure solely to the benefit of each party hereto, and nothing in this Agreement, expressed or implied, is intended to or will confer upon any other person any right, benefit or remedy of any nature whatsoever under or by reason of this Agreement, other than Section 5.06 (which is intended to be for the benefit of the parties indemnified thereby and may be enforced by such parties).

Section 8.08 Waiver. No failure or delay on the part of any party hereto in the exercise of any right hereunder will impair such right or be construed to be a waiver of, or acquiescence in, any breach of any representation, warranty or agreement herein, nor will any single or partial exercise of any such right preclude other or further exercise thereof or of any other right. At any time prior to the Effective Time, any party hereto may, with respect to any other party hereto, (a) extend the time for the performance of any of the obligations or other acts, (b) waive any inaccuracies in the representations and warranties contained herein or in any document delivered pursuant hereto and (c) waive compliance with any of the agreements or conditions contained herein. Any such extension or waiver will be valid if set forth in an instrument in writing signed by the party or parties to be bound.

Section 8.09 Remedies Cumulative; Specific Performance. All rights and remedies existing under this Agreement are cumulative to, and not exclusive of, any rights or remedies otherwise available. Each party to this Agreement agree that, in the event of any breach or threatened breach by the other party of any covenant, obligation or other provision set forth in this Agreement: (a) such party will be entitled, without any proof of actual damages (and in addition to any other remedy that may be available to it) to: (i) a decree or order of specific performance or mandamus to enforce the observance and performance of such covenant, obligation or other provision; and (ii) an injunction restraining such breach or threatened breach; and (b) such party will not be required to provide any bond or other security in connection with any such decree, order or injunction or in connection with any related action or Legal Proceeding.

Section 8.10 Governing Law; Venue; Waiver of Jury Trial.

(a) This Agreement will be governed by, and construed in accordance with, the laws of the State of Delaware, regardless of the laws that might otherwise govern under applicable principles of conflicts of laws thereof.

(b) Any action, suit or other Legal Proceeding relating to this Agreement or the enforcement of any provision of this Agreement will be brought or otherwise commenced exclusively in the Court of Chancery of the State of Delaware or, if jurisdiction over the matter is vested exclusively in the federal courts, the United States District Court for the District of Delaware. Each party to this Agreement: (i) expressly and irrevocably consents and submits to the exclusive jurisdiction of such court (and each appellate court therefrom) in connection with any such action, suit or Legal Proceeding; (ii) agrees that such court will be deemed to be a convenient forum and (iii) agrees not to assert (by way of motion, as a defense or otherwise), in any such action, suit or Legal Proceeding commenced in any such court, any claim that such party is not subject personally to the jurisdiction of such court, that such action, suit or Legal Proceeding has been brought in an inconvenient forum, that the venue of such action, suit or other Legal Proceeding is improper or that this Agreement or the subject matter of this Agreement may not be enforced in or by such court.

(c) EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES, TO THE EXTENT PERMITTED BY APPLICABLE LEGAL REQUIREMENTS, ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, SUIT OR OTHER LEGAL PROCEEDING ARISING OUT OF OR RELATED TO THIS AGREEMENT OR THE TRANSACTIONS.

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Section 8.11 Counterparts and Exchanges by Electronic Transmission or Facsimile. This Agreement may be executed in one or more counterparts, and by the different parties hereto in separate counterparts and by facsimile or electronic (i.e., PDF) transmission, each of which when executed will be deemed to be an original but all of which taken together will constitute one and the same agreement.

Section 8.12 Attorney Fees. In any action at law or suit in equity to enforce this Agreement or the rights of any of the parties hereunder, the prevailing party in such action or suit will be entitled to receive a reasonable sum for its attorneys' fees and all other reasonable costs and expenses incurred in such action or suit.

Section 8.13 Cooperation. In further of, and not in limitation of, any other provision of this Agreement, each party hereto agrees to cooperate fully with the other parties hereto and to execute and deliver such further documents, certificates, agreements and instruments and to take such other actions as may be reasonably requested by the other parties hereto to evidence or reflect the Transactions and to carry out the intent and purposes of this Agreement.

Section 8.14 Non-Survival of Representations, Warranties. The representations and warranties of the Company, Parent and Merger Sub contained in this Agreement or any certificate or instrument delivered pursuant to this Agreement shall terminate at the Effective Time, and only the covenants that by their terms survive the Effective Time and this Article VIII shall survive the Effective Time.

Section 8.15 Construction.

(a) References to "cash," "dollars" or "$" are to U.S. dollars.

(b) For purposes of this Agreement, whenever the context requires: the singular number will include the plural, and vice versa; the masculine gender will include the feminine and neuter genders; the feminine gender will include the masculine and neuter genders; and the neuter gender will include masculine and feminine genders.

(c) The parties hereto agree that any rule of construction to the effect that ambiguities are to be resolved against the drafting party will not be applied in the construction or interpretation of this Agreement.

(d) As used in this Agreement, the words "include" and "including," and variations thereof, will not be deemed to be terms of limitation, but rather will be deemed to be followed by the words "without limitation."

(e) Except as otherwise indicated, all references in this Agreement to "Sections," "Exhibits" and "Schedules" are intended to refer to Sections of this Agreement and Exhibits or Schedules to this Agreement.

(f) Any reference to legislation or to any provision of any legislation shall include any modification, amendment, re-enactment thereof, any legislative provision substituted therefore and all rules, regulations, and statutory instruments issued or related to such legislations.

(g) The term "knowledge of Company", and all variations thereof, will mean the actual knowledge of Rick Orr, and the knowledge such persons would reasonably be expected to have after making reasonable inquiry of their direct reports who are responsible for the subject matter of the particular representation or warranty. The term "knowledge of Parent", and all variations thereof, will mean the actual knowledge of David Johnson, and the knowledge such persons would reasonably be expected to have after making reasonable inquiry of their direct reports who are responsible for the subject matter of the particular representation or warranty.

(h) Whenever the last day for the exercise of any privilege or the discharge of any duty hereunder shall fall upon a Saturday, Sunday, or any date on which banks in New York, New York are authorized or obligated by Legal Requirements to be closed, the Party having such privilege or duty may exercise such privilege or discharge such duty on the next succeeding day which is a regular Business Day.

[Signature Page Follows]

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IN WITNESS WHEREOF, the undersigned parties have caused this Agreement to be executed as of the date first written above.

ALLIQUA BIOMEDICAL, INC.

By: /s/ David Johnson

Name: David Johnson

Title: Chief Executive Officer

EMBARK MERGER SUB INC.

By: /s/ David Johnson

Name: David Johnson

Title: Chief Executive Officer

ADNYXX, INC.

By: /s/ Rick Orr

Name: Rick Orr

Title: President and Chief Executive Officer

[Signature Page to Agreement and Plan of Merger and Reorganization]

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EXHIBIT A

CERTAIN DEFINITIONS

For purposes of the Agreement (including this Exhibit A):

“Acquired Companies” mean Company and its direct and indirect Subsidiaries.

“Acquiring Companies” mean Parent and its direct and indirect Subsidiaries.

“Acquisition Proposal” means any offer, proposal or indication of interest contemplating or which would reasonably be interpreted to be lead to the contemplation of an Acquisition Transaction.

“Acquisition Transaction” means any transaction or series of transactions involving:

(a) any merger, consolidation, amalgamation, share exchange, business combination, issuance of securities, acquisition of securities, tender offer, exchange offer or other similar transaction (i) in which Company (or its Subsidiaries) or Parent (or its Subsidiaries) is a constituent corporation, (ii) in which a Person or “group” (as defined in the Exchange Act and the rules promulgated thereunder) of Persons directly or indirectly acquires beneficial or record ownership of securities representing more than 20% of the outstanding securities of any class of voting securities of Company (or its Subsidiaries) or Parent (or its Subsidiaries), or (iii) in which Company (or its Subsidiaries) or Parent (or its Subsidiaries) issues securities representing more than 20% of the outstanding securities of any class of voting securities of any such Entity (other than as contemplated under this Agreement);

(b) any sale, lease, exchange, transfer, license, acquisition or disposition of any business or businesses or assets that constitute or account for 20% or more of the consolidated net revenues, net income or assets of Company (or its Subsidiaries) or Parent (or its Subsidiaries); or

(c) any liquidation or dissolution of any of Company (or its Subsidiaries) or Parent (or its Subsidiaries).

“Affiliates” mean, with respect to any Person, any other Person which directly or indirectly controls, is controlled by or is under common control with such Person.

“Applicable Amount” means 0.8625; provided, however, that if the Company raises more than $10,000,000 in the Permitted Financing (including the conversion of convertible promissory notes outstanding as of the date of this Agreement), then, in such instance the “Applicable Amount” shall be ratably adjusted upward on a sliding scale from 0.8625 to account for such excess amount raised in the Permitted Financing such that, in the event Company raises $20,000,000 in the Financing (including the conversion of convertible promissory notes outstanding as of the date of this Agreement), the Applicable Amount means 0.9.

“Business Day” means a day other than a Saturday, Sunday or other day on which banks located in New York, New York are authorized or required by applicable Legal Requirements to close.

“Cash Dividend” means a cash dividend, declared and paid or to be paid to stockholders of Parent as of the Parent Record Date, of a per share amount calculated as the quotient of (a)(i) Closing Parent Cash minus (ii) Indebtedness of Parent outstanding as of immediately prior to the Effective Time minus (iii) Transaction Costs of Parent minus (iv) the amount (expressed as a positive number), if any, by which the Working Capital is less than zero ($0) divided by (b) the number of shares of Parent Capital Stock outstanding as of the Parent Record Date.

“Closing Company Cash” means the Company’s cash on hand immediately prior to the Effective Time.

“Closing Parent Cash” means Parent’s cash on hand immediately prior to the Effective Time.

“COBRA” means the health care continuation and notice provisions of the Consolidated Omnibus Budget Reconciliation Act of 1985 and the regulations thereunder or any state Legal Requirement governing health care coverage extension or continuation.

“Company Capital Stock” means the Company Common Stock and the Company Preferred Stock.

“Company Common Stock” means the Common Stock of the Company, par value $0.001.

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"Company Disclosure Schedule" means the disclosure schedule in agreed form that has been delivered by Company to Parent on the date of this Agreement.

"Company Fundamental Representations" means the representations and warranties of the Company set forth in Sections 2.01 (Organization and Qualification; Charter Documents), 2.02 (Capital Structure), 2.03 (Authority; Non-Contravention; Approvals), 2.11 (Brokers' And Finders' Fees) and 2.13 (Title to Assets; Real Property).

"Company IP Rights" mean all IP Rights owned solely or co-owned by an Acquired Company or in which an Acquired Company has any right, title or interest and which are used by an Acquired Company in the ordinary course of its business.

"Company Material Adverse Effect" means any effect, change, event or circumstance (an "Effect") that (a) has or would reasonably be expected to have a material adverse effect on the business, financial condition, operations or results of operations of the Acquired Companies taken as a whole; provided, however, that, in no event will any of the following, alone or in combination, be deemed to constitute, nor shall any of the following be taken into account in determining whether there has occurred, a Company Material Adverse Effect: Effects resulting from (i) conditions generally affecting the industries in which the Acquired Companies operate (ii) changes generally affecting the United States or global economy or capital markets as a whole; (iii) any natural disaster or any acts of terrorism, sabotage, military action or war or any escalation or worsening thereof; or (iv) any changes (after the date of this Agreement) in GAAP or applicable Legal Requirements, and with respect to items (i) - (iv), only to the extent that, individually or in the aggregate, such Effects do not have a disproportionate impact on the Acquired Companies taken as a whole; or (b) prevents the Company from consummating the Merger.

"Company Option" means an option to purchase shares of Company Capital Stock.

"Company Option Plan" means the Adynxx, Inc. 2010 Equity Incentive Plan with an effective date of December 8, 2010, as established and maintained by the Company and as amended and restated from time to time.

"Company Outstanding Shares" means the (a) the total number of shares of Company Common Stock outstanding immediately prior to the Effective Time (assuming the conversion of the Company Preferred Stock into Company Common Stock immediately prior to the Effective Time) and (b) the total number of shares of Company Common Stock that, immediately prior to the Effective Time, are issuable upon exercise of Company Options (whether or not vested or currently exercisable) and Company Warrants. Company Outstanding Shares shall include any equity securities issuable at or after the Effective Time by Parent in connection with the Transaction Costs of the Company.

"Company Preferred Stock" means the Company's Series A and Series B Preferred Stock, collectively.

"Company Restricted Share" means a share of Company Capital Stock that is subject to repurchase by, or forfeiture to, the Company pursuant to restricted stock or similar agreements with the Company.

"Company Stockholders" mean the holders of Company Capital Stock issued and outstanding immediately prior to the Effective Time.

"Company Superior Offer" means an unsolicited, bona fide written Acquisition Proposal (with all references to 20% in the definition of Acquisition Proposal being treated as references to 50% for these purposes) made by a third party that (a) was not obtained or made as a direct or indirect result of a breach of (or in violation of) this Agreement and (b) the terms of which the board of directors of Company determines, in its reasonable judgment after consulting in good faith with an independent financial advisor and its outside legal counsel, to be more favorable to its stockholders from a financial point of view than the terms of the Merger, as well as the likelihood of the consummation thereof, which consideration shall include whether any financing is or may be required to consummate the transaction contemplated by such proposal, and whether such financing is committed and is reasonably capable of being obtained by the applicable offeror.

"Company Warrant" means a warrant to purchase shares of Company Capital Stock.

"Consent" means any approval, consent, ratification, permission, waiver or authorization.

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"Contract" means any written agreement, contract, subcontract, lease, understanding, arrangement, instrument, note, option, warranty, purchase Order, license, sublicense, insurance policy, benefit plan or legally binding commitment or undertaking of any nature.

"Copyrights" mean all copyrights and copyrightable works (including without limitation databases and other compilations of information, mask works and semiconductor chip rights), including all rights of authorship, use, publication, reproduction, distribution, performance, transformation, moral rights and rights of ownership of copyrightable works and all registrations and rights to register and obtain renewals and extensions of registrations, together with all other interests accruing by reason of international copyright.

"Encumbrance" means any lien, pledge, hypothecation, charge, mortgage, easement, encroachment, imperfection of title, title exception, title defect, right of possession, lease, tenancy license, security interest, encumbrance, community property interest or restriction of any nature (including any restriction on the voting of any security, any restriction on the transfer of any security or other asset, any restriction on the receipt of any income derived from any asset, any restriction on the use of any asset and any restriction on the possession, exercise or transfer of any other attribute of ownership of any asset). For the avoidance of doubt, Encumbrance does not include Out-Licenses.

"End Date" means the date that is six (6) months after the date of this Agreement.

"Employee Benefit Plan" means each plan, program, policy, contract, agreement or other arrangement providing for retirement, pension, deferred compensation, severance, separation pay, relocation benefits, termination pay, performance awards, bonus compensation, incentive compensation, stock option, stock purchase, stock bonus, phantom stock, stock appreciation right, supplemental retirement, profit sharing, fringe benefits, cafeteria benefits, medical benefits, life insurance, disability benefits, accident benefits, salary continuation, accrued leave, vacation, sabbatical, sick pay, sick leave, or other employee benefits, whether written or unwritten, including each "voluntary employees' beneficiary association" under Section 501(c)(9) of the Code and each "employee benefit plan" within the meaning of Section 3(3) of ERISA, in each case, for active, retired or former employees, directors or consultants.

"Entity" means any corporation (including any non-profit corporation), general partnership, limited partnership, limited liability partnership, joint venture, estate, trust, company (including any company limited by shares, limited liability company or joint stock company), firm, society or other enterprise, association, organization or entity.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended.

"ERISA Affiliate" means any trade or business (whether or not incorporated) that is or at any relevant time was treated as a single employer with any Person within the meaning of Section 414 of the Code.

"Exchange Ratio" means the following ratio (rounded to four decimal places): the quotient of (a) the Merger Shares divided by (b) the Company Outstanding Shares.

"Excluded Contracts" means (i) any non-exclusive Contract concerning "off-the-shelf" or similar computer software that is available on commercially reasonable terms, (ii) standard non-disclosure, confidentiality and material transfer Contracts granting non-exclusive rights to IP Rights and entered into in the Ordinary Course of Business, (iii) Contracts that have expired on their own terms or were terminated and for which there are no material outstanding obligations, and (v) purchase orders and associated terms and conditions for which the underlying goods or services have been delivered or received.

"FDA" means the United States Food and Drug Administration.

"Financing" shall mean the sale and issuance of debt or equity securities by Company to former or existing stockholders or other investors or their respective Affiliates in the Company or its Subsidiaries.

"Governmental Body" means any: (a) nation, state, commonwealth, province, territory, county, municipality, district or other jurisdiction of any nature; (b) federal, state, local, municipal, foreign or other government; or (c) governmental or quasi-governmental authority of any nature (including any governmental division, regulatory agency, department, agency, commission, instrumentality, official, ministry, fund, foundation, center, organization, unit, body or Entity and any court or other tribunal).

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"HSR Act" means the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended.

"Indebtedness" means (i) all obligations for borrowed money and advancement of funds; (ii) all obligations evidenced by notes, bonds, debentures or similar instruments, contracts or arrangements (whether or not convertible), (iii) all obligations for the deferred purchase price of property or services (including any potential future earn-out, purchase price adjustment, releases of "holdbacks" or similar payments, but excluding any such obligations to the extent there is cash being held by a third party in escrow exclusively for purposes of satisfying such obligations) ("Deferred Purchase Price"); (iv) all obligations arising out of any financial hedging, swap or similar arrangements; (v) all obligations as lessee that would be required to be capitalized in accordance with GAAP, whether or not recorded; (vi) all obligations in connection with any letter of credit, banker's acceptance, guarantee, surety, performance or appeal bond, or similar credit transaction; (vii) interest payable with respect to Indebtedness referred to in clause (i) through (vi), and (viii) the aggregate amount of all prepayment premiums, penalties, breakage costs, "make whole amounts," costs, expenses and other payment obligations of such Person that would arise (whether or not then due and payable) if all such items under clauses (i) through (vii) were prepaid, extinguished, unwound and settled in full as of such specified date. For purposes of determining the Deferred Purchase Price obligations as of a specified date, such obligations shall be deemed to be the maximum amount of Deferred Purchase Price owing as of such specified date (whether or not then due and payable) or potentially owing at a future date.

"IP Rights" mean any and all of the following in any country or region: (a) Copyrights, Patent Rights, Trademark Rights, domain name registrations, Trade Secrets, and other intellectual property rights; and (b) the right (whether at law, in equity, by Contract or otherwise) to enjoy or otherwise exploit any of the foregoing, including the rights to sue for and remedies against past, present and future infringements of any or all of the foregoing, and rights of priority and protection of interests therein under the Legal Requirements of any jurisdiction worldwide.

"Legal Proceeding" means any action, suit, litigation, arbitration, proceeding (including any civil, criminal, administrative, investigative or appellate proceeding), hearing, audit, examination or investigation commenced, brought, conducted or heard by or before, or otherwise involving, any court or other Governmental Body or any arbitrator or arbitration panel.

"Legal Requirements" mean any federal, state, local, municipal, foreign or other law, statute, constitution, controlling principle of common law, resolution, ordinance, code, edict, decree, rule, regulation, ruling or requirement issued, enacted, adopted, promulgated, implemented or otherwise put into effect by or under the authority of any Governmental Body.

"Lock-up Agreement Signatories" means those Persons set forth on Schedule A.

"Merger Shares" means the product of (a) the Total Outstanding Shares multiplied by (b) the Applicable Amount.

"Merger Sub Common Stock" means the Common Stock, $0.001 par value per share, of the Merger Sub.

"Nasdaq" means The Nasdaq Capital Market.

"Order" means any order, writ, injunction, judgment or decree.

"Out-of-the-Money Parent Securities" means any Parent Options and Parent Warrants having an exercise price in excess of $6.87 (as adjusted for any stock splits, combinations, reorganizations and the like with respect to the Parent Common Stock between the date of announcement and the Effective Time).

"Parent Capital Stock" means Parent Common Stock and Parent Preferred Stock.

"Parent Disclosure Schedule" means the disclosure schedule that has been delivered by Parent to Company on the date of this Agreement.

"Parent IP Rights" mean all IP Rights of the Parent or its Subsidiaries.

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"Parent Material Adverse Effect" means any Effect that, considered together with all other Effects, (a) has a material adverse effect on the business, financial condition, operations or results of operations of Parent and its Subsidiaries taken as a whole; provided, however, that, in no event will any of the following, alone or in combination, be deemed to constitute, nor will any of the following be taken into account in determining whether there has occurred, a Parent Material Adverse Effect: Effects resulting (i) from conditions generally affecting the industries in which Parent participates; (ii) changes generally affecting the United States or global economy or capital markets as a whole; (iii) changes in the trading price or trading volume of Parent Common Stock (it being understood, however, that any Effect causing or contributing to such changes in the trading price or trading volume of Parent Common Stock may if not otherwise to be disregarded pursuant to a different subclause of this definition, constitute a Parent Material Adverse Effect and may be taken into account in determining whether a Parent Material Adverse Effect has occurred); (iv) any natural disaster or any acts of terrorism, sabotage, military action or war or any escalation or worsening thereof; and (v) any changes (after the date of this Agreement) in GAAP or applicable Legal Requirements, and with respect to items (i), (ii), (iv) and (v), only to the extent that, individually or in the aggregate, such Effects do not have a disproportionate impact on the Acquired Companies taken as a whole; or (b) prevents Parent or Merger Sub from consummating the Merger.

"Parent Outstanding Shares" means the means the sum of (a) the total number of shares of Parent Common Stock outstanding immediately prior to the Effective Time, (b) the total number of shares of Parent Common Stock that, immediately prior to the Effective Time, are issuable upon exercise of Parent Options (whether or not vested or currently exercisable) and Parent Warrants, in each case other than Out-of-the-Money Parent Securities and (c) the total number of shares of Parent Common Stock underlying Parent RSUs outstanding immediately prior to the Effective Time. Parent Outstanding Shares shall include any equity securities that are issuable at or after the Effective Time by Parent in connection with the Transaction Costs of Parent.

"Parent Record Date" the date (which shall occur prior to the Effective Time) with respect to which Parent stockholders of record on such date will receive the Cash Dividend.

"Parent RSUs" means restricted stock units issued by Parent.

"Parent Stock Option Plans" mean the 2014 Long Term Incentive Plan, the 2011 Long Term Incentive Plan, and the 2001 Long Term Incentive Plan, each as established and maintained by Parent (or a predecessor to Parent) and as amended and restated from time to time.

"Parent Superior Offer" means an unsolicited, bona fide written Acquisition Proposal (with all references to 20% in the definition of Acquisition Proposal being treated as references to 50% for these purposes) made by a third party that (a) was not obtained or made as a direct or indirect result of a breach of (or in violation of) this Agreement and (b) the terms of which the board of directors of Parent determines, in its reasonable judgment after consulting in good faith with an independent financial advisor and its outside legal counsel, to be more favorable to its stockholders from a financial point of view than the terms of the Merger, as well as the likelihood of the consummation thereof, which consideration shall include whether any financing is or may be required to consummate the transaction contemplated by such proposal, and whether such financing is committed and is reasonably capable of being obtained by the applicable offeror.

"Parent Transactions" means the Transactions.

"Parent Unaudited Interim Balance Sheet" means the balance sheet included in Parent's Form 10-Q for the period ended June 30, 2018.

"Parent Warrant" means any warrant to purchase shares of Parent Capital Stock.

"Patent Rights" mean all issued patents, pending patent applications and abandoned patents and patent applications provided that they can be revived (which for purposes of this Agreement will include utility models, design patents, industrial designs, certificates of invention and applications for certificates of invention and priority rights) in any country or region, including all provisional applications, substitutions, continuations, continuations-in-part, divisions, renewals, reissues, re-examinations and extensions thereof.

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"Permitted Financing" shall mean a Financing in an amount not to exceed $20,000,000 (including the conversion or exchange of any promissory notes of Company outstanding as of the date of this Agreement).

"Permitted Liens" means (i) Liens for Taxes, assessments or other governmental charges or levies not yet delinquent or that are being contested in good faith by appropriate Legal Proceedings or that may thereafter be paid without penalty; (ii) statutory Liens of landlords or lessors under rental agreements for amounts not delinquent, (iii) mechanics', carriers', warehousemen's, workers', repairers' and similar Liens imposed by applicable Law or arising or incurred in the ordinary course of business consistent with past practice with respect to amounts not yet due and payable or being contested in good faith by appropriate Legal Proceedings; (iv) Liens incurred or deposits made in the ordinary course of business consistent with past practice in connection with workers' compensation, unemployment insurance or other types of social security; and (v) licenses and other similar rights granted and obligations incurred in the ordinary course of business consistent with past practice that are not material to the operation of the applicable business, (vi) Liens or encumbrances of record affecting any owned or leased real property, any matters that would be disclosed by a survey of any owned or leased real property and any zoning, land use, covenants, conditions and restrictions or similar matters affecting any owned or leased real property, in each case that would not be reasonably likely to materially interfere with the present use or occupancy of such real property.

"Person" means any person, Entity, Governmental Body, or group (as defined in Section 13(d)(3) of the Exchange Act).

"Personal Data" means a natural person's name, street address, telephone number, e-mail address, photograph, social security number, driver's license number, passport number, or any other piece of information that allows the identification of a natural person.

The "Phase 2 Study" means the Company's currently planned Phase 2 clinical trial for brivoligide in total knee arthroplasty patients.

"Proxy Statement" shall mean the proxy statement to be sent to Company's stockholders in connection with the approval of this Agreement and the Merger (by signing the Company Stockholder Written Consent) and to Parent's stockholders in connection with the Parent's Stockholders' Meeting.

"Registrable Securities" means shares of Parent Common Stock issued in connection with the Closing pursuant to this Agreement; provided, however, that shares of Parent Common Stock shall cease to be Registrable Securities hereunder if and when (a) such Registrable Securities have been sold, transferred or otherwise disposed of pursuant to an effective registration statement registering such Registrable Securities under the Securities Act, (b) such Registrable Securities have been sold, transferred or otherwise disposed of pursuant to Rule 144 of the Securities Act ("Rule 144") or (c) with respect to the Registrable Shares held by a particular securityholder, such securityholder holds a number of Registrable Securities less than the number of share of Parent Common Stock that can be sold by such securityholder in a single 90-day period pursuant to Rule 144 (including Rule 144(e)).

A party's "Representatives" include each Person that is or becomes (a) a Subsidiary or other controlled Affiliate of such party or (b) an officer, director, employee, partner, attorney, advisor, accountant, agent or representative of such party or of any such party's Subsidiaries or other controlled Affiliates.

"SEC Documents" mean each report, registration statement, proxy statement and other statements, reports, schedules, forms and other documents filed by Parent with the SEC since the Parent Lookback Date, including all amendments thereto.

"SpinCo" means AquaMed Technologies, Inc.

"Spin-Off" means shall mean the transaction or series of transactions resulting in (a) the divestiture in one or a series of transactions, including by way of stock transfer, asset sale, merger or otherwise, by the Parent of SpinCo, which shall consist solely of Parent's custom hydrogel manufacturing business, (b) the assumption in one or a series of transactions, including by operation of Legal Requirements, by SpinCo of all of the liabilities of Parent associated with Parent's custom hydrogels business and (c) the pro rata distribution to the holders of Parent Common Stock prior to the Effective Time of SpinCo common stock.

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An Entity will be deemed to be a "Subsidiary" of another Person if such Person directly or indirectly owns, beneficially or of record, (a) an amount of voting securities of or other interests in such Entity that is sufficient to enable such Person to elect at least a majority of the members of such Entity's board of directors or other governing body, or (b) at least 50% of the outstanding equity or financial interests of such Entity.

"Tax" and "Taxes" mean any federal, state, local, or non-U.S. income, gross receipts, license, payroll, employment, excise, escheat, severance, stamp, occupation, premium, windfall profits, customs duties, capital stock, franchise, profits, withholding, social security (or similar), unemployment, disability, real property, personal property, sales, use, transfer, registration, value added, alternative or add-on minimum, estimated, or other tax of any kind whatsoever, including any interest, penalty, or addition thereto, whether disputed or not and including any obligations to indemnify or otherwise assume or succeed to the Tax liability of any other Person.

"Tax Return" means any return, declaration, report, claim for refund, or information return or statement relating to Taxes, including any schedule or attachment thereto, and including any amendment thereof.

"Total Outstanding Shares" means the quotient of (a) the Parent Outstanding Shares divided by (b) 0.13.

"Trade Secrets" mean trade secrets, know-how, proprietary information, inventions, discoveries, improvements, technology, technical data and research and development, whether patentable or not.

"Trademark Rights" mean all material common law trademarks, registered trademarks, applications for registration of trademarks, material common law service marks, registered service marks, applications for registration of service marks, trade names, registered trade names and applications for registration of trade names, and Internet domain name registrations; and including all filings with the applicable Governmental Body indicating an intent to use any of the foregoing if not registered or subject to a pending application.

"Transaction Costs" means the aggregate amount of costs and expenses of a Person or any of its Subsidiaries incurred in connection with the negotiation, preparation and execution of this Agreement and the consummation of the Transactions, including (a) any brokerage fees and commissions, finders' fees or financial advisory fees, any fees and expenses of counsel or accountants payable by such Person or any of its Subsidiaries and any transaction bonuses or similar items in connection with the Transactions, (b) any bonus, severance, change-in-control payments or similar payment obligations (including payments with "single-trigger" provisions triggered at and as of the consummation of the Transactions) that become due or payable to any director, officer, employee or consultant of such Person in connection with the consummation of the Transactions, (c) any payments to third parties under any Contract to which such Person or its Subsidiaries are a party triggered by the consummation of the Transactions, or any payment or consideration arising under or in relation to obtaining any consents, waivers or approvals of any third party under any Contract to which such Person or its Subsidiaries are a party required to be obtained in connection with the consummation of the Transactions in order for any such Contract to remain in full force and effect following the Closing or resulting from agreed-upon modification or early termination of any such Contract, in each case with respect to the foregoing matters (a)-(c), to the extent unpaid; provided, Parent and Company shall share equally all out of pocket costs and expenses, other than attorneys', accountants' and other similar service provider's fees and expenses, incurred in relation to (i) the filings by the Parties under any filing requirement under the HSR Act and any foreign antitrust Legal Requirement applicable to this Agreement and the Transactions; (ii) the filing with the SEC of the preliminary and definitive Proxy Statement (including any financial statements and exhibits), including printer fees, and any amendments or supplements thereto, and the printing and delivery of such documents to the Parties' stockholders; and (iii) any fees incurred in connection with obtaining Nasdaq approval for the merger, the name and ticker symbol changes, and the listing of the shares of Parent Common Stock to be issued, to the extent contemplated by this Agreement. For the avoidance of doubt, all fees and costs incurred in connection with the Spin-Off and in obtaining the Spin-Off Valuation shall be borne by Parent.

"Voting Agreement Signatories" mean: (a) means those Persons set forth on Schedule B; and (b) each of the directors and officers of Company and Parent.

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"Working Capital" means the (a) the current assets of Parent, as of the Closing, calculated in accordance with GAAP applied on a basis consistent with the application thereof to the most recent audited financial statements included in the Parent SEC Documents, excluding Closing Parent Cash and deferred tax assets, minus (b) the current liabilities of Parent, as of the Closing, calculated in accordance with GAAP applied on a basis consistent with the application thereof to the most recent audited financial statements included in the Parent SEC Documents, excluding deferred tax liabilities, Indebtedness and Transaction Costs.

"Yardley Lease" means that certain Agreement of Lease, dated as of August 14, 2014, by and between Parent and Lower Makefield Investor LLC, as supplemented by that certain Confirmation of Lease Term, dated as of February 15, 2016.

Additionally, the following terms have the meanings assigned to such terms in the Sections of this Agreement set forth below opposite such term:

| Defined Word | Section of Agreement |
|---|---|
| "Acceptable Company Confidentiality Agreement" | Section 5.12(a) |
| "Acceptable Parent Confidentiality Agreement" | Section 5.13(a) |
| "Agreement" | Preamble |
| "Allocation Certificate" | Section 5.19 |
| "Certificate of Merger" | Section 1.02 |
| "Certifications" | Section 3.05(a) |
| "Closing Date" | Section 1.02 |
| "Closing" | Section 1.02 |
| "Code" | Recitals |
| "Commercialized" | Section 2.09(e) |
| "Company Appointees" | Section 5.11(a) |
| "Company Balance Sheet" | Section 2.05(a) |
| "Company Change in Recommendation" | Section 5.02(d) |
| "Company Contract" | Section 2.16(b) |
| "Company Disclosure Schedule" | Exhibit A |
| "Company Employee Plans" | Section 2.12(a) |
| "Company Environmental Permits" | Section 2.14(c) |
| "Company Financials" | Section 2.05(a) |
| "Company Insurance Policy" | Section 2.18(a) |
| "Company Lookback Date" | Section 2.05(c) |
| "Company Owned IP Rights" | Section 2.08 |
| "Company Permits" | Section 2.09(b) |
| "Company Stock Certificate" | Section 1.09 |
| "Company Stockholder Matters" | Section 5.02(a) |
| "Company Stockholder Written Consent" | Section 5.02(a) |
| "Company Vote Deadline" | Section 5.02(a) |
| "Company Voting Agreements" | Recitals |
| "Company" | Preamble |
| "Confidentiality Agreement" | Section 5.04 |
| "D&O Indemnified Party" | Section 5.06(a) |
| "Delaware Law" | Section 1.01 |

| | |
|---|---|
| “Dissenting Shares” | Section 1.07 |

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| Defined Word | Section of Agreement |
|---|---|
| “Effective Time” | Section 1.02 |
| “ERISA Affiliate” | Section 2.12(a) |
| “ERISA” | Section 2.12(a) |
| “Exchange Act” | Section 2.03(d) |
| “Exchange Agent” | Section 1.08(a) |
| “Exchange Fund” | Section 1.08(a) |
| “GAAP” | Section 2.05(a) |
| “Hazardous Material Activities” | Section 2.14(b) |
| “Hazardous Material” | Section 2.14(a) |
| “knowledge of Company” | Section 8.15(g) |
| “knowledge of Parent” | Section 8.15(g) |
| “Liability” | Section 2.05(d) |
| “Lock-up Agreements” | Recitals |
| “Merger Consideration” | Section 1.06(a) |
| “Merger Sub” | Preamble |
| “Merger” | Recitals |
| “Nasdaq Listing Application” | Section 5.25 |
| “Parent Board Recommendation” | Section 5.03(b) |
| “Parent Certificate” | Section 5.19(d) |
| “Parent Change in Recommendation” | Section 5.03(c) |
| “Parent Charter Amendment” | Section 3.03(a) |
| “Parent Common Stock” | Section 1.06(a) |
| “Parent Contract” | Section 3.15(b) |
| “Parent Employee Plans” | Section 3.12(a) |
| “Parent Environmental Permits” | Section 3.14(c) |
| “Parent Financials” | Section 3.05(f) |
| “Parent Insurance Policy” | Section 3.16(a) |
| “Parent Lookback Date” | Section 3.05(a) |
| “Parent Option” | Section 3.02(b) |
| “Parent Owned IP Rights” | Section 3.08 |
| “Parent Permits” | Section 3.09(b) |
| “Parent Preferred Stock” | Section 3.02(a) |
| “Parent SEC Documents” | Section 3.05(a) |
| “Parent Stockholder Approval Matters” | Section 5.03(a) |
| “Parent Stockholder Approval” | Section 3.03(a) |
| “Parent Stockholders’ Meeting” | Section 5.03(a) |
| “Parent Voting Agreements” | Recitals |
| “Parent” | Preamble |
| “Party” or “Parties” | Preamble |

| | |
|---|---|
| “Post-Closing Plans” | Section 5.20 |
| “Pre-Closing Period” | Section 4.01 |
| “Regulatory Authorities” | Section 2.09(i) |

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| Defined Word | Section of Agreement |
|---|---|
| “Company Stockholder Approval” | Section 2.03(a) |
| “Reverse Split” | Section 5.23 |
| “SEC” | Section 2.03(d) |
| “SEC Website” | Section 3.05(a) |
| “Securities Act” | Section 3.05(a) |
| “Spin-Off Valuation” | Section 5.29 |
| “Stockholder Notice” | Section 5.02(b) |
| “Surviving Corporation” | Section 1.01 |
| “Termination Fee” | Section 7.03(b) |
| “Transactions” | Recitals |
| “Voting Agreements” | Recitals |

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Annex B

AMENDMENT NO. 1

TO

AGREEMENT AND PLAN OF MERGER AND REORGANIZATION

This AMENDMENT NO. 1 TO AGREEMENT AND PLAN OF MERGER AND REORGANIZATION (this "Amendment") is made as of November 7, 2018, by and among Alliqua BioMedical, Inc., a Delaware corporation ("Parent"), Embark Merger Sub Inc., a Delaware corporation ("Merger Sub"), and Adynxx, Inc., a Delaware corporation ("Company"). Parent, Merger Sub and Company are sometimes referred to herein individually as a "Party" and collectively as the "Parties." Capitalized terms used but not defined herein shall have the meanings assigned to them in the Original Agreement (defined below).

RECITALS

WHEREAS, Parent, Merger Sub and Company are parties to that certain Agreement and Plan of Merger and Reorganization, dated as of October 11, 2018 (including the exhibits and schedules attached thereto, the "Original Agreement");

WHEREAS, the Parties desire to amend Exhibit A of the Original Agreement as provided herein; and

WHEREAS, the Parties constitute all of the parties required to amend the Original Agreement in accordance with Section 8.02 thereof as provided herein.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

1. Amendment to the Original Agreement.

The definition of Total Outstanding Shares in Exhibit A of the Original Agreement is hereby amended to replace the phrase "[…] divided by (b) 0.13." with "[…] divided by (b) one minus the Applicable Amount."

2. Effect of Amendments. Except as amended as set forth above, the Original Agreement shall continue in full force and effect. Nothing in this Amendment shall be construed to modify any provision of the Original Agreement other than as specifically amended as set forth above. The Original Agreement, as amended hereby, remains in full force and effect. Any reference to the Original Agreement contained in the Original Agreement shall, from and after the date hereof, be deemed to refer to the Original Agreement as amended hereby. The Original Agreement, as amended by this Amendment, represents the entire understanding and agreement of the Parties with respect to the subject matter of this Amendment, supersedes all prior negotiations between the Parties, and may not be amended, supplemented, or changed orally but only by an agreement in writing signed by the Party or Parties against whom enforcement is sought and making specific reference to this Amendment. If there are any conflicts between this Amendment and the Original Agreement, then this Amendment will govern and control.

3. Governing Law. This Amendment shall be governed by and construed in accordance with the laws of the State of Delaware applicable to contracts made and performed in such State, without reference to such State's or any other state's or other jurisdiction's principles of conflict of laws.

4. Binding Effect. This Amendment shall be binding upon and shall inure to the benefit of the Parties and their respective successors, heirs, executors, administrators, legal representatives, and permitted assigns.

5. Counterparts. This Amendment may be executed in multiple counterparts, each of which will be deemed to be an original copy of this Amendment and all of which, when taken together, will be deemed to constitute one and the same agreement. In the event that a signature is delivered by facsimile transmission or by e-mail delivery of a ".pdf" or other electronic format data file, such signature shall create a valid and binding obligation of the Party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile, ".pdf," or other electronic format signature page were an original thereof.

* * * * *

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IN WITNESS WHEREOF, this Amendment has been duly executed and delivered by the Parties as of the date first written above.

PARENT:

ALLIQUA BIOMEDICAL, INC.

By: /s/ David I. Johnson

Name: David I. Johnson

Title: Chief Executive Officer

MERGER SUB:

EMBARK MERGER SUB INC.

By: /s/ David I. Johnson

Name: David I. Johnson

Title: Chief Executive Officer

COMPANY:

ADYNXX, INC.

By: /s/ Rick Orr

Name: Rick Orr

Title: President and Chief Executive Officer

Signature Page to
Amendment No. 1 to Agreement and Plan of Merger and Reorganization
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Annex C

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended: December 31, 2017

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to
Commission file number: 001-36278

Alliqua BioMedical, Inc.
(Exact name of registrant as specified in its charter)

| | |
|---|---|
| Delaware | 58-2349413 |
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification Number) |
| 1010 Stony Hill Road Yardley, PA | 19067 |
| (Address of principal executive office) | (Zip Code) |

Registrant's telephone number, including area code: (215) 702-8550
Securities registered pursuant to Section 12(b) of the Exchange Act:

| Title of each class | Name of each exchange on which registered |
|---|---|
| Common Stock, $0.001 par value | The NASDAQ Stock Market LLC |

Securities registered pursuant to Section 12(g) of the Exchange Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes No
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

| | |
|---|---|
| Large accelerated filer | Accelerated filer |

Non-accelerated filer

(Do not check if a smaller reporting company)

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined by Rule 12b-2 of the Exchange Act).
Yes No

The aggregate market value of the voting and non-voting common equity of the registrant held by non-affiliates, computed by reference to the closing sales price of such stock, as of June 30, 2017 was $13,713,853. (For purposes of determination of the aggregate market value, only directors, executive officers and 10% or greater shareholders have been deemed affiliates.

The number of shares outstanding of the registrant’s common stock, par value $0.001 per share, as of March 1, 2018 was 4,985,212 shares.

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ALLIQUA BIOMEDICAL, INC.

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PART I

Unless the context otherwise indicates, the terms “we,” “us” and “our” as used in this Annual Report on Form 10-K refer to Alliqua BioMedical, Inc. and its directly and indirectly owned subsidiaries on a consolidated basis.

ITEM 1. BUSINESS

Forward-Looking Statements

This Annual Report on Form 10-K contains “forward-looking statements,” which include information relating to future events, future financial performance, strategies, expectations, competitive environment and regulation. Words such as “may,” “should,” “could,” “would,” “predict,” “potential,” “continue,” “expect,” “anticipate,” “future,” “intend,” “plan,” “belie similar expressions, as well as statements in future tense, identify forward-looking statements. Forward-looking statements should not be read as a guarantee of future performance or results and may not be accurate indications of when such performance or results will actually be achieved. Forward-looking statements are based on information we have when those statements are made or our good faith belief as of that time with respect to future events, and are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in or suggested by the forward-looking statements. Important factors that could cause such differences include, but are not limited to:

- inadequate capital;
- the occurrence of any event, change or other circumstances that could cause a failure to consummate the Asset Sale Transaction (as defined below);
- an increase in the amount of costs, fees, expenses and other charges related to the Asset Purchase Agreement or Asset Sale Transaction;
- risks arising from the diversion of management’s attention from our ongoing business operations;
- the uncertainty regarding the adequacy of our liquidity to pursue our complete business objectives;
- our ability to recover the carrying value of some or all of our intangible assets, including goodwill;
- our ability to obtain reimbursement from third party payers for our products;
- our ability to achieve and maintain minimum sales and other requirements under our license agreements;
- our ability to obtain and maintain regulatory approval of our existing products and any future products we may develop;
- our ability to cure or obtain forbearance or waivers for existing covenant defaults under our outstanding indebtedness and to remain in compliance with our debt covenants;
-

market acceptance of our existing and future products;

- loss or retirement of our Chief Executive Officer;

- our plans to make significant additional outlays of working capital before we expect to generate significant revenues and the uncertainty regarding when we will begin to generate significant revenues, if we are able to do so;

- an unfavorable decision on product reimbursement;

- adverse economic conditions and/or intense competition;

- loss of a key customer or supplier;

- entry of new competitors and products;

- adverse federal, state and local government regulation;

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- technological obsolescence of our products;

- technical problems with our research and products;

- risks of mergers and acquisitions including the time and cost of implementing transactions and the potential failure to achieve expected gains, revenue growth or expense savings;

- price increases for supplies and components;

- the inability to carry out research, development and commercialization plans; and

For a discussion of these and other risks that relate to our business and investing in shares of our common stock, you should carefully review the risks and uncertainties described under the heading "Part I — Item 1A. Risk Factors" and elsewhere in this Annual Report on Form 10-K. The forward-looking statements contained in this Annual Report on Form 10-K are expressly qualified in their entirety by this cautionary statement. We do not undertake any obligation to publicly update any forward-looking statement to reflect events or circumstances after the date on which any such statement is made or to reflect the occurrence of unanticipated events.

Our Company

We are a regenerative technologies company that commercializes differentiated regenerative medical products which assist the body in the repair or replacement of soft tissue. Through our sales and distribution network, together with our proprietary products, we believe we offer solutions that allow clinicians to utilize the latest advances in regenerative technologies to bring improved patient outcomes to their practices. Our contract manufacturing business provides custom hydrogels to the OEM market.

On January 5, 2018, we entered into an Asset Purchase Agreement (the "Asset Purchase Agreement") with Celularity, Inc. ("Celularity") pursuant to which we agreed to sell substantially all of our assets to Celularity (the "Asset Sale Transaction"), including certain assets comprising our MIST, Biovance and Interfyl Product lines (the "Purchased Assets"). As consideration for the Purchased Assets, Celularity has agreed to pay us $29 million in cash. No debt or significant liabilities will be assumed by Celularity in the Asset Sale Transaction.

Under the terms of the Asset Purchase Agreement, we will retain certain specified assets, including, among other things, cash, accounts receivable, and our hydrogel contract manufacturing business, including our SilverSeal and Hydress product lines.

The transactions contemplated by the Asset Purchase Agreement must be approved by the affirmative vote of a majority of the voting power of issued and outstanding shares of our common stock. In addition to the receipt of our approval of our stockholders, each party's obligation to consummate the Asset Sale Transaction is conditioned upon certain other customary closing conditions. We expect the consummation of the Asset Sale Transaction to be no later than May 31, 2018.

In addition, in order to add capital and to focus on future investments on commercializing our own regenerative technologies, on August 31, 2017, we entered into an Asset Purchase Agreement ("the Argentum Purchase Agreement") with Argentum Medical, LLC. ("Argentum") whereby we agreed to sell to Argentum all of our rights, including (i) all distribution rights, exclusivity rights, intellectual property rights and marketing rights to the TheraBond product line and (ii) the unsold inventory of TheraBond products and work in process previously purchased by us in existence as of the closing, which occurred upon execution and delivery of the Argentum Purchase Agreement. In consideration for the sale of the TheraBond product line and the unsold TheraBond inventory to Argentum by us, Argentum agreed to pay (i) $3.6 million for the TheraBond product line and certain other agreements between the parties and (ii) up to $112,000 for the unsold TheraBond inventory upon our completion of our obligations to deliver all remaining and

qualifying unsold TheraBond inventory, as specified in the Argentum Purchase Agreement. Of the $3.6 million of consideration, $300,000 is deposited in an indemnity escrow account under standard terms and conditions.

Products and Services

The disclosure in this section describes our commercial wound care portfolio as of December 31, 2017, including the assets we intend to sell under the Asset Purchase Agreement with Celularity.

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Our commercial wound care portfolio currently consists of two product categories: wound bed preparation and human biologics. We currently market MIST® Ultrasound Healing Therapy ("MIST Therapy"), which uses painless, noncontact low-frequency ultrasound to promote healing, Biovance® Amniotic Membrane Allograft ("Biovance") and Interfyl® Human Connective Tissue Matrix ("Interfyl"), which are human biologic regenerative technologies. In addition, we maintain our legacy contract manufacturing business, which provides custom hydrogels to the OEM market.

Wound Bed Preparation

On May 29, 2015, we completed our acquisition of Celleration, Inc. ("Celleration"), a medical device company focused on developing and commercializing the MIST Therapy therapeutic ultrasound platform for the treatment of acute and chronic wounds. MIST Therapy is a painless, noncontact, low-frequency ultrasound delivered through a saline mist medium to the wound bed. The MIST Therapy system and UltraMIST® System ("UltraMIST") consist of a portable countertop generator and handheld transducer. Attached to the transducer is a single-use disposable applicator, which includes an inlet for sterile saline. As the device is activated, the saline is introduced to the head of the transducer where it is atomized. This saline mist is the medium allowing the ultrasonic energy to be efficiently transmitted to the wounded area without direct contact of the device. The energy delivery via a fluid mist has been described as painless and often pain-relieving for the patient. The disposable applicator is designed for a single use only, to avoid any potential of contamination from patient to patient. Unlike most wound therapies that are limited to treating the wound surface, we have evidence that MIST Therapy sound wave energy promotes healing and reduces bacterial bioburden.

Human Biologics

In November 2013, we entered into a license, marketing and development agreement with Anthrogenesis Corporation d/b/a Celgene Cellular Therapeutics ("CCT"), an affiliate of Celgene Corporation, pursuant to which CCT granted us an exclusive, royalty-bearing license in its intellectual property related to certain placental based products for wound care and wound management, including those made from extracellular matrix ("ECM") derived from the human placenta, and Biovance, a decellularized and dehydrated allograft produced from human amniotic membrane for the management of non-infected partial- and full-thickness wounds. On May 5, 2015, the license agreement was amended, pursuant to which we received the additional right to develop and market CCT's connective tissue matrix product known as Interfyl, our latest regenerative technology. In February 2016, Human Longevity Inc. ("HLI"), a genomics-based, technology-driven company, acquired the assets of CCT related to ECM, Biovance and Interfyl, among other select assets. All of CCT's rights and obligations under the license agreement were assigned to HLI in connection with this acquisition. In June 2017, Celularity, Inc. ("Celularity") acquired some of the assets of HLI, including the agreements between HLI and the Company. The initial term of the license agreement ends on November 14, 2023, unless sooner terminated pursuant to the termination rights under the license agreement, and will extend for additional two-year terms unless either party gives written notice within a specified period prior to the end of a term. The license agreement is terminable on a product-by-product basis, and not with respect to the entire license agreement (i) by either Celularity or us, if we fail to meet certain sales thresholds or other conditions, and (ii) by either party upon written notice if outside legal counsel recommends discontinuance of commercialization of a product because of significant safety, legal, or economic risk as a result of a claim, demand or action or as a result of a change in the interpretation of law by a governmental or regulatory authority.

The license agreement permits us to commercialize Biovance and Interfyl in the United States. The development and application of the intellectual property covered under the license agreement is managed by a joint steering committee, composed of members of our company and Celularity. We pay Celularity annual license fees, designated amounts when certain milestone events occur and royalties on all sales of licensed products, with such amounts being variable and contingent on various factors. On September 30, 2014, the license agreement was amended to give us the exclusive right to market Biovance for podiatric and orthopedic applications.

In connection with the Biovance products, on November 14, 2013, we also entered into a supply agreement with CCT, as subsequently amended on each of April 10, 2014 and September 30, 2014,

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pursuant to which CCT agreed to supply us with our entire requirement of Biovance for distribution and sale in the United States. On April 10, 2014, we and CCT entered into a supply agreement for ECM, on substantially the same terms as the supply agreement for Biovance. On April 23, 2014, we initiated our sales and marketing efforts for Biovance at the Spring 2014 Symposium on Advanced Wound Care and had our first commercial sale on May 1, 2014. In February 2016, HLI assumed all of CCT's rights and obligations under the supply agreement in connection with the acquisition and the assignment of the license agreement. In June 2017, Celularity acquired this agreement from HLI and assumed all of HLI's rights and obligations thereunder.

In connection with the Interfyl products, on April 15, 2016, we entered into a supply agreement with HLI, pursuant to which HLI agreed to supply us with our entire requirements of Interfyl for distribution and sale in the United States. In September 2016, we announced the commercial introduction of Interfyl in the United States and had our first commercial sale. In June 2017, Celularity acquired this agreement from HLI and assumed all of HLI's rights and obligations thereunder. We offer Interfyl in both particulate and flowable forms. In these forms, Interfyl can be used to fill voids and correct defects in soft tissue, providing mechanical and structural support to facilitate the tissue repair process or replace missing or inadequate soft tissue.

On December 1, 2017, we received notice from Celularity that we are in material breach of our License, Marketing and Development Agreement with Celularity (or its affiliates) dated as of November 14, 2013, as amended from time to time (the "License Agreement") and our Supply Agreements with Celularity (or its affiliates), dated as of April 15, 2016 and November 14, 2013, respectively, as amended from time to time (the "Supply Agreements") for failure to purchase the required amounts of materials under the Supply Agreements and failure to use commercially reasonable best efforts to undertake development activities for the licensed products under the License Agreement (the "Notices"). Celularity estimated that an additional purchase of at least $842,000 would have to be made by us to remedy the breach under the Supply Agreements. Celularity has agreed to forbear from exercising its right to terminate the Supply Agreements and License Agreements until the closing of the Asset Sale Transaction or termination of the Asset Purchase Agreement for any reason. We believe that Celularity's notice of material breach of the License Agreement is without merit.

Biovance and Interfyl are derived from the placenta of healthy, full-term pregnancies. Both Biovance and Interfyl are regulated by the U.S. Food and Drug Administration ("FDA") under Section 361 of the Public Health Service Act ("PHS Act") as a 361 HCT/P, or human tissue product. Human tissues contain collagen, fibronectin, and other proteins and biochemicals that support healing. These important components are maintained in their native architecture throughout Celularity's processing. However, essentially no cells are contained in the finished products (Biovance and Interfyl are decellularized), which is different from other placenta-based products, and this decellularization together with the gentle minimal manipulation of the tissues contribute to minimization of irritation and inflammation related to immune responses that can interfere with healing. When the scaffold or extracellular matrix of Biovance and Interfyl is placed in a wound or an area with damaged or deficient soft tissue, it can serve as a platform that allows the body's own cells to migrate into the matrix and attach. Once attached, the cells release growth factors to signal other activities to progress healing.

Biovance is intended for use as a biological membrane covering that provides extracellular matrix while supporting the repair of damaged tissue. As a barrier membrane, Biovance is intended to protect the underlying tissue and preserve tissue plane boundaries with minimized adhesion or fibrotic scarring. Indications include, but are not limited to, surgical covering, wrap or barrier, application to partial- and full-thickness, acute and chronic wounds (such as, traumatic and complex wounds, burns, surgical and Mohs surgery sites; and diabetic, venous, arterial, pressure and other ulcers), including wounds with exposed tendon, muscle, bone or other vital structures.

We believe Interfyl treats deep wounds or soft tissue voids for which a sheet format such as Biovance is not as well suited. Interfyl is indicated for the replacement or supplementation of damaged or inadequate integumental soft tissue. There are podiatric and orthopedic applications, as well as wound management opportunities for homologous use of Interfyl.

Interfyl is intended for use as the replacement or supplementation of damaged or inadequate integumental tissue. Indications include, but are not limited to, treatment of soft tissue voids, correction of

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soft tissue defects, soft tissue augmentation during repair of dehisced or complicated surgical closures and repair of small surgical defects resulting from either medical or surgical conditions including those with exposed vital structures (bone, tendon, ligament, or nerve). Interfyl is also intended for use as the replacement or supplementation of damaged or inadequate integumental tissue. Indications include, but are not limited to: augmentation of deficient/inadequate soft tissue and treatment of deep dermal wounds; surgical wounds; soft tissue voids as a result of tunneling wounds, fistula tracts, or dermal undermining — including those with exposed vital structures (bone, tendon, ligament, or nerve).

Any further development and commercialization of ECM is not planned by us at this time.

Contract Manufacturing

In connection with our legacy contract manufacturing business; we develop, manufacture and market high water content, electron beam cross-linked, aqueous polymer hydrogels, or gels, used for wound care, medical diagnostics, transdermal drug delivery and cosmetics. We specialize in custom gels by capitalizing on proprietary manufacturing technologies. Our products are manufactured using proprietary and non-proprietary mixing, coating and cross-linking technologies. Together, these technologies enable us to produce gels that can satisfy rigid tolerance specifications with respect to a wide range of physical characteristics (e.g., thickness, water content, adherence, absorption, moisture vapor transmission rate (a measure of the passage of water vapor through a substance) and release rate) while maintaining product integrity. Additionally, we have the manufacturing ability to offer broad choices in the selection of liners onto which the gels are coated. Consequently, our customers are able to determine tolerances in moisture vapor transmission rate and active ingredient release rates while personalizing color and texture.

Planned Future Operations

If we consummate the Asset Sale Transaction, we, and not our stockholders, will receive the proceeds from the Asset Sale Transaction. We do not intend to liquidate following the Asset Sale Transaction. Our Board will evaluate alternatives for the use of the cash proceeds to be received at closing, which alternatives are expected to include using a portion of the proceeds to repay our outstanding indebtedness (including prepayment fees) to Perceptive Credit Opportunities Fund, L.P. (“Perceptive”) of approximately $12.6 million in full and to pay transaction and other expenses of approximately $3 million. In addition, we intend to continue to maximize stockholder interests with a goal of returning value to our stockholders. Although our Board has not made any determination, such alternatives may include paying a special dividend, a share repurchase or other return of capital to our stockholders. We intend to use the remainder of the proceeds, together with any other sources of liquidity available to us at that time, to support operations at our contract manufacturing plant and to pursue strategic opportunities including, without limitation, a reverse merger transaction or a strategic acquisition. The amounts and timing of our actual expenditures, however, will depend upon numerous factors, and we may find it necessary or advisable to use portions of the proceeds from the Asset Sale Transaction for different or presently non-contemplated purposes.

If we do not receive stockholder approval, the Asset Sale Transaction will not occur. Instead, we will retain the assets and liabilities proposed to be sold in the Asset Sale Transaction and will not receive the $29 million cash consideration from Celularity. We are currently in default of a covenant pertaining to trailing twelve-month revenue under the Credit Agreement as a result of our failure to achieve $24,600,000, $27,200,000, $30,300,000, $33,800,000 and $37,800,000 of gross revenue for the twelve-month periods ended December 31, 2016, March 31, 2017, June 30, 2017, September 30, 2017 and December 31, 2017, respectively. The Company is also currently in default of a minimum cash balance requirement under the Credit Agreement due to the Company having a cash balance of less than $2,000,000. As of the date hereof, the lender has agreed to forbear from exercising any rights and remedies related to each such event of default. In addition, on December 1, 2017, we received the Notices from Celularity. Without receipt of the cash consideration from Celularity, we will not be able to repay our indebtedness under the Credit Agreement and will be unable to purchase materials under the Supply Agreements. The lender under the Credit Agreement may pursue the rights and remedies available to it under the Credit Agreement including, but not limited to, declaring all or any portion of the outstanding principal amount to be immediately due and payable, imposing a default rate of interest as specified in the

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Credit Agreement, or pursing the lender's rights and remedies as a secured party under the UCC as a secured lender. In addition, the lender has a lien on substantially all of our assets and, as a result of the default, may seek to foreclose on some or substantially all of our assets. If we do not consummate the Asset Sale Transaction with Celularity and transfer the License Agreement and Supply Agreements to Celularity as part of the Purchased Assets, we may face termination or litigation with respect to the Supply Agreements and the License Agreement. If we were to lose our rights to license Biovance, Interfyl or other products from Celularity under the License Agreement, it will have a material adverse effect on our business, financial condition and results of operations which could force the Company to file for bankruptcy.

Subject to the risks mentioned above, if the Asset Sale Transaction does not close we will explore other strategic options including sale of some or all of the assets proposed to be sold in the Asset Sale Transaction. In addition, we may seek merger or licensing opportunities to bring additional assets into our product portfolio.

Industry and Markets

According to medical market research firm BioMedGPS, LLC SmartTRAK™ data, the U.S. market for wound care management products, which had revenues of approximately $5.9 billion in 2015, is expected to grow to $7.4 billion by 2019, which is a compound annual growth rate of 5% for 2015 to 2019. Growth in the U.S. wound care market will likely come from new therapies that result in decreasing healing times and subsequent cost savings and a growing focus on special populations such as diabetics and the obese.

We have targeted four specific market segments within the wound care industry:

- Lower Extremity. According to SmartTRAK there will be an estimated 14 million orthopedic procedures in the U.S. in 2018, a number which is growing at 5% per year, representing a $146 million market growing at 21% per year (estimates for 2018 from SmartTRAK). We have focused the sales and marketing of our biologics products on lower extremity and primarily foot and ankle procedures, which are a sub-segment of the orthopedic procedures market, and we estimate that there are currently approximately 2.5 million estimated foot and ankle procedures on an annual basis.. However, while we have chosen to focus on a specific segment of the wound care industry, we believe our biologics products are suitable for all types of wounds because of their HCTP-361 designation, and, as such, have applications across all wound types.

- Diabetic Ulcers. According to the National Diabetes Clearinghouse ("National Diabetes Fact Sheet, 2014" available at www.cdc.gov), there are over 29 million diabetics in the U.S., or more than 9.3% of the U.S. population. Almost 11.2 million people over the age of 65 are diabetic, which equates to almost 26% of all people in this age group. Furthermore, more than 60% of nontraumatic lower-limb amputations occur in people with diabetes. A study published by Wild, et. al. (Diabetes Care, May 2004) estimates that the worldwide number of diabetics is projected to be 366 million people by the year 2030. Boulton, et. al. ("Neuropathic Diabetic Foot Ulcers," New England Journal of Medicine, July 2004) reported that diabetic foot ulcers (DFUs) develop in approximately 15% of patients with diabetes and precede 84% of all diabetes-related lower leg amputations. We believe that our wound care products can aid in the healing of these diabetic foot ulcers, thereby lessening the need for amputation.

- Pressure Ulcers. Dorner, et. al. ("The Role of Nutrition in Pressure Ulcer Prevention and Treatment," The National Pressure Ulcer Advisory Panel, 2009) stated that according to The Joint Commission, more than 2.5 million patients in U.S. acute-care facilities suffer from pressure ulcers. Dorner, et. al. also stated that the prevalence of pressure ulcers in the U.S. is widespread in all settings, with estimates of 10% to 18% in acute care and 2.3% to 28% in long-term care. The study further noted that these pressure ulcers can reduce overall quality of life and may also contribute to premature mortality in some patients, therefore any intervention that may help to prevent or treat them once they occur is important to reduce the cost of pressure ulcer care and improve the quality of life for affected individuals. Park-Lee, et. al. ("Pressure Ulcers Among Nursing Home Residents: United States, 2004," The National Center for Health Statistics Data

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Brief, No. 14, February 2009) reported that 35% of nursing home residents with stage 2 or higher pressure ulcers received special wound care by specially trained professionals. We believe that our wound care products can aid in the treatment of pressure sores and ulcers, thereby increasing quality of life and decreasing the amount of time spent in wound care facilities.

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Venous Stasis Ulcers. These wounds are believed to occur due to improper functioning of venous valves, usually of the legs. According to the University of Washington Medical Center (available at www.uwmedicine.org/health-library/Pages/venous-stasis-ulcers.aspx), the main risk of venous stasis ulcers is the spread of infection from a persistent wound. Failure to address the condition appropriately could ultimately result in limb loss. As these ulcers are typically small, they are often undertreated, which leads to larger ulcers which require more complex treatments. Brem, et. al. ("Protocol for the Successful Treatment of Venous Ulcers," American Journal of Surgery, July 2004) reported in one study that up to 48% of venous ulcers had recurred by the fifth year after healing. These often chronic ulcers affect up to 2.5 million U.S. citizens annually. We believe that our wound care products can aid in the treatment of venous stasis ulcers and increase the quality of life for those affected.

Sales and Marketing

We continue to focus on sales and marketing efforts in the United States. As of December 31, 2017, we had 34 employees dedicated to sales, all of whom have experience in the wound care industry. Additionally, we have developed an independent network of agents to sell our wound care products through our extensive channel reach through a network of distributors. In addition, we have assembled a Medical/Surgical Advisory Board to help us target improvements and new applications for our products and assist in our marketing efforts. We also market our advanced wound care products at conferences, trade shows and other educational events.

Customers

During the year ended December 31, 2017, one customer accounted for 67% of our contract manufacturing revenue and 6% of our total net revenue from continuing operations. We are uncertain as to this customer's intentions to use our services during the fiscal year ending December 31, 2018.

Competition

Leading competitors in the tissue-based wound care area that will compete with our biologic products, Biovance and Interfyl include companies such MiMedx Group, Inc., Osiris Therapeutics, Inc., Organogenesis Inc., Integra LifeSciences Corporation, as well as a significant number of smaller companies.

We believe that MIST Therapy has no direct competition in the advanced wound care market. As a result, we believe that MIST Therapy may compete favorably on the basis of broad application. Notwithstanding the lack of direct competition, we expect many physicians and allied professionals to continue to employ other treatment approaches and technologies to treat chronic and hard-to-heal wounds.

Our ability to establish sales in a market with many larger manufacturers may be difficult. We continue to recruit veterans of the medical device industry to leverage our product offerings into the most beneficial distribution channels. Our competitors may still have greater resources to support their products and may not allow us to take any market share from them.

Sources and Availability of Raw Materials; Principal Suppliers

In general, raw materials essential to our businesses are readily available from multiple sources. For reasons of quality assurance, availability, or cost effectiveness, certain components and raw materials are available only from a sole supplier. Our policy is to maintain sufficient inventory of components so that our production will not be significantly disrupted even if a particular component or material is not available for a period of time.

We purchase MIST Therapy applicators and the saline bottles included with each applicator from single sources. We purchase the MIST systems from one supplier. We and our suppliers purchase many of the components and raw materials in manufacturing the MIST products from numerous suppliers in

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various countries. We have been able to obtain adequate supplies of such raw materials and components and work closely with suppliers to try to ensure continuity of supply while maintaining high quality and reliability.

Under our Supply Agreements we receive the finished goods of Biovance and Interfyl from Celularity.

On December 1, 2017, we received notice from Celularity that we are in material breach of our supply agreements with Celuarity, for failure to purchase the required amounts of materials under the Supply Agreement. Celularity estimated that an additional purchase of at least $842,000 would have to be made by us to remedy this breach. Celularity has agreed to forbear from exercising its right to terminate the supply agreement until the closing of the Asset Sale Transaction or termination of the Asset Purchase Agreement for any reason.

See “Item 1A. Risk Factors — “We cannot be sure if or when the Asset Sale Transaction will be completed.”

Because we have no direct control over these suppliers, interruptions or delays in the products and services provided by these parties may be difficult to remedy in a timely fashion. In addition, if such suppliers are unable or unwilling to deliver the necessary products or raw materials, we may be unable to redesign or adapt our technology to work without such raw materials or products or find alternative suppliers or manufacturers. In such events, we could experience interruptions, delays, increased costs or quality control problems, or be unable to sell the applicable products, all of which could have a significant adverse impact on our revenue.

Other than as discussed above, we believe that, due to the size and scale of production of our suppliers, there should be adequate supply of raw materials from our manufacturers.

Patents, Proprietary Rights and Trademarks

We own or license trademarks covering our company and our products. Our policy is to file patent applications to protect technology, inventions and improvements that are important to the development of our business. We also rely upon trade secrets and continuing technological innovations to develop and maintain our competitive position.

As of December 31, 2017, we have beneficial ownership of 15 issued U.S. utility patents, 2 issued U.S. design patents, 17 foreign patents, and several pending U.S. and foreign patent applications covering aspects of our MIST Therapy platform. Specifically, the MIST Therapy patent rights cover both medical and device aspects of wound care using non-contact ultrasound, as well as other clinical ultrasound applications.

In November 2013, we entered into a license, marketing and development agreement with CCT, as subsequently amended on each of September 30, 2014 and May 6, 2015, pursuant to which we hold an exclusive, royalty-bearing license in CCT’s intellectual property related to certain placental based products, including DRS (ECM), Interfyl and Biovance, to develop and commercialize these products in the United States. In January 2016, HLI assumed all of CCT’s rights and obligations under the license agreement in connection with HLI’s acquisition of the assets of CCT related to DRS and Biovance, among other select assets. In June 2017, Celularity, Inc. (“Celularity”) acquired some of the assets of HLI, including the agreements between HLI and the Company. The development and application of the intellectual property covered under the license agreement is managed by a joint steering committee, composed of members of us and Celularity. Following the commencement of commercial sales of each licensed product, the license agreement requires us to pay Celularity certain annual license fees, royalty payments based on a percentage of net sales, as well as financial and performance milestone payments, subject to the terms and conditions set forth in the license agreement. The initial term of the license agreement expires on November 14, 2023, unless sooner terminated pursuant to the termination rights under the license agreement, and will automatically renew for additional two-year periods unless either party gives written notice within a specified period prior to the end of a term. The license agreement may be terminated (i) by Celularity if we or any of our affiliates challenges the validity, enforceability or scope of certain enumerated Celularity patents anywhere in the world; (ii) by either party if there is a final decree that a licensed product infringed on the intellectual property of a third party and the parties cannot cure

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such third party infringement; (iii) by either party for breach and failure to cure such breach of the license agreement; or (iv) by either party if the other party is the subject of insolvency proceedings, either voluntary or involuntary. In addition, the license agreement is terminable on a product-by-product basis, and not with respect to the entire license agreement: (i) by Celularity, if we fail to meet certain minimum sales thresholds for the second year of commercial sales, and by either Celularity or us if we fail to meet certain minimum sales thresholds for the third or any subsequent year of commercial sales and (ii) by either party upon written notice if outside legal counsel recommends discontinuance of commercialization of a product because of an actual, threatened, or perceived significant safety, legal, or economic risk as a result of a claim, demand or action or as a result of a change in the interpretation of law by a governmental or regulatory authority. Each year of commercial sales are referred to in the license agreement as "launch years" and the calendar period constituting each launch year for each licensed product is determined in accordance with the terms of the license agreement. See "Item 1A. Risk Factors — If we fail to meet certain minimum sales thresholds for products licensed pursuant to our agreement with Celularity, we could lose our right to license such products."

On December 1, 2017, we received notice from Celularity that we are in material breach of the License Agreement for failure to use commercially reasonable best efforts to undertake development activities for the licensed products under the License Agreement. Celularity has agreed to forbear from exercising its right to terminate the License Agreement until the closing of the Asset Sale Transaction or termination of the Asset Purchase Agreement for any reason. We believe that Celularity's notice of material breach of the License Agreement is without merit.

See "Item 1A. Risk Factors — "We cannot be sure if or when the Asset Sale Transaction will be completed."

Government Regulation

Product Regulation. Under the Federal Food, Drug and Cosmetic Act, medical devices are classified by the FDA into one of three classes — Class I, Class II or Class III — depending on the degree of risk associated with each medical device and the extent of control needed to ensure safety and effectiveness. While some applications of hydrogels fall under the jurisdiction of the FDA, hydrogels are generally classified as Class I exempt devices and the majority of the hydrogel products that we manufacture are thereby exempt from the FDA filing of any regulatory submissions and/or pre-market notification requirements. To the extent that any FDA regulatory submissions are required, we will be required to file these submissions and maintain all appropriate documentation. With respect to registering the manufacturing facility with the FDA under the Code of Federal Regulations, 21 CFR 820.1, Scope: Part A, it is stated that the regulation does not apply to manufacturers of component parts of finished devices. Currently, hydrogels are sold as component parts to various medical device/cosmetic manufacturers.

We believe that a number of products that our partners are developing will be classified in the U.S. as either Class I or Class II medical devices or Human Cells, Tissues, and Cellular and Tissue-Based Products (HCT/Ps). Class I medical devices are subject to the FDA's general controls, which include compliance with the applicable portions of the FDA's Quality System Regulation, facility registration and product listing, reporting of adverse medical events, and appropriate, truthful and non-misleading labeling, advertising, and promotional materials. Class II devices are subject to the FDA's general controls and may also be subject to other special controls as deemed necessary by the FDA to ensure the safety and effectiveness of the device. Most Class II devices require pre-market clearance by the FDA through the 510(k) pre-market notification process. When a 510(k) is required, the manufacturer must submit to the FDA a pre-market notification demonstrating that the device is "substantially equivalent" to either a device that was legally marketed prior to May 28, 1976, the date upon which the Medical Device Amendments of 1976 were enacted, or to another commercially available, similar device which was subsequently cleared through the 510(k) process. By regulation, the FDA is required to clear a 510(k) within 90 days of submission of the application. As a practical matter, clearance often takes longer. HCT/Ps that are regulated under 21 Code of Federal Regulations Part 1271 and Section 361 of the Public Health Service Act ("361 HCT/Ps") and do not require FDA approval or clearance prior to marketing. We are required to follow Current Good Tissue Practices (CGTP) including registration as a storage/distribution facility as well as track the tissue products from receipt to final disposition.

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Biovance and Interfyl are products derived from human tissue. The FDA has specific regulations governing HCT/Ps. An HCT/P is a product containing or consisting of human cells or tissue intended for transplantation into humans. HCT/Ps that meet the criteria for regulation solely under Section 361 of the Public Health Service Act and 21 CFR 1271 (361 HCT/Ps) are not subject to pre-market clearance or approval requirements, but are subject to post-market regulatory requirements. To be a 361 HCT/P, a product must meet all four of the following criteria:

- It must be minimally manipulated;
- It must be intended for homologous use;
- It must not be combined with another article; and
- It must not have a systemic effect and not be dependent upon the metabolic activity of living cells for its primary function.

We and Celularity believe that, within their intended uses, Biovance and Interfyl qualify as 361 HCT/Ps. The FDA is in the process of clarifying definitions of homologous use and minimal manipulation in their Guidance for Industry publications.

The FDA has broad post-market regulatory and enforcement powers with respect to medical devices, similar to those for pharmaceutical products. Failure to comply with the applicable U.S. medical device regulatory requirements could result in, among other things, warning letters, fines, injunctions, consent decrees, civil penalties, repairs, replacements, refunds, recalls or seizures of products, total or partial suspension of production, the FDA's refusal to grant future pre-market clearances or approvals, withdrawals or suspensions of current product applications, and criminal prosecution. Similarly, the FDA may audit any manufacturer of medical devices or facilities with a registered 361 HCT/P.

If there are any modifications to a cleared medical device such as our UltraMIST Class II device identified in 510(k) K140782, including changes in indication, manufacturing process or labeling or a change in a manufacturing facility, an applicant must notify the FDA, and in many cases, clearance for such changes must be submitted to the FDA. Additionally, the FDA regulates post-approval promotional labeling and advertising activities to assure that such activities are being conducted in conformity with statutory and regulatory requirements. These regulations include standards or restrictions for direct-to-consumer advertising, industry-sponsored scientific and educational activities, promotional activities and off-label promotion. Likewise, labeling and advertising of HCT/Ps may be monitored for indication language to be consistent with homologous use. While physicians may prescribe for off-label uses, manufacturers may only promote for the approved indications and in accordance with the provisions of the approved label (or homologous use). The FDA has very broad enforcement authority under the Federal Food, Drug and Cosmetic Act, and failure to abide by these regulations can result in enforcement action, including the issuance of untitled or warning letters directing entities to correct deviations from FDA regulations and civil and criminal investigations and prosecutions. These activities could have a material adverse effect on our business, results of operations, financial condition and cash flows.

Quality Assurance Requirements. The FDA enforces regulations to ensure that the methods used in, and the facilities and controls used for, the manufacture, processing, packing and holding of drugs, medical devices and/or HCT/Ps conform with current good manufacturing (CGMP) and/or CGTP. The CGMP regulations the FDA enforces are comprehensive and cover all aspects of manufacturing operations, from receipt of raw materials to finished product distribution, insofar as they bear upon whether drugs meet all the identity, strength, quality and purity characteristics required of them. The CGMP regulations for devices, called the Quality System Regulation, are also comprehensive and cover all aspects of device manufacture, from pre-production design validation to installation and servicing, insofar as they bear upon the safe and effective use of the device and whether the device otherwise meets the

requirements of the Federal Food, Drug and Cosmetic Act. CGTPs are narrower in scope than CGMPs. CGTP requires a quality program to prevent, detect, and correct deficiencies that could increase communicable disease risk. To assure compliance requires a continuous commitment of time, money and effort in all operational areas.

The FDA also conducts periodic inspections of drug, device and registered HCT/P facilities to assess their current CGMP/CGTP status. If the FDA were to find serious non-compliant manufacturing or processing practices during such an inspection, it could take regulatory actions that could adversely affect

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our business, results of operations, financial condition and cash flows. With respect to domestic establishments, the FDA could initiate product seizures or in some instances require product recalls and seek to enjoin a product's manufacture and distribution. In certain circumstances, violations could support civil penalties and criminal prosecutions. In addition, if the FDA concludes that a company is not in compliance with CGMP requirements, sanctions may be imposed that include preventing that company from receiving the necessary licenses to export its products and classifying that company as an "unacceptable supplier", thereby disqualifying that company from selling products to federal agencies.

We conduct audits of our outside manufacturers and believe that we and our suppliers and outside manufacturers are currently in compliance with CGMP/CGTP requirements. We are currently registered as a device manufacturer and human tissue distributor with the FDA and we intend to register as a drug facility with the FDA when we are required to do so.

Third-Party Reimbursement

In the United States as well as in foreign countries, sales of our products depend, in significant part, on the availability of reimbursement from third-party payers. In the U.S., third-party payers consist of government programs such as Medicare, private health insurance plans, managed care organizations and other similar programs. For any product, three factors are critical to reimbursement:

- coding, which ensures uniform description of procedures, diagnoses and medical products;

- coverage, which is the payer's policy describing the clinical circumstances under which it will pay for a given treatment; and

- payment process and fee schedules.

We believe the availability, as of January 2014, of a Category I CPT code for MIST Therapy has encouraged and will continue to encourage, broader coverage and subsequent use of its MIST Therapy System in the United States. Previously, MIST Therapy was billed under a temporary Category III CPT code, which some payers generally refuse to cover. Each government and private payer, however, makes its own coverage decision.

Access to MIST Therapy is available to Medicare beneficiaries in all 50 states. Although private payers will often pay for MIST Therapy when medically necessary and pre-approved, we have not focused on securing private payer coverage decisions for MIST Therapy.

For Medicare-covered patients who are commonly treated in a hospital outpatient department, the payment system is called the Outpatient Prospective Payment System. The facility payment for MIST Therapy is billed under the CPT Code and then categorized for payment under a single Ambulatory payment ("APC"). Each hospital has a specific APC payment based on the hospital's wage index for their geographic location.

If MIST Therapy is delivered by a physician, non-physician practitioner, or physical therapist, a professional payment may be based on the Medicare Physician Fee Schedule ("MPFS"). The MPFS includes both a facility, and, for treatment delivered in a physician's office a non-facility rate. The actual amount will vary by location per the geographic practice cost index adjustment to the national rate. Therapy services are typically paid under the non-facility MPFS payment rate pursuant to Medicare guidelines.

Biovance is currently marketed in hospitals where Diagnosis Related Group Procedures are performed, in the Veteran's Affairs health system, and in hospital outpatient departments as well as Physician offices or other outpatient care centers. Providers of outpatient services will be reimbursed for Biovance by Medicare where there is a local coverage determination by the prevailing Medicare Administrative Contractor ("MAC"). On October 31, 2014, Biovance was assigned a new and unique, Level II Healthcare Common Procedure Coding System product reimbursement Q code (Q4154) by Centers for Medicare and Medicaid Services ("CMS"). The new reimbursement code took effect on January 1, 2015. We currently have reimbursement coverage for Biovance from all eight MACs, as well as 61% of BlueCross BlueShield covered lives in the U.S.

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We have the Healthcare Common Procedural Coding System, or HCPCS, codes, from the Pricing, Data, Analysis, and Coding contractor for CMS, for use when billing for our wound care dressings. HCPCS was established in 1978 to provide a standardized coding system for describing the specific items and services provided in the delivery of health care. HCPCS codes are used by Medicare and monitored by the CMS. They are based on the Current Procedural Technology codes developed by the American Medical Association. We believe that these codes will facilitate reimbursement for the use of our dressings in Medicare patients with applicable wounds.

Environmental Regulation. We are subject to various laws and governmental regulations concerning environmental matters and employee safety and health in the U.S. and other countries. We have made, and continue to make, significant investments to comply with these laws and regulations. We cannot predict the future capital expenditures or operating costs required to comply with environmental laws and regulations. We believe that we are currently compliant with applicable environmental, health and safety requirements in all material respects. However, we cannot assure you that current or future regulatory, governmental, or private action will not have a material adverse effect on our performance, results or financial condition.

In the future, if a loss contingency related to environmental matters, employee safety, health or conditional asset retirement obligations is recognized, we would record a liability for the obligation and it may result in a material impact on net income for the annual or interim period during which the liability is recorded. The investigation and remediation of environmental obligations generally occur over an extended period of time, and therefore we do not know if these events would have a material adverse effect on our financial condition, liquidity, or cash flow, nor can we assure you that such liabilities would not have a material adverse effect on our performance, results or financial condition.

Federal and State Anti-kickback, Self-referral, False Claims and Similar Laws. Our relationships with physicians, hospitals and the marketers of our products are subject to scrutiny under various federal anti-kickback, self-referral, false claims and similar laws, often referred to collectively as healthcare fraud and abuse laws. Healthcare fraud and abuse laws are complex, and even minor, inadvertent violations can give rise to claims that the relevant law has been violated. Certain states have similar fraud and abuse laws, imposing substantial penalties for violations. Any government investigation or a finding of a violation of these laws would likely result in a material adverse effect on the market price of our common stock, as well as our business, financial condition and results of operations. We believe that we are currently compliant with applicable anti-kickback, self-referral, false claims in all material respects.

Research and Development Costs

For the years ended December 31, 2017 and 2016, we incurred research and development costs of approximately $121,000 and $859,000, respectively, related to a randomized controlled trial for our Biovance product in chronic diabetic foot ulcers. We experienced slower than expected patient enrollment and projected costs to complete the trial were significantly higher than we had previously expected. In addition, we believed there was no longer a business need for this trial due to the amount of patient data currently available, our success in getting government and commercial insurance coverage for Biovance, and our recent increase in Biovance sales. Due to these factors, we decided to terminate patient enrollment for the Biovance trial. We completed our study during the first half of 2017. We bear our own research and development costs and do not directly pass along our research and development costs to our customers.

We intend to commit capital resources to research and development only as our cash resources allow. We have incurred all costs associated with the launch of our proprietary products and will only require research and development expenses for product enhancements and modifications and to obtain additional reimbursement coverage, which we do not expect to be significant.

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Employees

As of December 31, 2017, we had 60 full-time employees. Of these employees, 46 are involved with finance, sales, marketing, and administration and 14 are involved with manufacturing, clinical and regulatory matters. Our employees are not represented by a labor union or other collective bargaining groups, and we consider relations with our employees to be good. We currently plan to retain and utilize the services of outside consultants for additional research, testing, regulatory, legal compliance and other services on an as needed basis.

ITEM 1A. RISK FACTORS

There are numerous and varied risks, known and unknown, that may prevent us from achieving our goals. You should carefully consider the risks described below and the other information included in this Annual Report on Form 10-K, including the consolidated financial statements and related notes. If any of the following risks, or any other risks not described below, actually occur, it is likely that our business, financial condition, and/or operating results could be materially adversely affected. The risks and uncertainties described below include forward-looking statements and our actual results may differ from those discussed in these forward-looking statements.

Risks Related to the Asset Sale Transaction with Celularity.

The announcement and pendency of the Asset Sale Transaction, whether or not consummated, may adversely affect our business.

The announcement and pendency of the Asset Sale Transaction, whether or not consummated, may adversely affect the trading price of our common stock, our business or our relationships with customers, suppliers and employees. In addition, pending the completion of the Asset Sale Transaction, we may be unable to attract and retain key personnel and the focus and attention of our management and employee resources may be diverted from operational matters during the pendency of the Asset Sale Transaction.

We cannot be sure if or when the Asset Sale Transaction will be completed.

The closing of the Asset Sale Transaction is subject to the satisfaction or waiver of various conditions, including the Stockholder Approval. We cannot guarantee that the closing conditions set forth in the Asset Purchase Agreement will be satisfied. If we are unable to satisfy the closing conditions in Celularity's favor or if other mutual closing conditions are not satisfied, Celularity will not be obligated to complete the Asset Sale Transaction. In the event that the Asset Sale Transaction is not completed, the announcement of the termination of the Asset Purchase Agreement may adversely affect the trading price of our common stock, our business and operations or our relationships with customers, suppliers and employees. In addition, (i) we will not be able to repay our debt to the lender under the Credit Agreement, and the lender may choose to pursue any rights and remedies available to it, including, but not limited to, declaring all or any portion of the outstanding principal amount to be immediately due and payable, imposing a default rate of interest as specified in the Credit Agreement, pursing the lender's rights and remedies as a secured party under the UCC as a secured lender, or seeking to foreclose on some or substantially all of our assets pursuant to the lender's lien held on such assets and (ii) we may face termination of, or litigation with respect to, the License Agreement and the Supply Agreements as the Celularity has alleged that we are in default under each of these agreements and will only forbear from seeking to terminate such agreements to the extent that the Asset Sale Transaction closes.

In addition, if the Asset Sale Transaction is not completed, our Board, in discharging its fiduciary obligations to our stockholders, may evaluate other strategic alternatives that may be available, which alternatives may not be as favorable to us as the Asset Sale Transaction.

The Asset Purchase Agreement limits our ability to pursue alternatives to the Asset Sale Transaction.

The Asset Purchase Agreement contains provisions that make it more difficult for us to sell our assets or engage in another type of acquisition transaction with a party other than Celularity. These provisions include a non-solicitation provision and a provision obligating us to pay Celularity a termination fee of

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$1.45 million under certain circumstances. These provisions could discourage a third party that might have an interest in acquiring all of, or substantially all of, our assets or our common stock from considering or proposing such an acquisition, even if that party were prepared to pay consideration with a higher value than the consideration to be paid by Celularity.

Our stockholders may not receive any of the proceeds of the Asset Sale Transaction.

The proceeds from the Asset Sale Transaction will be paid directly to us. Our Board will evaluate different alternatives for the use of the proceeds from the Asset Sale Transaction. Although the alternatives are expected to include using a portion of the proceeds to repay our outstanding indebtedness (including prepayment fees) to Perceptive of approximately $12.6 million in full, to pay transaction and other expenses of approximately $3 million, return capital to our stockholders and to use the remainder of the proceeds, together with any other sources of liquidity available to us at that time, to support operations at our hydrogel plant and to pursue strategic opportunities including, without limitation, a reverse merger transaction or a strategic acquisition, the Board may decide to utilize all of the proceeds for other purposes.

We will incur significant expenses in connection with the Asset Sale Transaction, regardless of whether the Asset Sale Transaction is completed and, in certain circumstances, may be required to pay a termination fee to Celularity.

We expect to incur significant expenses related to the Asset Sale Transaction. These expenses include, but are not limited to, financial advisory and opinion fees and expenses, legal fees, accounting fees and expenses, certain employee expenses, filing fees, printing expenses and other related fees and expenses. Many of these expenses will be payable by us regardless of whether the Asset Sale Transaction is completed. In addition, if the Asset Purchase Agreement is terminated in certain circumstances, we will be required to pay Celularity a $1.45 million termination fee. However, if the Asset Purchase Agreement is terminated in certain other circumstances, we may be entitled to a $3 million reverse termination fee from Celularity.

Risks Related to Our Future Operations if We Consummate the Asset Sale Transaction.

Our operations will be curtailed and we will have limited sources of revenue following the Asset Sale Transaction, which may negatively impact the value and liquidity of our common stock.

Upon the closing of the Asset Sale Transaction, our operations will be curtailed as our sources of revenue will be limited to our hydrogel manufacturing business. Although the alternatives under evaluation by our Board for the use of the proceeds from the Asset Sale Transaction includes supporting our operations at our hydrogel plant and pursuing strategic opportunities, there can be no assurance that we will be successful at carrying out such alternatives or that they will be successful at generating revenue. A failure by us to secure additional sources of revenue following the closing of the Asset Sale Transaction could negatively impact the value and liquidity of our common stock.

The uncertainty regarding the use of proceeds from the Asset Sale Transaction and our future operations may negatively impact the value and liquidity of our common stock.

Although our Board will evaluate various alternatives regarding the use of the proceeds from the Asset Sale Transaction, it has made no decision with respect to the use of proceeds and has not committed to making any such decision by a particular date. This uncertainty may negatively impact the value and liquidity of our common stock.

We will continue to incur the expense of complying with public company reporting requirements following the closing of the Asset Sale Transaction.

After the Asset Sale Transaction, we will continue to be required to comply with the applicable reporting requirements of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), even though compliance with such reporting requirements is economically burdensome.

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Risks Related to Our Company

The report of our independent registered public accounting firm contains an explanatory paragraph as to our ability to continue as a going concern, which could prevent us from obtaining new financing on reasonable terms or at all.

Because we have had recurring losses, negative cash flows from operating activities, limited cash on hand in light of expected expenditures and are in default of certain financial covenants under our Credit Agreement with Perceptive, the report of Marcum LLP, our independent registered public accounting firm, with respect to our financial statements at December 31, 2017, and for the year ended December 31, 2017, contains an explanatory paragraph as to our potential inability to continue as a going concern. This opinion indicates that substantial doubt exists regarding our ability to remain in business. Such an opinion may adversely affect our ability to obtain new financing on reasonable terms or at all.

We have experienced significant losses and expect losses to continue for the foreseeable future.

We have incurred annual net losses of $25.7 million and $28.2 million, during the years ended December 31, 2017 and 2016, respectively. As of December 31, 2017, we had an accumulated deficit of $150.0 million. We expect to incur additional operating losses for the foreseeable future.

We will require additional capital if we do not consummate the Asset Sale Transaction.

As of December 31, 2017, we had $2.2 million of cash on hand. Given our current cost structure, we will require additional equity and/or debt financing if we do not consummate the Asset Sale Transaction. If we are unable to raise additional capital or if we encounter circumstances that place unforeseen constraints on capital resources, we will be required to take measures to conserve liquidity, which may include, but are not limited to, eliminating all non-essential positions, ceasing all marketing efforts, curtailing business development activities and/or suspending all operations. There can be no assurance that we will be successful in improving revenues, reducing expenses and/or securing additional capital in sufficient amounts and on favorable terms to successfully continue our business.

We have a substantial amount of indebtedness under our $12.1 million principal term loan and are in default of certain financial covenants under the Credit Agreement, which may adversely affect our cash flow and our ability to operate our business.

In order to finance our acquisition of Celleration, on May 29, 2015, we and each of our subsidiaries entered into the Credit Agreement with Perceptive, which provided for a senior, secured term loan with a current principal amount of approximately $12.1 million. The full unpaid principal amount of the term loan will mature on May 29, 2019. Prior to maturity, on the last business day of each calendar month commencing on the earlier of April 30, 2018 or the date the Asset Purchase Agreement with Celularity is terminated, we will be required to make monthly principal payments of $225,000, with any remaining unpaid balance of the term loan being payable in cash on the maturity date. The repayment of the term loan and our obligations under the Credit Agreement are secured by a first priority lien on all of our existing and after acquired tangible and intangible assets, including intellectual property. The Credit Agreement also contains certain restrictions that prohibit us and our subsidiaries from engaging in certain transactions and activities, including but not limited to the following:

- entering into, creating, incurring or assuming any indebtedness of any kind, subject to limited exceptions;
- creating or incurring new liens, subject to certain exceptions;
- entering into new acquisitions or investments in other entities, subject to certain exceptions;
- winding up, liquidating or dissolving;
- merging or consolidating with another person or disposing of assets, subject to certain exceptions;

- entering into inbound or outbound licenses, subject to certain exceptions;

- changing the nature of our core business;

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- paying cash dividends; and

- repaying, repurchasing or otherwise acquiring shares of our common stock or other equity securities.

Our ability to meet our expenses, debt obligations and other financial covenants under the Credit Agreement will depend on our future performance, which will be affected by financial, business, economic, regulatory and other factors. We will be unable to control many of these factors. We cannot be certain that our earnings will be sufficient to allow us to pay the principal and interest on our debt and meet any other obligations. If we do not have enough money to service our debt, we will be required, but may be unable to refinance or restructure all or part of our existing debt, sell assets, borrow money or raise equity on terms acceptable to us, if at all, and the lender could foreclose on its security interest and liquidate some or all of our assets, which would harm our business, financial condition and results of operations.

The Credit Agreement also requires us to meet certain financial covenants. Our ability to meet these financial covenants may be affected by events beyond our control. If, as or when required, we are unable to repay, refinance or restructure our indebtedness under, or amend the covenants contained in, the Credit Agreement, the lender could institute foreclosure proceedings against our assets, which would harm our business, financial condition and results of operations. We are currently in default of certain financial covenants under the Credit Agreement.

In addition, as a result of our increased level of indebtedness, demands on our cash resources will continue to increase in the future and could, among other things:

- require us to dedicate a large portion of our cash flow from operations to the servicing and repayment of our debt, thereby reducing funds available for working capital, capital expenditures, research and development expenditures and other general corporate requirements;

- limit our ability to obtain additional financing to fund future working capital, capital expenditures, research and development expenditures and other general corporate requirements;

- limit our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate;

- restrict our ability to make strategic acquisitions or dispositions or to exploit business opportunities;

- place us at a competitive disadvantage compared to our competitors that have less debt;

- adversely affect our credit rating, with the result that the cost of servicing our indebtedness might increase and our ability to obtain surety bonds could be impaired;

- adversely affect the market price of our common stock; and

- limit our ability to apply proceeds from an offering or asset sale to purposes other than the servicing and repayment of debt.

We are currently in default of certain financial covenants under the Credit Agreement, which allows the lender to exercise certain rights and remedies, including, without limitation, declaring the entire outstanding indebtedness under the Credit Agreement of approximately $12.1 million immediately due and payable, imposing a default rate of interest and/or foreclosing on some or substantially all of our assets.

Under the Forbearance and Amendment Agreement dated as of February 5, 2018, the lender agreed to defer the commencement of our remaining principal payments and agreed to extend the forbearance period and to forbear from exercising any rights and remedies related to our default of a covenant pertaining to (i) trailing twelve-month revenue under the Credit Agreement as of (A) September 30, 2016, (B) December 31, 2016, (C) March 31, 2017, (D) June 30, 2017, (E) September 30, 2017, and (F) December 31, 2017 and (ii) failure to maintain on a consolidated basis, a monthly minimum cash balance of at least $2,000,000, until the earlier of April 30, 2018, the termination of the Asset Purchase Agreement, or the date when the lender becomes aware of any other default.

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The remedies available for the lender include, among others, the ability to accelerate and immediately demand payment of the outstanding debt of approximately $12.1 million under the Credit Agreement, to impose a default rate of interest, to foreclose on some or all of our assets, and/or to take possession of or sell some or all of our assets. Were the lender to demand payment of the outstanding debt after expiration of the forbearance period, we would currently have insufficient funds to satisfy that obligation, and the lender's exercise of its other remedies would have a material adverse effect on our operations and financial condition.

Occurrence of an event of default under the Credit Agreement could result in a material adverse effect on our business, operating results and financial condition, or the loss of our assets as the lender holds a first priority security interest in all of our assets and the assets of our subsidiaries.

Events of default under the Credit Agreement include, but are not limited to, the following:

- failure to pay principal, interest or other amounts, if any, when due;

- any form of bankruptcy or insolvency proceeding instituted by or against us or any of our subsidiaries that is not dismissed in 60 days;

- a default occurring under any debenture, mortgage, credit agreement, indenture or other instrument representing or securing indebtedness in an amount exceeding $250,000;

- we or any of our subsidiaries is party to a change of control;

- the FDA or other governmental authority (i) issues a letter or other communication asserting any of our products lacks a required product authorization, including in respect of CE marks or 510(k)s or 361 HCT/P qualification, or (ii) initiates enforcement action or warning against us, any of our products or manufacturing facilities resulting in the discontinuance of marketing, withdrawal of any material products, or delay in the manufacture of any material products, each lasting for more than 90 days;

- a recall of any product that has generated or is expected to generate at least $1.0 million in revenue in the aggregate over any consecutive twelve (12) month period;

- we or any of our subsidiaries enters into a settlement agreement with the FDA or any other governmental authority that results in aggregate liability as to any single or related series of transactions, incidents or conditions, in excess of $500,000;

- we are in default under our license agreement with Celularity or the license agreement is terminated, amended, waived or otherwise modified in a manner materially adverse to the lender's interests; and

- failure to observe or perform any other covenant contained in the Credit Agreement.

Upon occurrence of an event of default under the Credit Agreement, payment of the entire principal amount could be accelerated and become immediately due and payable. The cash that we may be required to pay would most likely come out of our working capital, which may be insufficient to repay the obligation or leave us with insufficient cash to

finance our operations. In such event, we may lose some or all of our assets as the lender could foreclose on its security interests and liquidate some or all of these assets, which would harm our business, financial condition and results of operations. We may also be required to file for bankruptcy, sell assets, or cease operations, any of which would put our company, our investors and the value of our common stock, at significant risk.

The pledge of these assets and other restrictions may limit our flexibility in raising capital for other purposes. Because substantially all of our assets are pledged under the Credit Agreement, our ability to incur additional secured indebtedness or to sell or dispose of assets to raise capital may be impaired, which could have an adverse effect on our financial flexibility.

Our goodwill and long-lived assets are subject to potential further impairment, and if those become further impaired, it could materially further the reduction in the value of our assets and increase our net loss for the year in which the write-off occurs.

Our intangible and fixed assets have finite useful lives and are amortized or depreciated over their useful lives on either a straight-line basis or over the expected period of benefit or as revenues are earned

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from the sales of the related products. The underlying assumptions regarding the estimated useful lives of these intangible assets are reviewed annually and more often if an event or circumstance occurs making it likely that the carrying value of the assets may not be recoverable and are adjusted through accelerated amortization if necessary. Whenever events or changes in circumstances indicate that the carrying value of the assets is not recoverable we test intangible assets for impairment based on estimates of future cash flows. If an intangible asset is considered to be impaired, the amount of the impairment will equal the excess of the carrying value over the fair value of the asset.

As of December 31, 2017, we had $1.7 million in goodwill related to acquisitions, which represents the purchase price we paid in excess of the fair value of the net tangible assets and identifiable intangible assets we acquired. We assess the recoverability of goodwill annually, at the beginning of the fourth quarter of each fiscal year, and between annual tests if an event occurs or circumstances change that would indicate the carrying amount may be impaired. Under Financial Accounting Standards Board guidance for goodwill and other intangible assets, a reporting unit is defined as an operating segment or one level below the operating segment, called a component. However, two or more components of an operating segment will be aggregated and deemed a single reporting unit if the components have similar economic characteristics. We adopted authoritative accounting guidance that allows us to first assess qualitative factors to determine whether it is necessary to perform the more detailed two-step quantitative goodwill impairment test. We perform the quantitative test if the qualitative assessment determined it is more likely than not that a reporting unit's fair value is less than its carrying amount. We may elect to bypass the qualitative assessment and proceed directly to the quantitative test for any reporting unit. When performing the quantitative test, an impairment loss is recognized if the carrying amount of the reporting unit's net assets exceeds the estimated fair value of the reporting unit and the carrying amount of reporting unit goodwill is determined to exceed the implied fair value of that goodwill. As of December 31, 2017 and 2016, we elected to bypass the qualitative assessment and proceed directly to the quantitative test for our reporting unit. As of December 31, 2017, the estimated fair value of our reporting unit was calculated using the sale price of the Asset Sales Transaction. As of December 31, 2016, the estimated fair value of our reporting unit was calculated using a discounted cash flow model. During the year ended December 31, 2017, we recorded an impairment charge of approximately $10.3 million related to our goodwill. During the year ended December 31, 2016, we recorded an impairment charge of approximately $1.7 million related to our MIST tradename and approximately $9.2 million related to our goodwill.

If actual results differ from the assumptions and estimates used in the goodwill and intangible asset calculations, we could incur further impairment or amortization charges. Any finding that the value of our goodwill and long-lived assets has been further impaired would require us to write off the impaired portion, which could materially reduce the value of our assets and reduce our net income or increase our net loss for the year in which the write off occurs and increase our accumulated deficit, which could contribute to difficulty in raising additional funds.

If we fail to meet certain minimum sales thresholds for products licensed pursuant to our agreement with Celularity, we could lose our right to license such products.

Our license agreement with Celularity is terminable on a product-by-product basis if we fail to meet certain minimum sales thresholds in the second year or any subsequent year of commercial sales of the licensed products. Each year of commercial sales is referred to in the license agreement as "launch years" and the calendar period constituting each launch year for the licensed product is determined in accordance with the terms of the license agreement, and for the purpose of determining whether the license can be terminated for failure to meet the minimum sales threshold, Biovance and Interfyl are treated on an aggregate basis as if a single licensed product. To maintain our license for Biovance and Interfyl, we must meet a minimum gross sales amount for Biovance and Interfyl in the second year and third year of commercial sales. If we fail to meet the minimum threshold in the second year of commercial sales of a licensed product, we would be able to cure such failure by making a cure payment specified in the license agreement to Celularity; provided, however, we do not have the option to make a cure payment, should we fail to meet the minimum threshold for such product in the third year of commercial sales, and Celularity may terminate the license agreement with respect to such product. If we do not meet the minimum sales threshold, Celularity may terminate the license with respect to Biovance and Interfyl. Even though we are implementing sales and marketing strategies to meet this minimum gross sales amount, no assurance can be

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given that we will be able to meet the minimum sales thresholds for Biovance and Interfyl. If we were to lose or otherwise become unable to maintain our right to license Biovance, Interfyl or other products from Celularity, it could have a material adverse effect on our business, financial condition and results of operations. In addition, any termination of our right to license Biovance, Interfyl or other products under the license agreement with Celularity could trigger an event of default under our Credit Agreement.

Decisions in reimbursement levels by governmental or other third-party payers for our products and procedures using our products may have an adverse impact on acceptance and use of our products.

We believe that our products will be purchased principally by hospitals, physicians and other healthcare providers, which typically bill various third-party payers, such as state and federal healthcare programs (e.g., Medicare and Medicaid), private insurance plans and managed care plans, for the products and services provided to their patients. The ability of our customers to obtain appropriate reimbursement for products and services from third-party payers is critical to the success of our business because reimbursement status affects which products customers purchase and the prices they are willing to pay. In addition, our ability to obtain reimbursement approval in foreign jurisdictions will affect our ability to expand our product offerings internationally.

Third-party payers have adopted, and are continuing to adopt, a number of policies intended to curb rising healthcare costs. These policies include:

- imposition of conditions of payment by foreign, state and federal healthcare programs as well as private insurance plans;

- rules related to how products and services may be marketed; and

- reduction in reimbursement amounts applicable to specific products and services.

Adverse decisions relating to coverage or reimbursement of our products would have an adverse impact on the acceptance of our products and the prices that our customers are willing to pay for them.

We are unable to predict whether foreign, federal, state or local healthcare reform legislation or regulation affecting our business may be proposed or enacted in the future, or what effect any such legislation or regulation would have on our business. Changes in healthcare systems in the United States or internationally in a manner that significantly reduces reimbursement for procedures using our products or denies coverage for these procedures would also have an adverse impact on the acceptance of our products and the prices which our customers are willing to pay for them.

Our future success depends on our ability to retain key executives and to attract, retain and motivate qualified personnel.

We believe that our success will depend, in part, upon our ability to retain David Johnson, our Chief Executive Officer. There can be no assurance that we will be able to find and attract additional qualified employees or retain our Chief Executive Officer and other key personnel. Our inability to hire qualified personnel, or the loss of services of or Chief Executive Officer or key personnel who may be hired in the future may have a material and adverse effect on our business.

Our strategic business plan may not produce the intended growth in revenue and operating income.

Our strategies include making significant investments in sales and marketing programs to achieve revenue growth and margin improvement targets. If we do not achieve the expected benefit from these investments or otherwise fail to execute on our strategic initiatives, we may not achieve the growth improvement we are targeting and our results of operations may be adversely affected.

Our acquisition strategy may not produce the intended growth in revenue and operating income.

As part of our strategy for growth, we may make acquisitions and enter into strategic alliances such as joint ventures and joint development agreements. However, we may not be able to identify suitable acquisition candidates, complete acquisitions or integrate acquisitions successfully, and our strategic alliances may not prove to be successful. Such acquisitions could reduce shareholders' ownership, require us

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to incur debt, expose us to liabilities and result in amortization expenses related to intangible assets with definite lives. In addition, acquisitions involve other risks, including diversion of management resources otherwise available for ongoing development of our business and risks associated with entering new markets with which we have limited experience or where distribution alliances with experienced distributors are not available. Our future profitability may depend in part upon our ability to further develop our resources to adapt to these new products or business areas and to identify and enter into satisfactory distribution networks. Moreover, we may fail to realize the anticipated benefit of any acquisition as rapidly as expected or at all, or the acquired business may not perform in accordance with our expectations. We may also incur significant expenditures in anticipation of an acquisition that is never realized. There can be no assurance that difficulties encountered in connection with acquisitions will not have a material adverse effect on our business, financial condition and results of operations.

Our future success depends upon market acceptance of our existing and future products.

We believe that our success will depend in part upon the acceptance of our existing and future products by the medical community, hospitals and physicians and other health care providers, third-party payers, and end-users. Such acceptance may depend upon the extent to which the medical community and end-users perceive our products as safer, more effective or cost-competitive than other similar products. Ultimately, for our new products to gain general market acceptance, it may also be necessary for us to develop marketing partners for the distribution of our products. There can be no assurance that our new products will achieve significant market acceptance on a timely basis, or at all. Failure of some or all of our future products to achieve significant market acceptance could have a material adverse effect on our business, financial condition, and results of operations.

We operate in a highly competitive industry and face competition from large, well-established medical device manufacturers as well as new market entrants.

Competition from other medical device companies and from research and academic institutions is intense, expected to increase, subject to rapid change and significantly affected by new product introductions and other market activities of industry participants. In addition to competing with universities and other research institutions in the development of products, technologies and processes, we compete with other companies in acquiring rights to products or technologies from those institutions. A number of factors may limit the market acceptance of our products, including the timing of regulatory approvals and market entry relative to competitive products, the availability of alternative products, and the price of our products relative to alternative products, the availability of third party reimbursement and the extent of marketing efforts by third party distributors or agents that we retain. There can be no assurance that our products will receive market acceptance in a commercially viable period of time, if at all. Furthermore, there can be no assurance that we can develop products that are more effective or achieve greater market acceptance than competitive products, or that our competitors will not succeed in developing or acquiring products and technologies that are more effective than those being developed by us, that would render our products and technologies less competitive or obsolete.

Our competitors enjoy several competitive advantages over us, including some or all of the following:

- large and established distribution networks in the United States and/or in international markets;
- greater financial, managerial and other resources for products research and development, sales and marketing efforts and protecting and enforcing intellectual property rights;
- significantly greater name recognition;
- more expansive portfolios of intellectual property rights;
- established relations with physicians, hospitals, other healthcare providers and third party payers;

- products which have been approved by regulatory authorities for use in the United States and/or Europe and which are supported by long-term clinical data; and

- greater experience in obtaining and maintaining regulatory approvals and/or clearances from the FDA and other regulatory agencies.

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Our competitors' products will compete directly with our products. In addition, our competitors as well as new market entrants may develop or acquire new treatments, products or procedures that will compete directly or indirectly with our products. The presence of this competition in our market may lead to pricing pressure which would make it more difficult to sell our products at a price that will make us profitable or prevent us from selling our products at all. Our failure to compete effectively would have a material and adverse effect on our business, results of operations and financial condition.

Changes to the FDA approval process or ongoing regulatory requirements could make it more difficult for us to obtain FDA approval of our products or comply with ongoing requirements.

Our products are subject to rigorous pre- and post-approval regulation by the FDA as well as other federal and state authorities. Based on scientific developments, post-market experience, or other legislative or regulatory changes, the current FDA standards of review for approving new medical device and other FDA regulated products are sometimes more stringent than those that were applied in the past. For example, with passage of the Food and Drug Administration Safety and Innovation Act in 2012 (the "FDASIA"), the FDA was required to revisit some of its policies regarding 510(k) devices which resulted in the FDA drafting new guidance for the 510(k) process. The FDA continues to revisit and clarify its guidance regarding 510(k) devices, and such revisions could impact the process for clearing medical devices, determining which devices are eligible for 510(k) clearance, the ability to rescind previously granted 510(k) clearances and additional requirements that may significantly impact the process.

Additionally, we believe that some of our products are regulated under Section 361 of the PHS Act and that as a result no premarket review or approval is required. If the FDA does not agree that one or more of our HCT/P products meet its regulatory criteria for regulation solely as 361 HCT/Ps, our HCT/Ps will be regulated as drugs, devices, and/or biological products, and we could be required to withdraw those products from the market until the applicable approvals are obtained.

We cannot determine what effect changes in regulations or legal interpretations by the FDA or the courts, when and if promulgated or issued, may have on our business in the future. Changes could, among other things, require additional product approvals, different labeling, monitoring of patients, interaction with physicians, education programs for patients or physicians, curtailment of necessary supplies, or limitations on product distribution. These changes, or others required by the FDA could have an adverse effect on the sales of these products, up to and including our inability to sell such products until we may be able to address such requirements. The evolving and complex nature of regulatory science and regulatory requirements, the broad authority and discretion of the FDA and the generally high level of regulatory oversight results in a continuing possibility that from time to time, we will be adversely affected by regulatory actions despite ongoing efforts and commitment to achieve and maintain full compliance with all regulatory requirements.

Should the FDA determine that Biovance and/or Interfyl do not meet regulatory requirements that permit qualifying HCT/Ps to be processed, stored, labeled and distributed without pre-marketing approval, our supplier may be required by the FDA to stop processing and we may be required to stop distributing Biovance and/or Interfyl, or to narrow the indications for which Biovance and/or Interfyl is marketed, which, in turn, could also result in a default under our Credit Agreement.

Each of Biovance and Interfyl is a product derived from human tissue. The FDA has specific regulations governing HCT/Ps. An HCT/P is a product containing or consisting of human cells and/or tissue intended for transplantation into humans. HCT/Ps that meet the criteria for regulation solely under Section 361 of the PHS Act and 21 CFR 1271 are not subject to pre-market clearance or approval requirements, but are subject to post-market regulatory requirements. To be a 361 HCT/P, a product must meet all four of the following criteria:

- it must be minimally manipulated;
- it must be intended for homologous use only;
- it must not be combined with another article; and

- it must not have a systemic effect and not be dependent upon the metabolic activity of living cells for its primary function.

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We and Celularity believe that each of Biovance and Interfyl qualifies as a 361 HCT/P. The FDA has published several draft guidance documents relating to the regulation of HCT/Ps, including the determination of what constitutes minimal manipulation, and held a public hearing on the subject in September 2016. We cannot predict whether or when the FDA will publish any final guidance documents. Moreover, guidance documents, even in final form, are not binding and are merely a reflection of the FDA's thinking on a particular issue at the time that the final guidance document is published. Should the FDA finalize these drafts and include a significant change in its policy with respect to 361 HCT/P qualifications, or determine that our marketing claims exceed what would be permitted for a 361 HCT/P product, and either Biovance and/or Interfyl is determined to not qualify as a 361 HCT/P product, we may have to obtain approval or clearance from the FDA before we can continue to market Biovance or Interfyl in the United States. Furthermore, a communication from the FDA asserting that either Biovance or Interfyl does not qualify as a 361 HCT/P product could also trigger an event of default under our Credit Agreement.

Modifications to our current products may require new marketing clearances or approvals or require us to cease marketing or recall the modified products until such clearances or approvals are obtained.

Any modification to an FDA-cleared or approved product that could significantly affect safety or effectiveness, or that would constitute a major change or modification in the product's intended use, requires a new FDA 510(k) clearance or, possibly, a premarket approval. The FDA requires every manufacturer to make its own determination as to whether a modification requires a new 510(k) clearance or premarket approval, but the FDA may review and disagree with any decision reached by the manufacturer. In the future, we may make additional modifications to our products after they have received FDA clearance or approval and, in appropriate circumstances, determine that new clearance or approval is unnecessary. Regulatory authorities may disagree with our past or future decisions not to seek new clearance or approval and may require us to obtain clearance or approval for modifications to our products. If that were to occur for a previously cleared or approved product, we may be required to cease marketing or recall the modified device until we obtain the necessary clearance or approval. Under these circumstances, we may also be subject to significant regulatory fines or other penalties. If any of the foregoing were to occur, our financial condition and results of operations could be negatively impacted.

We and our manufacturers are required to comply with current good manufacturing practices ("cGMPs") and current good tissue practices ("cGTPs") and could be subject to suspensions or product withdrawals if found non-compliant.

We rely on collaborative relationships with third-party contractors to manufacture various aspects of our products. Reliance on third-party contractors subjects us to a number of risks, including regulatory compliance issues. We may be responsible for the failures of our third-party contractors. The FDA regulates the facilities, processes and procedures used to manufacture and market medical products in the United States. Manufacturing facilities must be registered with the FDA and all products made in such facilities must be manufactured in accordance with cGMP, regulations enforced by the FDA. Compliance with cGMP regulations require the dedication of substantial resources and requires significant expenditures. The FDA periodically inspects our manufacturing facilities and those of our contractors. The inspections are generally random, however, and we cannot predict with certainty when the FDA will inspect our facilities or those of our contractors. Any failure of regulatory standards of compliance by us or on the part of our third-party contractors may compel the FDA to take actions to recall products or to suspend, or withdraw one or more of our product approvals. We or our third-party contractors may also be subject to additional FDA actions as identified in the subsequent section. Further, in the event that we need to use an additional contractor or transfer our processes or methods to manufacture our products to an alternative contractor; or if the FDA decides to curtail or cease our operations or cease or curtail our contractor due to manufacturing problems, the FDA's actions could result in product delays which could adversely affect our business, results of operations, and financial condition and cash flow.

We will be subject to ongoing federal and state regulations, and if we fail to comply, our business could be seriously harmed.

Following regulatory marketing clearance or approval of any products that we may develop, we will be subject to continued regulatory review, including review of adverse (drug or device) events or reactions and clinical results that are reported after our products become commercially available. This would include

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results from any post-marketing tests or continued actions required by a condition of approval. The manufacturing facilities we may use to make any of our products may become subject to periodic review and inspection by the FDA. If a previously unknown problem or problems with a product or a manufacturing and laboratory facility used by us is discovered, the FDA may impose restrictions on that product or on the manufacturing facility, including requiring us to withdraw the product from the market. Any changes to an approved product, including the way it is manufactured or promoted, often requires FDA approval before the product, as modified, can be marketed. In addition, for products we develop in the future, we and our contract manufacturers may be subject to ongoing FDA requirements for submission of safety and other post-market information. If we or any of our contract manufacturers fail to comply with applicable regulatory requirements, a regulatory agency may:

- issue warning letters;
- impose civil or criminal penalties;
- suspend or withdraw our regulatory approval;
- suspend or terminate any of our ongoing clinical trials;
- refuse to approve pending applications or supplements to approved applications filed by us;
- impose restrictions on our operations;
- close the facilities of our contract manufacturers; and/or
- seize or detain products or require a product recall.

Additionally, regulatory review covers our activities in the promotion of our medical products, with significant potential penalties and restrictions for promotion of drugs, devices or tissues for an unapproved use. Sales and marketing programs, such as illegal promotions to health care professionals, are under scrutiny for compliance with various mandated requirements. We are also required to submit information on open and completed clinical trials to public registries and databases. Failure to comply with these requirements could expose us to negative publicity, fines and penalties that could harm our business.

If we violate regulatory requirements at any stage, whether before or after marketing approval is obtained, we may be fined, be forced to remove a product from the market or experience other adverse consequences, including delay, which would materially harm our financial results. Additionally, we may not be able to obtain the labeling claims necessary or desirable for product promotion.

We and our sales personnel, whether employed by us or by others, must comply with various federal and state anti-kickback, self-referral, false claims and reporting and similar laws, any breach of which could cause a material adverse effect on our business, financial condition and results of operations.

Our relationships with physicians, hospitals, other healthcare providers and the marketers of our products are subject to scrutiny under various U.S. federal anti-kickback, self-referral, false claims, physician sunshine and other reporting laws and regulations and similar laws, often referred to collectively as healthcare fraud and abuse laws. Healthcare fraud and abuse laws are complex, and even minor, inadvertent violations can give rise to liability, or claims of

alleged violations. Possible sanctions for violation of these fraud and abuse laws include monetary fines; civil and criminal penalties; exclusion from federal and state healthcare programs, including Medicare, Medicaid, Veterans Administration health programs, workers' compensation programs and TRICARE, the healthcare system administered by or on behalf of the U.S. Department of Defense for uniformed services beneficiaries, including active duty and their dependents, retirees and their dependents; and forfeiture of amounts collected in violation of such prohibitions. Many states have similar, or sometimes broader, fraud and abuse laws that also authorize substantial civil and criminal penalties for violations. Any government investigation or a finding of a violation of these laws would likely result in a material adverse effect on the market price of our common stock, as well as our business, financial condition and results of operations.

The federal Anti-Kickback Statute prohibits any knowing and willful offer, payment, solicitation or receipt of any form of remuneration in return for the referral of an individual or the ordering or recommending of the use of a product or service for which payment may be made by any federal healthcare

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program, including Medicare. The definition of "remuneration" has been broadly interpreted to include anything of value, including gifts, discounts, the furnishing of supplies or equipment, payments of cash and waivers of payments. States also often have anti-kickback laws which may be broader in scope and apply to referrals and items or services reimbursed by both governmental and non-governmental third-party payers, including private insurers.

The federal Physician Payments Sunshine Act requires certain manufacturers of drugs, devices, biologics and medical supplies that are reimbursable under Medicare, Medicaid or Children's Health Insurance Program to report annually to Centers for Medicare and Medicaid Services information related to payments and other transfers of value to physicians and teaching hospitals, and ownership and investment interests held by physicians and their immediate family members. States also often have analogous laws and regulations, such as state anti-kickback and false claims laws, which may be broader in scope and apply to referrals and items or services reimbursed by both governmental and non-governmental third-party payers, including private insurers; and state transparency and reporting laws, which may require drug, device, and biologics manufacturers to report information to the state related to payments and other transfers of value to physicians and other healthcare providers, price disclosures, or marketing expenditures.

The scope and enforcement of the healthcare fraud and abuse laws is uncertain and subject to rapid change. There can be no assurance that federal or state regulatory or enforcement agencies will not investigate our current or future activities under these laws. Any investigation or challenge could have a material adverse effect on our business, financial condition and results of operations. Any state or federal investigation, regardless of the outcome, could be costly and time-consuming. Additionally, we cannot predict the impact of any changes in these laws, whether these changes are retroactive or will have effect on a going-forward basis only.

Because our business involves arrangements with physicians, hospitals, and healthcare providers, including physicians who consult with us on the design of our products, we could be materially impacted if regulatory or enforcement agencies or courts interpret our financial relationships with healthcare providers who refer, order, or use our products to be in violation of health care fraud and abuse laws. Such governmental action could harm our reputation and the reputations of the healthcare providers that we do business with. In addition, the cost of noncompliance with these laws could be substantial because we could be subject to monetary fines and civil or criminal penalties, and we could also be excluded from state and federal healthcare programs, including Medicare and Medicaid, for non-compliance.

If we are unable to protect our intellectual property rights adequately, we may not be able to compete effectively.

Our success depends in part on our ability to protect the proprietary rights to the technologies used in our products. We rely on patent protection, as well as a combination of trademark laws and confidentiality, noncompetition and other contractual arrangements to protect our proprietary technology. However, these legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep a competitive advantage. Our patents and patent applications, if issued, may not be broad enough to prevent competitors from introducing similar products into the market. Our patents, if challenged or if it attempts to enforce them, may not necessarily be upheld by the courts. In addition, patent protection in foreign countries may be different from patent protection under U.S. laws and may not be favorable to us. Efforts to enforce any of our proprietary rights could be time-consuming and expensive, which could adversely affect our business and prospects and divert management's attention.

We are dependent on proprietary know-how, and a failure to protect our proprietary know-how would harm our business and operation.

We rely on trade secret protection to protect our interests in proprietary know-how and for processes for which patents are difficult to obtain or enforce. We may not be able to protect our trade secrets adequately. In addition, we rely on non-disclosure and confidentiality agreements with employees, consultants and other parties to protect, in part, trade secrets and other proprietary technology. These agreements may be breached and we may not have adequate remedies for any breach. Moreover, others may

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independently develop equivalent proprietary information, and third parties may otherwise gain access to our trade secrets and proprietary knowledge. Any disclosure of confidential data into the public domain or to third parties could allow competitors to learn our trade secrets and use the information in competition against us.

Despite our efforts to protect our proprietary rights, there is no assurance that such protections will preclude our competitors from developing and/or marketing similar products. While we are not aware of any third party intellectual property that would materially affect our business, our failure or inability to obtain patents and protect our proprietary information could result in our business being adversely affected.

If we are not able to establish and maintain successful arrangements with third parties or successfully build our own sales and marketing infrastructure, we may not be able to commercialize our products, which would adversely affect our business and financial condition.

To commercialize our products, we must continue to develop our own sales, marketing and distribution capabilities, which will be expensive and time consuming, or make arrangements with third parties to perform these services for us. The third parties may not be capable of successfully selling any of our products. We will have to commit significant resources to developing a marketing and sales force and supporting distribution capabilities. If we decide to enter into arrangements with third parties for performance of these services, we may find that they are not available on terms acceptable to us, or at all.

We may face intellectual property infringement claims that could be time-consuming, costly to defend and could result in our loss of significant rights and, in the case of patent infringement claims, the assessment of treble damages.

On occasion, we may receive notices of claims of our infringement, misappropriation or misuse of other parties' proprietary rights. We may have disputes regarding intellectual property rights with the parties that have licensed those rights to us. We may also initiate claims to defend our intellectual property. Intellectual property litigation, regardless of its outcome, is expensive and time-consuming, could divert management's attention from our business and have a material negative effect on our business, operating results or financial condition. In addition, the outcome of such litigation may be unpredictable. If there is a successful claim of infringement against us, we may be required to pay substantial damages — including treble damages if we were to be found to have willfully infringed a third party's patent — to the party claiming infringement, and to develop non-infringing technology, stop selling our products or using technology that contains the allegedly infringing intellectual property or enter into royalty or license agreements that may not be available on acceptable or commercially practical terms, if at all. Our failure to develop non-infringing technologies or license the proprietary rights on a timely basis could harm our business. In addition, modifying our products to exclude infringing technologies could require us to seek re-approval or clearance from various regulatory bodies for our products, which would be costly and time consuming. Also, we may be unaware of pending patent applications that relate to our technology. Parties making infringement claims on future issued patents may be able to obtain an injunction that would prevent us from selling our products or using technology that contains the allegedly infringing intellectual property, which could harm our business.

We may face product liability claims that could result in costly litigation and significant liabilities, and we may not be able to maintain adequate product liability insurance.

Our business exposes us to the risk of product liability claims that are inherent in the testing, manufacturing and marketing of medical devices. This risk exists even if a device is cleared or approved for commercial sale by the FDA and manufactured in facilities licensed and regulated by the FDA or an applicable foreign regulatory authority. Manufacturing and marketing of our commercial devices may expose us to product liability and other tort claims. Additionally, regardless of the merit or eventual outcome, product liability claims may result in:

- litigation costs;

- distraction of management's attention from our primary business;

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- impairment of our business reputation;
- the inability to commercialize our devices;
- device recall or withdrawal from the market;
- withdrawal of clinical trial participants;
- substantial monetary awards to patients or other claimants; or
- loss of revenue.

Although we have, and intend to maintain, liability insurance, the coverage limits of our insurance policies may not be adequate, and one or more successful claims brought against us may have a material adverse effect on our business and results of operations. If we are unable to obtain insurance in the future at an acceptable cost or on acceptable terms with adequate coverage, we will be exposed to significant liabilities.

Healthcare policy changes, including reforms to the U.S. healthcare system, may have a material adverse effect on us. Healthcare costs in the United States have risen significantly over the past decade. There have been, and continue to be, proposals by legislators, regulators, and third-party payers to keep these costs down. The efforts of governments and third-party payers to contain or reduce the cost of healthcare and legislative and regulatory proposals to broaden the availability of healthcare will likely affect the business and financial condition of biomedical companies. A number of legislative and regulatory changes in the healthcare system in the United States and other major healthcare markets have occurred in recent years, and interpretation and application of such changes continue to evolve. These developments have included healthcare reform legislation enacted by certain states and implementation of the Patient Protection and Affordable Care Act (the "Affordable Care Act") enacted in 2010 which resulted in significant changes to the health care industry. These developments could, directly or indirectly, impose limitations on the prices we will be able to charge for our products, or the amounts of reimbursement available for our products from governmental agencies or third-party payers. These limitations could have a material adverse effect on our financial position and results of operations.

The Affordable Care Act includes significant provisions that encourage state and federal law enforcement agencies to increase activities related to preventing, detecting and prosecuting those who commit health care fraud and abuse. The Affordable Care Act continues to be implemented through regulation and government activity but is subject to possible amendment, additional implementing regulations and interpretive guidelines. The manner in which the Affordable Care Act continues to evolve could materially affect the extent to which and the amount at which medical devices and products are reimbursed by government programs such as Medicare, Medicaid and TRICARE. We cannot predict all impacts the Affordable Care Act may have on our products, but it may result in our products being chosen less frequently or the pricing being substantially lowered. Further, the Affordable Care Act has been subject to judicial and Congressional challenges, and legislative initiatives to modify, limit, or repeal the Affordable Care Act continue. For example, members of the current Congress have proposed additional legislative changes, including complete repeal and replacement of certain provisions of the Affordable Care Act. It remains to be seen, however, precisely what new healthcare reform legislation will be enacted, and what impact it will have on the availability of healthcare and containing or lowering the cost of healthcare. Such reforms could have an adverse effect on anticipated revenue from our products and may affect our overall financial condition and ability to develop future products.

Other healthcare reform proposals have emerged at the federal and state levels. We cannot predict the exact effect newly enacted laws or any future legislation or regulation will have on us. However, the implementation of new legislation and regulation may lower reimbursements for our products, reduce medical procedure volumes and adversely affect our business, possibly materially.

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If we cannot maintain relationships with certain of our suppliers, it may be difficult to replace those suppliers and our business may suffer.

In general, raw materials essential to our business are readily available from multiple sources. However, for reasons of quality assurance, availability, or cost effectiveness, certain components and raw materials are available only from a sole supplier.

We believe that, due to the size and scale of production of our suppliers, there should be adequate supply of these raw materials from these manufacturers. In addition, our policy is to maintain sufficient inventory of components so that our production will not be significantly disrupted even if a particular component or material is not available for a period of time. However, there is no guarantee that our inventory will be sufficient to carry us through any disruption in supply. Because we have no direct control over our third-party suppliers, interruptions or delays in the products and services provided by these third parties may be difficult to remedy in a timely fashion. In addition, if such suppliers are unable or unwilling to deliver the necessary raw materials or products, we may be unable to redesign or adapt our technology to work without such raw materials or products or find alternative suppliers or manufacturers. In such events, we could experience interruptions, delays, increased costs or quality control problems.

Under our Supply Agreements, we receive finished goods from Celularity. Because we have no direct control over Celularity's suppliers, interruptions or delays in the products and services provided by these parties may be difficult to remedy in a timely fashion. In addition, if such suppliers are unable or unwilling to deliver the necessary products, we would be unable to sell any products that we expect from Celularity, and, therefore, could experience a significant adverse impact on our revenue.

In addition, on December 1, 2017, we received notice from Celularity that we are in material breach of the Supply Agreements for failure to purchase the required amounts of materials under the Supply Agreements. Celularity estimated that an additional purchase of at least $842,000 would have to be made by us to remedy this breach. Celularity has agreed to forbear from exercising its right to terminate the supply agreement until the closing of the Asset Purchase Agreement or termination of the Asset Purchase Agreement for any reason. If we do not consummate the Asset Sale Transaction and we were to lose our rights to purchase finished goods from Celularity under the Supply Agreements, it will have a significant adverse effect on our business, financial condition and results of operations.

We purchase the MIST Therapy system from a single source and UltraMIST from a single source. Reliance on outside suppliers makes us vulnerable to a number of risks that could impact our ability to manufacture the MIST Therapy system and UltraMIST and/or disposable applicators, resulting in harm to our business, including:

- inability to obtain an adequate supply in a timely manner or on commercially reasonable terms;
- uncorrected defects that impact the performance, efficacy and safety of our products;
- difficulty identifying and qualifying alternative suppliers for components in a timely manner;
- production delays related to the evaluation and testing of products from alternative suppliers and corresponding regulatory qualifications;
- delays in delivery by our suppliers due to changes in demand from us or other customers; and
- delays in delivery or production stoppage by our supplier due to a shortage of one or more of the components comprising our product.

If the supply of the MIST Therapy system or UltraMIST or the disposable applicators or saline bottles is interrupted or significantly delayed and we are unable to acquire product from alternate sources in a timely manner and at a commercially reasonable price, our ability to meet our customers' demand would be impaired and our business could be harmed. Identifying and qualifying additional or replacement suppliers for the MIST Therapy system and/or UltraMIST or disposable applicators may not be accomplished quickly or at all and could involve significant additional costs. Interruption of supply from our suppliers or failure to obtain additional suppliers would limit our ability to distribute our products and could therefore have an adverse effect on our business.

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Contractual and other disagreements with or involving our licensors, distribution partners and other commercial partners could harm our business, make us liable to them or result in litigation costs or other expenses, particularly if we do not consummate the Asset Sale Transaction.

Our agreements with licensors, distribution partners and other commercial partners require us to comply with performance conditions that are subject to interpretation and could result in disagreements. At any given time, we may be in disputes with one or more licensors, distribution partners or other commercial partners. Any such dispute could be very expensive for us, even if the outcome is ultimately in our favor. On December 1, 2017, we received the Notices from Celularity. Celularity has agreed to forbear from exercising its right to terminate the license agreement until the closing of the Asset Sale Transaction or termination of the Asset Purchase Agreement for any reason. If we do not consummate the Asset Sale Transaction and transfer the License Agreement and Supply Agreements to Celularity as a part of the Purchased Assets we may face termination or litigation with respect to the Supply Agreements and the License Agreement. We cannot predict the outcome of any arbitration or litigation, the effect of any negative judgment against us or the amount of any settlement that we may enter into with such licensors, distribution partners or any other third-party. A contractual dispute may result in a licensor or other commercial partners seeking to terminate our agreements, which could harm our business, even if such termination would be wrongful.

We are dependent upon third-party local distributors to market and distribute our products in key markets.

We rely on third-party distributors for marketing and distribution of our products in certain markets, both domestically and internationally. Our success in generating sales in markets where we have engaged local distributors depends in part on the efforts of others whom we do not employ. Many of these distributors have only limited personnel, which could impair their ability to successfully market, sell and service our products. Because of limited resources or for other reasons, they may not comply with applicable local regulations or respond promptly to adverse event reporting requirements under FDA regulations. As a result of such failures to comply with regulatory requirements, we may experience significant loss of revenue, increased costs and damage to our reputation, and our business, financial condition and results of operations could be materially adversely affected. In addition, if a distributor is terminated by us or goes out of business, it may take us a period of time to locate an alternative distributor, to transfer or obtain appropriate regulatory approvals and to train our personnel to market our products, and our ability to sell and service our products in the region formerly serviced by such terminated distributor could be materially adversely affected. Any of these factors could materially adversely affect our revenue in markets served by distributors, increase our costs in those markets or damage our reputation.

Security breaches and other disruptions could compromise our information and expose it to liability, which would cause our business and reputation to suffer.

In the ordinary course of our business, we use networks to collect and store sensitive data, including intellectual property, proprietary business information and that of our customers, suppliers and business partners, personally identifiable information of our customers and employees, and data relating to patients who use our products. The secure processing, maintenance and transmission of this information is critical to our operations. Despite our security measures, our information technology and infrastructure may be vulnerable to attacks by hackers or breached due to employee error, malfeasance or other disruptions. Any such breach could compromise our networks and the information stored there could be accessed, publicly disclosed, lost or stolen. Any such access, disclosure or other loss of information could result in legal claims or proceedings, liability under laws that protect the privacy of personal information, and regulatory penalties, disrupt our operations and the services we provide to customers, damage our reputation, and cause a loss of confidence in our products and services, which could adversely affect our operating margins, revenues and competitive position.

Risks Related to Ownership of Our Common Stock and Warrants

The issuance of additional equity securities may negatively impact the trading price of our common stock.

We have issued equity securities in the past and may continue to issue equity securities to finance our activities in the future. We may not be able to sell shares or other securities in any offering at a price per share that is equal to or greater than the price per share previously paid by investors. In addition,

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outstanding options and warrants to purchase our common stock may be exercised and additional options and warrants may be issued, resulting in the issuance of additional shares of common stock. The issuance by us of additional equity securities or securities convertible into or exchangeable or exercisable for common stock, may result in additional dilution to our stockholders, and even the perception that such an issuance may occur could have a negative impact on the trading price of our common stock.

Our stock price has been and may continue to be volatile, which could result in substantial losses for investors.

The market price of our common stock has been and is likely to continue to be highly volatile and could fluctuate widely in response to various factors, many of which are beyond our control, including the following:

- technological innovations or new products and services by or our competitors;
- additions or departures of key personnel;
- sales of our common stock, particularly under any registration statement for the purposes of selling any other securities, including management shares;
- our ability to execute our business plan;
- operating results that fall below expectations;
- loss of any strategic relationship;
- industry developments;
- economic, political and other external factors; and
- period-to-period fluctuations in our financial results.

In addition, the securities markets have from time to time experienced significant price and volume fluctuations that are unrelated to the operating performance of particular companies. These market fluctuations may also significantly affect the market price of our common stock.

Our stock price, and the stock price of many other life science companies, have suffered significant declines over the past 12 months.

Market prices for securities of life sciences companies, particularly companies like ours with limited product revenues, have been highly volatile and have suffered sharp losses over the past 12 months. As a result of these declines, it has become much harder for life sciences companies, like us, to raise money, as needed, in the capital markets. As such, should we desire to sell equity in the future to raise capital, such capital may not be available on favorable terms, or at all. In addition, any such capital raises could be highly dilutive to current stockholders. Depressed valuations of our stock will also make it harder for us to consummate strategic transactions or acquisitions, which have historically been a significant part of our growth strategy, absent significant dilution to our current investors.

We do not expect to pay dividends in the future if we do not consummate the Asset Sale Transaction. As a result, any return on investment may be limited to the value of our common stock.

We do not anticipate paying any dividends in the foreseeable future if we do not consummate the Asset Sale. Our Credit Agreement prohibits us from paying cash dividends or distributions on our capital stock. Even if we are permitted to pay cash dividends in the future, we currently intend to retain any future earnings for funding growth if we do not consummate the Asset Sale Transaction. As a result, an investor should not rely on an investment in our securities if such investor requires dividend income. Capital appreciation, if any, of our shares may be the only source of gain on our securities for the foreseeable future. Moreover, an investor may not be able to re-sell such investor's shares at or above the price paid for them.

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There are inherent limitations in all control systems, and misstatements due to error or fraud may occur and not be detected.

The ongoing internal control provisions of Section 404 of the Sarbanes-Oxley Act of 2002 require us to identify material weaknesses in internal control over financial reporting, which is a process to provide reasonable assurance regarding the reliability of financial reporting for external purposes in accordance with accounting principles generally accepted in the United States. Our management, including our Chief Executive Officer and Chief Financial Officer, does not expect that our internal controls and disclosure controls will prevent all errors and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. In addition, the design of a control system must reflect the fact that there are resource constraints and the benefit of controls must be relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, in our company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of simple errors or mistakes. Further, controls can be circumvented by individual acts of some persons, by collusion of two or more persons, or by management override of the controls. The design of any system of controls is also based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving our stated goals under all potential future conditions. Over time, a control may be inadequate because of changes in conditions, such as growth of the company or increased transaction volume, or the degree of compliance with the policies or procedures may deteriorate. Because of inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

In addition, discovery and disclosure of a material weakness, by definition, could have a material adverse impact on our financial statements. Such an occurrence could discourage certain customers or suppliers from doing business with us, cause downgrades in our future debt ratings leading to higher borrowing costs and affect how our stock trades. This could, in turn, negatively affect our ability to access public debt or equity markets for capital.

Our board of directors can authorize the issuance of preferred stock, which could diminish the rights of holders of our common stock and make a change of control of it more difficult even if it might benefit our stockholders.

Our board of directors is authorized to issue shares of preferred stock in one or more series and to fix the voting powers, preferences and other rights and limitations of the preferred stock. Accordingly, we may issue shares of preferred stock with a preference over our common stock with respect to dividends or distributions on liquidation or dissolution, or that may otherwise adversely affect the voting or other rights of the holders of common stock. Issuances of preferred stock, depending upon the rights, preferences and designations of the preferred stock, may have the effect of delaying, deterring or preventing a change of control, even if that change of control might benefit our stockholders.

Offers or availability for sale of a substantial number of shares of our common stock may cause the price of our common stock to decline.

Sales of a significant number of shares of our common stock in the public market could harm the market price of our common stock and make it more difficult for us to raise funds through future offerings of common stock. As additional shares of our common stock become available for resale in the public market, the supply of our common stock will increase, which could decrease the price of our common stock.

In addition, if our stockholders sell substantial amounts of our common stock in the public market, upon the expiration of any statutory holding period under Rule 144, upon the expiration of lock-up periods applicable to outstanding shares, or upon the exercise of outstanding options or warrants, it could create a circumstance commonly referred to as an “overhang,” in anticipation of which the market price of our common stock could fall. The existence of an overhang, whether or not sales have occurred or are occurring, could also make it more difficult for us to raise additional financing through the sale of equity or equity-related securities in the future at a time and price that we deem reasonable or appropriate.

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If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our stock price and trading volume could decline.

The trading market for our common stock will depend in part on the research and reports that securities or industry analysts publish about it or our business. Although we currently have research coverage by securities and industry analysts, you should not invest in our common stock in anticipation that we will increase such coverage. If one or more of the analysts who covers us at any given time downgrades our stock or publishes inaccurate or unfavorable research about our business, our stock price would likely decline. If one or more of these analyst's ceases coverage of us or fails to publish reports on us regularly, demand for our stock could decrease, which could cause our stock price and trading volume to decline.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable

ITEM 2. PROPERTIES

As of December 31, 2017, we operated three offices, with our corporate headquarters located in Yardley, Pennsylvania, where we lease approximately 9,000 square feet of office space. We maintain a combined corporate office and warehouse facility in Eden Prairie, Minnesota, where we lease approximately 9,000 square feet of space, as well as a manufacturing facility in Langhorne, Pennsylvania, where we lease approximately 16,500 square feet of office and manufacturing space. We believe that all our facilities are well maintained and are suitable and adequate for our current needs.

ITEM 3. LEGAL PROCEEDINGS

From time to time, we may become involved in lawsuits, investigations and claims that arise in the ordinary course of business. We believe we have meritorious defenses against all pending claims and intend to vigorously pursue them. While it is not possible to predict or determine the outcomes of any pending actions, we believe the amount of liability, if any, with respect to such actions, would not materially affect our financial position, results of operations or cash flows.

On February 22, 2018, a putative stockholder class action complaint was filed in the United States District Court for the District of Delaware against us and each member of the Board, captioned Ronald Cresta, Individually and on Behalf of All Others Similarly Situated v. Alliqua BioMedical Inc., David Johnson, Joseph M. Leone, Gary Restani, Jeffrey Sklar and Mark Wagner. The complaint alleges, among other things, that we and the Board violated federal securities laws and regulations by soliciting stockholder votes in connection with the Asset Sale Transaction through a proxy statement that omits material facts necessary to make the statements therein not false or misleading. The complaint seeks, among other things, to enjoin us and the Board from conducting the stockholder vote on the Asset Sale Transaction unless and until the allegedly omitted material information is disclosed to the Company's stockholders, damages allegedly suffered by the plaintiffs as a result of the asserted omissions, as well as related attorneys' fees and expenses.

We are reviewing the complaint and have not yet formally responded to it, but we believe that the plaintiffs' allegations are without merit and intend to defend against them vigorously. However, litigation is inherently uncertain and there can be no assurance regarding the likelihood that our defense of the actions will be successful. Additional complaints containing substantially similar allegations may be filed in the future.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

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PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market for Common Stock

Our common stock has been listed on The NASDAQ Capital Market under the symbol "ALQA" since January 28, 2014. The following table sets forth for the periods indicated the high and low sales price per share of our common stock as reported on The NASDAQ Capital Market for the period indicated. The sales prices for our common stock are adjusted for the 1-for-10 reverse stock split of our common stock that occurred on October 5, 2017:

| | 2017 | | 2016 | |
|---|---|---|---|---|
| | High | Low | High | Low |
| Fourth Quarter | $ 3.85 | $ 1.81 | $ 9.50 | $ 5.70 |
| Third Quarter | $ 4.60 | $ 2.30 | $ 13.00 | $ 7.30 |
| Second Quarter | $ 5.30 | $ 3.20 | $ 14.80 | $ 7.00 |
| First Quarter | $ 8.50 | $ 4.10 | $ 23.00 | $ 7.60 |

Holders of Record

As of February 28, 2018, there were approximately 263 holders of record of our common stock.

Dividends

We have never paid cash dividends on our common stock and, if we do not consummate the Asset Sale Transaction, do not anticipate paying any cash dividends in the foreseeable future, but intend to retain our capital resources for reinvestment in our business. In addition, our Credit Agreement prohibits us from paying cash dividends or distributions on our capital stock.

Issuer Purchases of Equity Securities

We did not repurchase any of our equity securities during the fourth quarter of the fiscal year ended December 31, 2017.

ITEM 6. SELECTED FINANCIAL DATA

Not applicable.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our consolidated financial statements and related notes included in this report. This discussion and analysis contains forward-looking statements based on our current expectations, assumptions, estimates and projections. These forward-looking statements involve risks and uncertainties. Our actual results could differ materially from those indicated in these forward-looking statements as a result of certain factors, as more fully discussed in Item 1 of this report, entitled "Business," under "Forward-Looking Statements" and Item 1A of this report, entitled "Risk Factors."

Overview

We are a regenerative technologies company that commercializes differentiated regenerative medical products which assist the body in the repair or replacement of soft tissue. Through our sales and distribution network, together with our proprietary products, we believe we offer solutions that allow clinicians to utilize the latest advances in regenerative technologies to bring improved patient outcomes to their practices. Our contract manufacturing business provides custom hydrogels to the OEM market.

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On January 5, 2018, we entered into the Asset Purchase Agreement pursuant to which we will sell the Purchased Assets to Celularity. As consideration for the Purchased Assets, Celularity has agreed to pay us $29 million in cash. No debt or significant liabilities will be assumed by the Celularity in the Asset Sale Transaction.

Under the terms of the Asset Purchase Agreement, we will retain certain specified assets, including, among other things, cash, accounts receivable, and its hydrogel contract manufacturing business, including our SilverSeal and Hydress product lines.

The transactions contemplated by the Asset Purchase Agreement must be approved by the affirmative vote of a majority of the voting power of issued and outstanding shares of our common stock. In addition to the receipt of our approval of our stockholders, each party's obligation to consummate the Asset Sale Transaction is conditioned upon certain other customary closing conditions. We expect the Asset Sale Transaction to be consummated no later than May 31, 2018.

Recent Events

Reverse Stock Split

The Company effected a 1-for-10 reverse stock split of its outstanding common stock on October 5, 2017. The accompanying consolidated financial statements and accompanying notes to the consolidated financial statements give retroactive effect to the reverse stock split for all periods presented. The shares of common stock retained a par value of $0.001 per share. Accordingly, stockholders' equity reflects the reverse stock split by reclassifying from common stock to additional paid-in capital an amount equal to the par value of the decreased shares resulting from the reverse stock split.

Senior Secured Term Loan Facility

We are currently in default of certain financial covenants under the Credit Agreement, as a result of our failure (A) to achieve $22.25 million, $24.6 million, $27.0 million, $30.3 million $33.8 million and $37.8 million of gross revenue for the twelve-month periods ended September 30, 2016, December 31, 2016, March 31, 2017, June 30, 2017 September 30, 2017 and December 31, 2017, respectively, and (B) to maintain on a consolidated basis, a monthly minimum cash balance of at least $2 million. Under the Forbearance and Amendment Agreement dated as of February 5, 2018, the lender agreed to defer the commencement of our remaining principal payments and agreed to extend the forbearance period and to forbear from exercising any rights and remedies related to our default of a covenant pertaining to (i) trailing twelve-month revenue under the Credit Agreement as of (A) September 30, 2016, (B) December 31, 2016, (C) March 31, 2017, (D) June 30, 2017, (E) September 30, 2017, and (F) December 31, 2017 and (ii) failure to maintain on a consolidated basis, a monthly minimum cash balance of at least $2,000,000, until the earlier of April 30, 2018, the termination of the Asset Purchase Agreement with Celularity, or the date when the lender becomes aware of any other default.

The remedies available for the lender include, among others, the ability to accelerate and immediately demand payment of the outstanding debt of approximately $12.1 million under the Credit Agreement, to impose a default rate of interest, to foreclose on some or all of our assets, and/or to take possession of or sell some or all of our assets. Were the lender to demand payment of the outstanding debt after expiration of the forbearance period, we would currently have insufficient funds to satisfy that obligation, and the lender's exercise of its other remedies would have a material adverse effect on our operations and financial condition.

The lender has the rights to pursue any rights and remedies available to it, including, but not limited to, declaring all or any portion of the outstanding principal amount to be immediately due and payable, imposing a default rate of interest as specified in the credit agreement, or pursing the lender's rights and remedies as a secured party under the UCC as a secured lender. In addition, the lender has a lien on substantially all of our assets and, as a result of the default, may seek to foreclose on some or substantially all of our assets after the expiration of the forbearance.

If we consummate the Asset Sale Transactions, we plan to fully repay this debt from the proceeds of the Asset Purchase Transaction.

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Contract Manufacturing Business

During the year ended December 31, 2017, one customer accounted for 67% of our contract manufacturing revenue and 6% of our total net revenue from continuing operations. We are uncertain as to this customer's intentions to use our services during the fiscal year ending December 31, 2018.

Asset Sales

In order to add capital and to focus on future investments on commercializing our own regenerative technologies, on August 31, 2017, we entered into the Argentum Purchase Agreement whereby we agreed to sell to Argentum all of the our rights, including (i) all distribution rights, exclusivity rights, intellectual property rights and marketing rights to the TheraBond product line and (ii) the unsold inventory of TheraBond products and work in process previously purchased by us in existence as of the closing, which occurred upon execution and delivery of the Argentum Purchase Agreement. In consideration for the sale of the TheraBond product line and the unsold TheraBond inventory to Argentum by us, Argentum agreed to pay (i) $3.6 million for the TheraBond product line and certain other agreements between the parties and (ii) up to $112,000 for the unsold TheraBond inventory upon our completion of our obligations to deliver all remaining and qualifying unsold TheraBond inventory, as specified in the Argentum Purchase Agreement. Of the $3.6 million of consideration, $300,000 is deposited in an indemnity escrow account under standard terms and conditions. This amount is classified under current assets of discontinued operations on our balance sheet as of December 31, 2017. As a result of the foregoing, we no longer distribute Therabond and past sales of Therabond are accounted for as a discontinued operation.

On June 30, 2016, we entered into a purchase agreement with BSN, pursuant to which we sold to BSN all of our rights under our former distribution agreement with Sorbion, dated as of September 20, 2013, as subsequently amended and assigned to BSN, including but not limited to all distribution rights, exclusivity rights, intellectual property rights and marketing rights to the sorbion product line and our remaining unsold inventory of sorbion products purchased under the distribution agreement. Subject to the terms and conditions of the purchase agreement, in exchange for the sale of such rights to the sorbion products and unsold products, BSN paid us an aggregate consideration of $4.1 million. Effective upon the closing of the sale, the distribution agreement was terminated. In addition, we received $100,000 in connection with a transaction services agreement with BSN. As a result of the foregoing, we no longer distribute sorbion wound dressings and exudate management products and past sales of sorbion products are accounted for as a discontinued operation.

Termination of Merger Agreement

On October 5, 2016, we entered into a merger agreement to acquire the business of Soluble Systems, LLC ("Soluble") through a series of transactions. On February 27, 2017, we terminated this agreement.

We advanced Soluble $1.4 million, $1.0 million during the year ended December 31, 2016 and $0.4 million on January 30, 2017.

On October 27, 2017, we received $1 million under an agreement with Soluble in connection with amounts advanced to Soluble by us. With the receipt of this $1 million, we acknowledged that all amounts due to us from Soluble were paid in full.

Private Placement

On February 27, 2017, we issued and sold an aggregate of 554,000 shares of our common stock at a purchase price of $5.00 per share to certain accredited investors in a private placement (the "Private Placement"), pursuant to a Securities Purchase Agreement (the "Securities Purchase Agreement"). Proceeds from the Private Placement, net of underwriting and administrative fees, were approximately $2.5 million.

Underwritten Public Offering

On April 3, 2017, we closed an underwritten public offering of 947,325 shares of our common stock at a price to the public of $4.00 per share. Proceeds from this offering, net of underwriting and administrative fees were approximately $3.3 million. The shares of common stock were issued pursuant to our shelf registration statement on Form S-3 previously filed with the Securities and Exchange Commission and declared effective on September 25, 2014.

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On April 3, 2017, we issued warrants to purchase an aggregate of 23,684 shares of our common stock to the underwriter of this offering. These warrants were immediately exercisable, have an exercise price of $4.40, and expire on March 29, 2022.

Pursuant to an anti-dilution provision provided in the warrants dated November 8, 2012 to purchase common stock at an initial exercise price of $21.90, the exercise price of these November 2012 warrants was adjusted to the public offering price of $4.00. As of April 3, 2017, November 2012 warrants to purchase 36,230 shares of the Company's common stock were outstanding. These warrants expired in November 2017.

Amendment and Adjustments of the Perceptive Warrant

On April 6, 2017, we and Perceptive entered into an amendment and restatement of a warrant to reduce the exercise price from $5.00 to $4.70, reflecting the impact of the public offering price of $4.00 per share at which we sold our common stock in the underwritten public offering that closed on April 3, 2017 as described above. The warrant was exercisable for 200,000 shares of our common stock. Perceptive will not have the right to exercise the warrant to the extent that after giving effect to such exercise, Perceptive would beneficially own in excess of 9.99% of the common stock outstanding immediately after giving effect to such exercise. On June 1, 2017, we and Perceptive entered into an amendment to increase the warrant from 200,000 to 210,000 shares of our common stock as well as delay the principal payments due under the Credit Agreement beginning June 30, 2017 until August 31, 2017.

Results of Operations

Year Ended December 31, 2017 Compared to the Year Ended December 31, 2016

Overview.

Our operations intended to be sold under the Asset Purchase Agreement have not been reclassified to discontinued operations since they are classified as Held for Use. These operations will be presented in continuing operations until the Asset Purchase Agreement is approved by our stockholders. Upon approval of the Asset Purchase Agreement, these operations will be reclassified to discontinued operations.

For the years ended December 31, 2017 and 2016, we had a net loss of $25.7 million and $28.2 million, respectively. Included in the operating loss for the years ended December 31, 2017 and 2016 was non-cash stock-based compensation of $2.0 million and $4.9 million, and an increase in the fair value adjustments to contingent consideration of $35,000 and a decrease in the fair value adjustments to contingent consideration of $10.1 million, respectively. Impairment charges of $10.3 million and $10.9 million were also included in our operating loss for the year ended December 31, 2017 and 2016, respectively.

Revenues, net. For the year ended December 31, 2017 revenues increased by $3.3 million, or 20%, to $19.6 million from $16.3 million for the year ended December 31, 2016. The increase in our overall revenue was primarily due to increase in sales of our biologics products.

The components of revenue were as follows for the years ended December 31, 2017 and 2016 (in thousands):

| | Year Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Revenues | | |
| Product | $ 17,573 | $ 14,142 |
| Contract manufacturing | 1,992 | 2,152 |
| Total revenues, net | $ 19,565 | $ 16,294 |

Gross profit. Our gross profit was $12.8 million for the year ended December 31, 2017 compared to gross profit of $10.2 million for the year ended December 31, 2016. The improved results for the year ended December 31, 2017, as compared to 2016 was primarily due to the greater volume of product sales as product revenue typically commands higher gross profit margins. Gross margin on our product sales was

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approximately 75%, while our overall gross margin was approximately 65% for year ended December 31, 2017. Gross margin on our product sales was approximately 77%, while our overall gross margin was approximately 63% for year ended December 31, 2016.

The components of cost of revenues are as follows for the years ended December 31, 2017 and 2016 (in thousands):

| | Year Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Cost of revenues | | |
| Materials and finished products | $ 4,315 | $ 3,301 |
| Stock-based compensation | 45 | 184 |
| Compensation and benefits | 663 | 916 |
| Depreciation and amortization | 841 | 779 |
| Equipment, production and other expenses | 899 | 871 |
| Total cost of revenues | $ 6,763 | $ 6,051 |

Selling, general and administrative expenses. The following table highlights selling, general and administrative expenses by type for the years ended December 31, 2017 and 2016 (in thousands):

| | Year Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Selling, general and administrative expenses | | |
| Compensation and benefits | $ 12,798 | $ 15,504 |
| Stock-based compensation | 1,975 | 4,691 |
| Professional fees | 2,866 | 4,420 |
| Marketing | 1,435 | 2,302 |
| Depreciation and amortization | 4,404 | 3,054 |
| Other expenses | 4,612 | 5,354 |
| Total selling, general and administrative expenses | $ 28,090 | $ 35,325 |

Selling, general and administrative expenses decreased by $7.2 million, to $28.1 million for the year ended December 31, 2017, as compared to $35.3 million for the year ended December 31, 2016.

Compensation and benefits decreased by $2.7 million, to $12.8 million for the year ended December 31, 2017, as compared to $15.5 million for the year ended December 31, 2016. The decrease in compensation and benefits was primarily due to the decrease in the average number of full-time employees in 2017 compared to 2016. Stock-based compensation decreased by $2.7 million, to $2.0 million for the year ended December 31, 2017, as compared to $4.7 million for the year ended December 31, 2016. The decrease in stock-based compensation is primarily due to the lower weighted average estimated fair value of options granted during the year ended December 31, 2017, as compared to the year ended December 31, 2016.

Marketing expenses decreased by $0.9 million to $1.4 million for the year ended December 31, 2017, as compared to $2.3 million for the year ended December 31, 2016. This decrease was primarily due to a reduction in the number of industry conferences attended.

The decrease in professional fees and other expenses is due to a reduction in expenditures for recruiting, travel, information technology, and legal fees. This decrease is consistent with our strategy to reduce operating costs.

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Royalties. Royalties expense decreased by $0.3 million, to $0.8 million for the year ended December 31, 2017, as compared to $1.1 million for the year ended December 31, 2016. During the year ended December 31, 2016, a minimum royalty of $600,000 was due Noble Fiber Technologies ("Noble"). During the year ended December 31, 2017, there was no minimum royalty due Noble. The decrease in royalties payable to Noble was offset by increased royalties paid to Celularity, due to increased sales of our licensed biologics products.

Research and product development expenses. During the years ended December 31, 2017 and 2016, we incurred research and development costs of approximately $121,000 and $859,000, respectively, related to a randomized controlled trial for our Biovance product in chronic diabetic foot ulcers. We experienced slower than expected patient enrollment and projected costs to complete the trial were significantly higher than we had previously expected. In addition, we believed there was no longer a business need for this trial due to the amount of patient data currently available, our success in getting government and commercial insurance coverage for Biovance, and our recent increase in Biovance sales. Due to these factors, we decided to terminate patient enrollment for the Biovance trial. We completed our study during the first half of 2017.

Milestone expense to licensor. During the year ended December 31, 2016, we incurred $1.0 million of milestone expense for achieving two of the three milestones under the license agreement with HLI related to the launch of the Interfyl product. We incurred expense of $500,000 related to the first commercial sale of Interfyl in the flowable matrix configuration and $500,000 related to the first commercial sale of Interfyl in the particulate form. We initiated sales and marketing efforts of Interfyl in September 2016 and commercial sales of both configurations occurred in September 2016. This milestone payment is included in other current liabilities as of December 31, 2017. This milestone payment will be forgiven by Celularity if the Asset Sale Transaction is consummated.

Acquisition-related expenses. On October 5, 2016, we entered into a merger agreement to acquire the business of Soluble through a series of transactions. On February 27, 2017, we terminated this agreement.

In connection with the merger agreement to acquire the business of Soluble, we provided Soluble with bridge loans in the form of subordinated promissory notes totaling approximately $1.4 million. We advanced Soluble $1.0 million during the year ended December 31, 2016 and $0.4 million on January 30, 2017. Pursuant to the terms of the merger agreement, the amount was to be repaid in full upon termination of the agreement.

On October 27, 2017, we received $1 million under an agreement with Soluble in connection with amounts advanced to Soluble by us. With the receipt of this $1 million, we acknowledged that all amounts due to us from Soluble were paid in full.

During the year ended December 31, 2017 we recorded a reduction of $365,000 in acquisition expenses which consisted of a recovery of bad debt expense for $650,000, offset by approximately $285,000 of other acquisition related expenses related to the terminated Soluble transaction.

During the year ended December 31, 2016, we incurred $3.0 million of acquisition-related costs related to Soluble, including bad debt expense of $1.0 million related to amounts advanced to Soluble as of that date.

Change in fair value of contingent consideration liability. During the year ended December 31, 2017, we recorded an increase in the fair value of the contingent consideration liability of approximately $35,000 compared to a decrease of $10.1 million in the year ended December 31, 2016.

The decrease in the fair value of the contingent consideration liability in the year ended December 31, 2016 was due to lower MIST sales than originally projected.

Impairment charges. During the year ended December 31, 2017, we recorded an impairment charge of approximately $10.3 million related to our goodwill. We proceeded directly to the quantitative analysis considering the consideration to be received and the assets to be sold under the Asset Purchase Agreement. During the year ended December 31, 2016, we recorded an impairment charge of approximately $1.7 million related to our MIST Therapy tradename and $9.2 million related to our goodwill. The impairment charge was triggered by the significant and sustained decline in our stock price and resulting market capitalization. The revenue from our portfolio of advanced wound care technologies was less than

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anticipated. Based on our revised forecasts our fair value was calculated to be less than the amounts assigned to our assets and liabilities resulting in an impairment of goodwill as of December 31, 2016. The impairment charge related to the tradename was calculated based on the fair value of MIST Therapy tradename as compared to the carrying value as of December 31, 2016

Warrant modification expense. During the year ended December 31, 2017, we recognized $803,000 of warrant modification expense in connection with the amendment of the warrant issued to Perceptive. In connection with entry into the January 2017 forbearance agreement, as amended March and June 2017, we also amended and restated the warrant issued to Perceptive in connection with the closing of the Credit Agreement in May 2015. The amended and restated warrant is exercisable for 210,000 shares of our common stock. The expense recorded during the year ended December 31, 2017 represents the incremental value of the modified warrant as compared to the original warrant, both valued as of the respective modification dates.

Other income. During the year ended December 31, 2017, we were required to perform certain services related to the transition of the TheraBond business to Argentum. As compensation, Argentum paid us $200,000 for the services completed during the year ended December 31, 2017. This compensation was recognized over the 90-day service period and is included in other income for the year ended December 31, 2017. During the year ended December 31, 2016, we were required to perform certain services related to the transition of the sorbion business to BSN. As compensation, BSN paid us $100,000 for the services completed during the year ended December 31, 2016. This compensation was recognized over the 90-day service period and is included in other income for the year ended December 31, 2016.

Income tax benefit. During the year ended December 31, 2017, we recorded an income tax benefit of approximately $743,000. The income tax benefit is primarily attributable to the change in the useful life of the MIST Therapy tradename from indefinite to definite, which necessitates a write-down of the deferred tax liability associated with the asset. During the year ended December 31, 2016, we recorded an income tax benefit of approximately $715,000.

On December 22, 2017, the U.S. government enacted significant changes to federal tax law following the passage of the Tax Cuts and Jobs Act ("the Act"). The Act significantly changes the U.S. corporate tax system. We have reasonably estimated the accounting for the effects of the Act during the year ended December 31, 2017. Our financial statements for the year ended December 31, 2017 reflect certain effects of the Act including a reduction in the corporate tax rate from 34% to 21% and changes to limitations on deductibility of executive compensation. As we have recorded a full valuation allowance against our net deferred tax assets as of December 31, 2017, these changes have no impact on the income tax benefit for year ending December 31, 2017. Given the significant changes resulting from and complexities associated with the Act, the financial impacts for the fourth quarter and full year 2017 are provisional and subject to further analysis, interpretation and clarification of the Act, which could result in changes to these estimates during 2018. We will reflect any adjustments to the provisional amounts within one year from the enactment date of the Act, if applicable. For additional discussion of the impact on the income tax provision, other income tax balances and related disclosures, see "Note 15 — Income Taxes" in the Notes accompanying the audited Consolidated Financial Statements.

Income from Discontinued Operations. During the year ended December 31, 2017, we sold our rights to the TheraBond product line, as well as our remaining TheraBond inventory. This sale resulted in income from discontinued operations of approximately $2.15 million for the year ended December 31, 2017, which consists of $454,000 of income from discontinued operations as well as $1.7 million recognized as a gain on the sale of the assets. During the year ended December 31, 2016, we had $4.2 million of income from discontinued operations in connection with our discontinued sorbion product line and $0.6 million from our discontinued Therabond product line.

Liquidity and Capital Resources

Year Ended December 31, 2017 Compared to Year Ended December 31, 2016

As of December 31, 2017, we had cash and cash equivalents totaling $2.2 million compared to $5.6 million at December 31, 2016. The decrease was largely attributable to cash used in operating activities of approximately $10.7 million, $1.6 million paid to Perceptive for the early extinguishment of debt,

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$675,000 to pay a portion of the contingent consideration related to the Celleration acquisition, and $350,000 issued as a bridge loan to Soluble in connection with the terminated acquisition. This decrease was offset by $5.9 million received from net proceeds from the issuance of common stock, the proceeds of $3.4 million from the sale of TheraBond and $1 million repaid by Soluble in connection with the bridge loan.

Net cash used in operating activities was $10.7 million and $18.3 million for the years ended December 31, 2017 and 2016, respectively. The decrease in net cash used in operating activities was due to an increase in our gross profit and a decrease in our selling, general and administrative expenses.

Net cash provided by investing activities was $3.9 million for the year ended December 31, 2017, compared to net cash used in investing activities of $2.2 million in the year ended December 31, 2016. Cash provided by investing activities during the year ended December 31, 2017 included $3.4 million from the sale of TheraBond and net receipts of $650,000 from Soluble. Cash provided by investing activities during the year ended December 31, 2016 included $4.1 million received from the sale of the rights to the sorbion product, offset by purchases of improvements and equipment of $893,000 and $1.0 million provided to Soluble as a bridge loan.

Net cash provided by financing activities for the year ended December 31, 2017 consisted of $5.9 million received from issuance of common stock offset by payments of $1.6 million to repay a portion of our long-term debt and $675,000 to pay the cash portion of the contingent consideration related to the Celleration acquisition. During the year ended December 31, 2016, net cash flow used in financing activities consisted of $2.6 million utilized to pay the cash portion of the contingent consideration related to the Celleration acquisition and $1.7 million utilized to repay a portion of our long-term debt.

At December 31, 2017, current assets totaled $7.5 million and current liabilities totaled $17.0 million, as compared to current assets totaling $11.8 million and current liabilities totaling $20.1 million at December 31, 2016. As a result, we had negative working capital of $9.5 million at December 31, 2017 compared to working capital of $8.4 million at December 31, 2016.

Our cash requirements have historically been for mergers and acquisitions, post-market clinical trials, marketing and sales activities, finance and administrative costs, capital expenditures and overall working capital. We have experienced negative operating cash flows since inception and have funded our operations primarily from sales of common stock and other securities.

Liquidity Outlook

Because we have had recurring losses, negative cash flows from operating activities, limited cash on hand in light of our expected expenditures and are in default of our Credit Agreement, the report of our independent auditors with respect to our financial statements as of December 31, 2017 and for the year ended December 31, 2017 contains an explanatory paragraph as to the potential inability to continue as a going concern. This opinion indicates that substantial doubt exists regarding our ability to remain in business.

Our financial statements have been prepared assuming we will continue as a going concern. We have experienced recurring losses since our inception. We incurred a net loss of $25.7 million and used $10.7 million in cash from operations for the year ended December 31, 2017, and had an accumulated deficit of $150.0 million as of December 31, 2017. At December 31, 2017, we had approximately $2.2 million of cash and cash equivalents.

On December 1, 2017, we received the Notices from Celularity. Celularity estimated that an additional purchase of at least $842,000 would have to be made by us to remedy the breach under the Supply Agreements. Celularity has agreed to forbear from exercising its right to terminate the Supply Agreements and License Agreements until the closing of the Asset Sale Transaction or termination of the Asset Purchase Agreement for any reason. We believe that Celularity’s notice of material breach of the License Agreement is without merit.

If we do not receive stockholder approval, the Asset Sale Transaction will not occur. Instead, we will retain the assets and liabilities proposed to be sold in the Asset Sale Transaction and will not receive the $29 million cash consideration from Celularity. We are currently in default of a covenant pertaining to

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trailing twelve-month revenue under the Credit Agreement as a result of our failure to achieve $24,600,000, $27,200,000, $30,300,000, $33,800,000 and $37,800,000 of gross revenue for the twelve-month periods ended December 31, 2016, March 31, 2017, June 30, 2017, September 30, 2017 and December 31, 2017, respectively. The Company is also currently in default of a minimum cash balance requirement under the Credit Agreement due to the Company having a cash balance of less than $2,000,000. As of the date hereof, the lender has agreed to forbear from exercising any rights and remedies related to each such event of default until the earlier of April 30, 2018 or the termination of the Asset Purchase Agreement with Celularity. In addition, on December 1, 2017, we received the Notices from Celularity.

Without receipt of the cash consideration from Celularity, we will not be able to repay our indebtedness under the Credit Agreement and will be unable to purchase materials under the Supply Agreements. The lender under the Credit Agreement may pursue the rights and remedies available to it under the Credit Agreement including, but not limited to, declaring all or any portion of the outstanding principal amount to be immediately due and payable, imposing a default rate of interest as specified in the Credit Agreement, or pursing the lender's rights and remedies as a secured party under the UCC as a secured lender. In addition, the lender has a lien on substantially all of our assets and, as a result of the default, may seek to foreclose on some or substantially all of our assets. If we do not consummate the Asset Sale Transaction with Celularity and transfer the License Agreement and Supply Agreements to Celularity as part of the Purchased Assets, we may face termination or litigation with respect to the Supply Agreements and the License Agreement. If we were to lose our rights to license Biovance, Interfyl or other products from Celularity under the License Agreement, it will have a material adverse effect on our business, financial condition and results of operations which could force the Company to file for bankruptcy if we are not successful in obtaining the level of financing needed for our operations.

Therefore, if we do not consummate the Asset Sale Transaction, due to our history of recurring losses and our negative working capital, there is substantial doubt about our ability to continue operating as a going concern within one year from the date of this filing.

If we consummate the Asset Sale Transaction, we, and not our stockholders, will receive the proceeds from the Asset Sale Transaction. We do not intend to liquidate following the Asset Sale Transaction. Our Board will evaluate alternatives for the use of the cash proceeds to be received at closing, which alternatives are expected to include using a portion of the proceeds to repay our outstanding indebtedness (including prepayment fees) to Perceptive of approximately $12.6 million in full and to pay transaction and other expenses of approximately $3 million. In addition, we intend to continue to maximize stockholder interests with a goal of returning value to our stockholders. Although our Board has not made any determination, such alternatives may include paying a special dividend, a share repurchase or other return of capital to our stockholders. We intend to use the remainder of the proceeds, together with any other sources of liquidity available to us at that time, to support operations at our hydrogel plant and to pursue strategic opportunities including, without limitation, a reverse merger transaction or a strategic acquisition. The amounts and timing of our actual expenditures, however, will depend upon numerous factors, and we may find it necessary or advisable to use portions of the proceeds from the Asset Sale Transaction for different or presently non-contemplated purposes.

Off Balance Sheet Arrangements

As of December 31, 2017, we had no off-balance sheet arrangements in the nature of guarantee contracts, retained or contingent interests in assets transferred to unconsolidated entities (or similar arrangements serving as credit, liquidity or market risk support to unconsolidated entities for any such assets), or obligations (including contingent obligations) arising out of variable interests in unconsolidated entities providing financing, liquidity, market risk or credit risk support to us, or that engage in leasing, hedging or research and development services with us.

Critical Accounting Policies and Estimates

The preparation of financial statements in accordance with generally accepted accounting principles requires that we make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of our financial statements and the reported amounts of revenues and expenses during the reporting period. The accounting policies that we believe

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require more significant estimates and assumptions include valuing equity securities and derivative financial instruments issued in financing transactions, allowance for doubtful accounts, inventory reserves, deferred taxes and related valuation allowances, and the fair values of long lived assets, intangibles, goodwill and contingent consideration. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ significantly from these estimates under different assumptions or conditions. There have been no material changes to these estimates for the periods presented in this Annual Report.

We believe that of our significant accounting policies, which are described below and in Note 2 to our audited consolidated financial statements included in this Item 7 of this Annual Report, the following accounting policies involve a greater degree of judgment and complexity. Accordingly, these are the policies we believe are the most critical to aid in fully understanding and evaluating our financial condition and results of operations.

Acquisitions

Results of operations of acquired companies are included in our results of operations as of the respective acquisition dates. The purchase price of each acquisition is allocated to the net assets acquired based on estimates of their fair values at the date of the acquisition. Any purchase price in excess of these net assets is recorded as goodwill. The allocation of purchase price in certain cases may be subject to revision based on the final determination of fair values during the measurement period, which may be up to one year from the acquisition date.

Contingent consideration is recognized at the estimated fair value on the acquisition date. Subsequent changes to the fair value of contingent payments are recognized in earnings. Contingent payments related to acquisitions consist of revenue based payments, and are valued using discounted cash flow techniques. The fair value of revenue based payments is based upon probability-weighted future revenue estimates and increases or decreases as revenue estimates or expectation of timing of payments changes.

Goodwill and Other Indefinite-Lived Intangible Assets

Goodwill and other indefinite-lived intangible assets are tested for impairment annually, at the end of the four quarter of each fiscal year, and between annual tests if an event occurs or circumstances change that would indicate it is more likely than not that the carrying amount may be impaired. Impairment testing for goodwill is done at a reporting unit level. A reporting unit is defined as an operating segment or one level below an operating segment, called a component. However, two or more components of an operating segment will be aggregated and deemed a single reporting unit if the components have similar economic characteristics. We operate as one reporting unit.

Authoritative accounting guidance allows us to first assess qualitative factors to determine whether it is necessary to perform a more detailed quantitative impairment test for goodwill and other indefinite-lived intangible assets. We may elect to bypass the qualitative assessment and proceed directly to the quantitative test for any reporting unit or indefinite-lived intangible assets. Qualitative factors that we consider as part of our assessment include a comparison of the most recent valuation to reporting unit carrying amounts, change in our market capitalization and its implied impact on reporting unit fair value, industry and market conditions, macroeconomic conditions, trends in product costs and financial performance of our businesses. If we perform the quantitative test for any reporting units or indefinite-lived intangible assets, we generally use a discounted cash flow method to estimate fair value. The discounted cash flow method is based on the present value of projected cash flows. Assumptions used in these cash flow projections are generally consistent with our internal forecasts. The estimated cash flows are discounted using a rate that represents the weighted average cost of capital. The weighted average cost of capital is based on a number of variables, including the equity-risk premium and risk-free interest rate. Management believes the assumptions used for the impairment tests are consistent with those that would be utilized by a market participant performing similar analyses and valuations. Adverse changes in future market conditions or weaker operating results compared to our expectations may impact our projected cash flows and estimates of weighted average cost of capital, which could result in a potential impairment charge if we are unable to recover the carrying value of our goodwill and other intangible assets.

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On January 5, 2018, we entered into the Asset Purchase Agreement pursuant to which we agreed to sell the Purchased Assets to Celularity. As consideration for the Purchased Assets, Celularity has agreed to pay us $29 million in cash. No debt or significant liabilities will be assumed by the Celularity in the Asset Sale.

Under the terms of the Asset Purchase Agreement, we will retain certain specified assets, including, among other things, cash, accounts receivable, and its hydrogel contract manufacturing business, including our SilverSeal and Hydress product lines.

The transactions contemplated by the Asset Purchase Agreement must be approved by the affirmative vote of a majority of the voting power of issued and outstanding shares of our common stock. In addition, to the receipt of our approval of our stockholders, each party's obligation to consummate the Asset Sale is conditioned upon certain other customary closing conditions.

We proceeded directly to the quantitative analysis considering the consideration to be received and the assets to be sold under the Asset Purchase Agreement. As a result of this test, our goodwill was determined to be impaired and an impairment charge of $10.3 million was recorded for the year ended December 31, 2017.

For the 2016 annual goodwill impairment test and certain indefinite-lived intangible assets impairment tests, we elected to bypass the qualitative assessment and proceeded directly to the quantitative analysis using a discounted cash flow method to estimate fair value. As a result of this test, our goodwill was determined to be impaired and an impairment charge of $9.2 million was recorded for the year ended December 31, 2016. Additionally, our indefinite-lived intangible asset related to the MIST Therapy tradename was also impaired and an impairment charge of $1.7 million was recorded for the year ended December 31, 2016. Total non-cash impairment charges related to goodwill and indefinite-lived intangible assets of $10.9 million is included in impairment charges the consolidated statement of operations for the year ended December 31, 2016. The impairment charge was triggered by the significant and sustained decline in our stock price and resulting market capitalization. The revenue from our portfolio of advanced wound care technologies was less than anticipated. Based on our revised forecasts, our fair value was calculated to be less than the amounts assigned to our assets and liabilities, resulting in an impairment in goodwill as of December 31, 2016. The impairment charge related to the tradename was calculated based on the fair value of the MIST Therapy tradename as compared to the carrying value of the MIST Therapy tradename as of December 31, 2016.

If different assumptions for our goodwill and other indefinite-lived intangible assets impairment tests had been applied, significantly different outcomes could have resulted. There can be no assurance that the estimates and assumptions used in our goodwill and indefinite-lived intangible assets impairment testing performed as of the end of the fourth quarter of 2017 will prove to be accurate predictions of the future. For example, if general macroeconomic conditions deteriorate or otherwise vary from current assumptions (including changes in the weighted average cost of capital), industry or market conditions deteriorate, business conditions or strategies for a specific reporting unit change from current assumptions, including cost increases or loss of major customers, our businesses do not perform as projected, or there is an extended period of a significant decline in our stock price, this could be an indicator that the excess fair value of our reporting units could be lessened and the chance of an impairment of goodwill could be raised.

Impairment of Long-Lived Assets Subject to Amortization

We amortize intangible assets with finite lives over their estimated useful lives and review them for impairment at least annually or whenever an impairment indicator exists. We continually monitor events and changes in circumstances that could indicate carrying amounts of our long-lived assets, including our intangible assets, may not be recoverable. When such events or changes in circumstances occur, we assess recoverability by determining whether the carrying value of such assets will be recovered through the undiscounted expected future cash flows. If the future undiscounted cash flows are less than the carrying amount of these assets, we recognize an impairment loss based on the excess of the carrying amount over the fair value of the assets.

Due to the Asset Purchase Agreement, we expect that it is more likely than not that our long-lived asset group related to the Purchased Assets will be sold or otherwise disposed of significantly before the end

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of its previously estimated useful life. We, therefore, tested our long-lived assets for recoverability as of December 31, 2017. These long-lived assets consist of property, plant and equipment and intangible assets subject to amortization. The expected consideration under the Asset Purchase Agreement for the sale of the long-lived asset group related to the Purchased Assets approximate the net book value of these assets at December 31, 2017. Therefore, no impairment charge was recorded for long-lived assets during the year ended December 31, 2017

Recent Accounting Standards

Recently issued accounting pronouncements are addressed in Note 2 in the Notes to Consolidated Financial Statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not required.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Our Consolidated Financial Statements and the relevant notes to those statements are attached to this report beginning on page F-1.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures.

We conducted an evaluation of the effectiveness of our “disclosure controls and procedures” (“Disclosure Controls”), as defined by Rules 13a-15(e) and 15d-15(e) of the Exchange Act, as of December 31, 2017, the end of the period covered by this Annual Report on Form 10-K. The Disclosure Controls evaluation was done under the supervision and with the participation of management, including our Chief Executive Officer and Chief Financial Officer. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives. Based upon this evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our Disclosure Controls were effective at the reasonable assurance level as of December 31, 2017.

Management’s Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the consolidated financial statements for external reporting purposes in accordance with generally accepted accounting principles.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness of internal control over financial reporting to future periods are subject to the risk that controls may become inadequate because of changes in conditions or that the degree of compliance with the policies or procedures may deteriorate over time.

Management, including our Chief Executive Officer and Chief Financial Officer, assessed the effectiveness of our internal control over financial reporting as of December 31, 2017. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) in Internal Control — Integrated Framework (2013). Based on its assessment and those criteria, management has concluded that we maintained effective internal control over financial reporting as of December 31, 2017.

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Changes in Internal Control over Financial Reporting

We regularly review our system of internal control over financial reporting to ensure we maintain an effective internal control environment. As we expand, we make changes to our processes and systems to improve controls and we continue to create and enhance the design and documentation of our internal control processes to ensure effective controls over financial reporting.

There have been no changes in our internal control over financial reporting during the quarter ended December 31, 2017 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information with respect to this item will be set forth in our definitive proxy statement for the 2018 Annual Meeting of Stockholders, which shall be filed with the Securities and Exchange Commission within 120 days after the end of the fiscal year covered by this report, (our “Proxy Statement”), and is incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

Information with respect to this item will be set forth in our Proxy Statement, and is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information with respect to this item will be set forth in our Proxy Statement, and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information with respect to this item will be set forth in our Proxy Statement, and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information with respect to this item will be set forth in our Proxy Statement, and is incorporated herein by reference.

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ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

The following documents are filed as part of this report:

(1)

Financial Statement Schedules:



(2)

Financial Statement Schedules:

None

(3)

Exhibits:

See "Index to Exhibits" for a description of our exhibits.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ALLIQUA BIOMEDICAL, INC.

By:

/s/ DAVID JOHNSON

David Johnson

President and Chief Executive Officer

Date: March 2, 2018

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

| Signature | Title | Date |
|---|---|---|
| /s/ DAVID JOHNSON<br>David Johnson | President, Chief Executive Officer and Director (principal executive officer) | March 2, 2018 |
| /s/ BRIAN M. POSNER<br>Brian M. Posner | Chief Financial Officer, Treasurer and Secretary (principal financial and accounting officer) | March 2, 2018 |
| /s/ JOSEPH LEONE<br>Joseph Leone | Director | March 2, 2018 |
| /s/ GARY RESTANI<br>Gary Restani | Director | March 2, 2018 |
| /s/ JEFFREY SKLAR<br>Jeffrey Sklar | Director | March 2, 2018 |
| /s/ MARK WAGNER<br>Mark Wagner | Director | March 2, 2018 |

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Index to Exhibits

| Exhibit No. | Description |
|---|---|
| 2.1 | Agreement and Plan of Merger, dated May 5, 2014, by and between Alliqua, Inc., ALQA Merger Sub, Inc., Choice Therapeutics, Inc. and E. James Hutchens, as the Stockholder Representative, incorporated by reference to Exhibit 2.1 to the Form 8-K filed May 6, 2014. |
| 2.2 | Agreement and Plan of Merger, dated June 5, 2014, by and between Alliqua, Inc. and Alliqua BioMedical, Inc., incorporated by reference to Exhibit 2.1 to the Form 8-K filed June 11, 2014. |
| 2.3** | Agreement and Plan of Merger, dated February 2, 2015, by and among Alliqua BioMedical, Inc., ALQA Cedar, Inc., Celleration, Inc. and certain representatives of the stockholders of Celleration, Inc., as identified therein, incorporated by reference to Exhibit 2.1 to the Form 8-K filed February 2, 2015. |
| 2.4** | Contribution Agreement and Plan of Merger, dated October 5, 2016, by and among Alliqua BioMedical, Inc., Alliqua Holdings, Inc., Chesapeake Merger Corp., and Soluble Systems, LLC, incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed on October 6, 2016. |
| 2.5** | Asset Purchase Agreement, dated January 5, 2018, by and between Alliqua BioMedical, Inc. and Celularity Inc., incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed on January 5, 2018. |
| 2.6** | Asset Purchase Agreement, dated August 31, 2017, by and between Alliqua BioMedical, Inc. and Argentum Medical, LLC, incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed on September 5, 2017. |
| 3.1 | Certificate of Incorporation of Alliqua BioMedical, Inc., incorporated by reference to Exhibit 3.1 to the Form 8-K filed June 11, 2014. |
| 3.2 | Certificate of Amendment to Certificate of Incorporation of Alliqua BioMedical, Inc., incorporated by reference to Exhibit 3.3 to the Form 8-K filed June 11, 2014. |
| 3.3 | Certificate of Amendment to Certificate of Incorporation of Alliqua BioMedical, Inc., incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on May 6, 2016. |
| 3.4 | Certificate of Amendment to Certificate of Incorporation of Alliqua BioMedical, Inc., incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on October 5, 2017. |
| 3.5 | Bylaws of Alliqua BioMedical, Inc., incorporated by reference to Exhibit 3.2 to the Form 8-K filed June 11, 2014. |
| 4.1 | Form of Warrant used in connection with February 16, 2012 private placement, incorporated by reference to Exhibit 10.2 to the Form 8-K filed February 21, 2012. |
| 4.2 | Form of Warrant used in connection with August 14, 2012 private placement, incorporated by reference to Exhibit 10.2 to the Form 8-K filed August 16, 2012. |
| 4.3 | Form of Warrant used in connection with November 8, 2012 private placement, incorporated by reference to Exhibit 10.2 to the Form 8-K filed November 14, 2012. |
| 4.4 | Form of Warrant used in connection with February 22, 2013 private placement, incorporated by reference to Exhibit 10.2 to the Form 8-K filed February 25, 2013. |
| 4.5 | Form of Warrant used in connection with April and May 2013 private placement, incorporated by reference to Exhibit 10.2 to the Form 8-K filed April 26, 2013. |
| 4.6 | Form of Warrant used in connection with June 28, 2013 private placement, incorporated by reference to Exhibit 10.2 to the Form 8-K filed July 5, 2013. |
| 4.7 | Form of $0.10 Warrant used in connection with October 22, 2013 private placement, incorporated by reference to Exhibit 10.2 to the Form 8-K filed October 28, 2013. |
| 4.8 | |

Warrant issued to Celgene Corporation on November 18, 2013, incorporated by reference to Exhibit 4.12 to the Form 10-K filed December 31, 2013.

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| Exhibit No. | Description |
|---|---|
| 4.9 | Form of Warrant used in connection with November 18, 2013 private placement, incorporated by reference to Exhibit 4.13 to the Form 10-K filed December 31, 2013. |
| 4.10 | Form of Warrant, dated April 14, 2014, by and between Alliqua, Inc. and certain accredited investors, incorporated by reference to Exhibit 10.2 to the Form 8-K filed April 15, 2014. |
| 4.11 | Form of Warrant, dated April 3, 2017, by and between Alliqua BioMedical, Inc. and H.C. Wainwright & Co. LLC and its designees, incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K filed April 4, 2017. |
| 10.1+ | 2001 Incentive Stock Purchase Plan, incorporated by reference to Exhibit 10.2 to the Form S-8 filed on May 8, 2003. |
| 10.2+ | Form of Nonstatutory Stock Option Agreement under the 2001 Incentive Stock Purchase Plan, incorporated by reference to Exhibit 10.2 to the Form 10-K/A filed May 16, 2013. |
| 10.3+ | Form of Incentive Stock Option Agreement under the 2001 Incentive Stock Purchase Plan, incorporated by reference to Exhibit 10.3 to the Form 10-K/A filed May 16, 2013. |
| 10.4+ | Form of Indemnification Agreement, incorporated by reference to Exhibit 10.2 to the Form 8-K filed January 5, 2011. |
| 10.5 | Exclusive License Agreement, dated as of July 15, 2011, by and between Noble Fiber Technologies, LLC and Alliqua Biomedical, Inc., incorporated by reference to Exhibit 10.1 to the Form 8-K filed July 20, 2011. |
| 10.6 | Collateral Assignment of 510(k) Rights, dated as of July 15, 2011, by and between Noble Fiber Technologies, LLC and Alliqua Biomedical, Inc., incorporated by reference to Exhibit 10.1 to the Form 8-K filed July 20, 2011. |
| 10.7+ | 2011 Long-Term Incentive Plan, incorporated by reference to Exhibit 10.1 to the Form 8-K filed December 20, 2011. |
| 10.8 | Form of Securities Purchase Agreement, by and among Alliqua, Inc. and certain purchasers set forth therein, incorporated by reference to Exhibit 10.1 to the Form 8-K filed February 21, 2012. |
| 10.9 | Securities Purchase Agreement, dated as of August 14, 2012, by and among Alliqua, Inc. and certain purchasers set forth therein, incorporated by reference to Exhibit 10.1 to the Form 8-K filed August 16, 2012. |
| 10.10 | Securities Purchase Agreement, dated as of November 8, 2012, by and among Alliqua, Inc. and certain purchasers set forth therein, incorporated by reference to Exhibit 10.1 to the Form 8-K filed November 14, 2012. |
| 10.11+ | First Amendment to the 2011 Long-Term Incentive Plan, incorporated by reference to Exhibit 10.1 to the Form 8-K filed December 20, 2012. |
| 10.12+ | Form of Nonstatutory Stock Option Agreement under the 2011 Long-Term Incentive Plan, incorporated by reference to Exhibit 10.32 to the Form 10-K/A filed May 16, 2013. |
| 10.13+ | Form of Incentive Stock Option Agreement under the 2011 Long-Term Incentive Plan, incorporated by reference to Exhibit 10.33 to the Form 10-K/A filed May 16, 2013. |
| 10.14+ | Executive Employment Agreement, dated as of February 4, 2013, between Alliqua, Inc. and David Johnson, incorporated by reference to Exhibit 10.1 to the Form 8-K filed February 7, 2013. |
| 10.15+ | Indemnification Agreement, dated as of February 4, 2013, in favor of David Johnson, incorporated by reference to Exhibit 10.3 to the Form 8-K filed February 7, 2013. |
| 10.16 | Securities Purchase Agreement, dated as of February 22, 2013, by and among Alliqua, Inc. and certain purchasers set forth therein, incorporated by reference to Exhibit 10.1 to the Form 8-K filed February 25, 2013. |

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| Exhibit No. | Description |
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| 10.17 | Securities Purchase Agreement, dated as of April 11, 2013, by and among Alliqua, Inc. and certain purchasers set forth therein, incorporated by reference to Exhibit 10.1 to the Form 8-K filed April 26, 2013. |
| 10.18 | Securities Purchase Agreement, dated as of June 28, 2013, by and among Alliqua, Inc. and certain purchasers set forth therein, incorporated by reference to Exhibit 10.3 to the Form 8-K filed July 5, 2013. |
| 10.19+ | Nonqualified Stock Option Agreement, dated September 3, 2013, between Brian Posner and Alliqua, Inc., incorporated by reference to Exhibit 10.2 to the Form 8-K filed September 9, 2013. |
| 10.20^ | Distributor Agreement, dated September 23, 2013, by and between Sorbion GmbH & Co KG and Alliqua Biomedical, Inc., incorporated by reference to Exhibit 10.5 to the Form 10-Q filed November 12, 2013. |
| 10.21^ | License, Marketing and Development Agreement, dated as of November 14, 2013, by and between Anthrogenesis Corporation, d/b/a CCT, and Alliqua, Inc., incorporated by reference to Exhibit 10.48 to the Form 10-K filed December 31, 2013. |
| 10.22^ | Supply Agreement, dated as of November 14, 2013, by and between Anthrogenesis Corporation and Alliqua, Inc., incorporated by reference to Exhibit 10.49 to the Form 10-K filed December 31, 2013. |
| 10.23 | Stock Purchase Agreement, dated as of November 14, 2013, by and between Celgene Corporation and Alliqua, Inc., incorporated by reference to Exhibit 10.50 to the Form 10-K filed December 31, 2013. |
| 10.24 | Securities Purchase Agreement, dated as of November 18, 2013, by and among Alliqua, Inc. and certain purchasers set forth therein, incorporated by reference to Exhibit 10.51 to the Form 10-K filed December 31, 2013. |
| 10.25 | First Amendment to Executive Employment Agreement dated December 20, 2013, by and between Alliqua, Inc. and David Johnson, incorporated by reference to Exhibit 10.1 to the Form 8-K filed December 27, 2013. |
| 10.26 | Nonqualified Stock Option Agreement dated December 20, 2013, by and between Alliqua, Inc. and David Johnson, incorporated by reference to Exhibit 10.2 to the Form 8-K filed December 27, 2013. |
| 10.27+ | Form of Restricted Stock Award Agreement under the 2011 Long-Term Incentive Plan, incorporated by reference to Exhibit 10.62 to the Form 10-K filed December 31, 2013. |
| 10.28+ | Form of Restricted Stock Award Agreement for 2013 Executive Bonuses under the 2011 Long-Term Incentive Plan, incorporated by reference to Exhibit 10.63 to the Form 10-K filed December 31, 2013. |
| 10.29+ | Form of Nonqualified Stock Option Agreement (outside of any incentive plan), incorporated by reference to Exhibit 99.8 to the Form S-8 filed January 23, 2014. |
| 10.30 | Form of Securities Purchase Agreement, dated April 14, 2014, by and between Alliqua, Inc. and certain accredited investors, incorporated by reference to Exhibit 10.1 to the Form 8-K filed April 15, 2014. |
| 10.31 | Form of Letter Agreement, dated April 11, 2014, by and between Alliqua, Inc. and certain holders of warrants to purchase Common Stock of Alliqua, Inc., incorporated by reference to Exhibit 10.3 to the Form 8-K filed April 15, 2014. |
| 10.32+ | Alliqua BioMedical, Inc. 2014 Long-Term Incentive Plan, incorporated by reference to Exhibit 10.1 to the Form 8-K filed June 11, 2014. |
| 10.33^ | Supply Agreement, dated April 10, 2014, by and between Alliqua, Inc. and Anthrogenesis Corporation, d/b/a Celgene Cellular Therapeutics, incorporated by reference to Exhibit 10.4 to the Form 10-Q filed August 11, 2014. |

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| Exhibit No. | Description |
|---|---|
| 10.34^ | First Amendment to Supply Agreement, dated April 10, 2014 by and between Alliqua, Inc. and Anthrogenesis Corporation, d/b/a Celgene Cellular Therapeutics, incorporated by reference to Exhibit 10.5 to the Form 10-Q filed August 11, 2014. |
| 10.35^ | First Amendment to License, Marketing and Development Agreement, dated September 30, 2014, by and between Alliqua, Inc. and Anthrogenesis Corporation, d/b/a Celgene Cellular Therapeutics, incorporated by reference to Exhibit 10.1 to the Form 10-Q filed November 5, 2014. |
| 10.36^ | Second Amendment to Supply Agreement, dated September 30, 2014, by and between Alliqua, Inc. and Anthrogenesis Corporation, d/b/a Celgene Cellular Therapeutics, incorporated by reference to Exhibit 10.2 to the Form 10-Q filed November 5, 2014. |
| 10.37 | Voting Agreement, dated February 2, 2015, by and between Alliqua BioMedical, Inc. and each of the stockholders of Celleration, Inc., as identified therein, incorporated by reference to Exhibit 10.1 to Amendment No. 1 to Registration Statement on Form S-4 filed on April 2, 2015. |
| 10.38 | Commitment Letter, dated February 2, 2015, by and between Perceptive Credit Opportunities Fund, LP and Alliqua BioMedical, Inc., incorporated by reference to Exhibit 10.2 to Amendment No. 1 to Registration Statement on Form S-4 filed on April 2, 2015. |
| 10.39 | Side Letter Agreement to Commitment Letter, dated March 10, 2015, by and between Perceptive Credit Opportunities Fund, LP and Alliqua BioMedical, Inc., incorporated by reference to Exhibit 10.3 to Amendment No. 1 to Registration Statement on Form S-4 filed on April 2, 2015. |
| 10.40^ | Second Amendment to the License, Marketing and Development Agreement, dated April 30, 2015, by and between Alliqua BioMedical, Inc. and Anthrogenesis Corporation, d/b/a Celgene Cellular Therapeutics, incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 6, 2015. |
| 10.41+ | First Amendment to the Alliqua BioMedical, Inc. 2014 Long-Term Incentive Plan, incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on May 6, 2015. |
| 10.42+ | Form of Incentive Stock Option Agreement under the 2014 Long-Term Incentive Plan, incorporated by reference to Exhibit 99.3 to the Form S-8 filed August 6, 2015. |
| 10.43+ | Form of Nonqualified Stock Option Agreement under the 2014 Long-Term Incentive Plan, incorporated by reference to Exhibit 99.4 to the Form S-8 filed August 6, 2015. |
| 10.44+ | Form of Restricted Stock Award Agreement under the 2014 Long-Term Incentive Plan, incorporated by reference to Exhibit 99.5 to the Form S-8 filed August 6, 2015. |
| 10.45+ | Form of Restricted Stock Unit Agreement under the 2014 Long-Term Incentive Plan, incorporated by reference to Exhibit 99.6 to the Form S-8 filed August 6, 2015. |
| 10.46 | Credit Agreement and Guaranty, dated May 29, 2015, by and among Alliqua BioMedical, Inc., Perceptive Credit Opportunities Fund, LP and those certain subsidiary guarantors party thereto, incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on June 1, 2015. |
| 10.47 | Pledge and Security Agreement, dated May 29, 2015, by and among Alliqua BioMedical, Inc., Perceptive Credit Opportunities Fund, LP and those certain subsidiary guarantor party thereto, incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on June 1, 2015. |
| 10.48 | Warrant, dated May 29, 2015, by and between Alliqua BioMedical, Inc. and Perceptive Credit Opportunities Fund, LP, incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on June 1, 2015. |

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| Exhibit No. | Description |
|---|---|
| 10.49+ | Employment Agreement, dated June 3, 2015, by and between Alliqua BioMedical, Inc. and Nino Pionati, incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on June 9, 2015. |
| 10.50+ | Employment Agreement, dated June 5, 2015, by and between Alliqua BioMedical, Inc. and Brian Posner, incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on June 9, 2015 |
| 10.51+ | Employment Agreement, dated June 5, 2015, by and between Alliqua BioMedical, Inc. and Bradford Barton, incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on June 9, 2015. |
| 10.52 | First Amendment to Distributor Agreement, dated July 31, 2015, by and between Alliqua BioMedical, Inc. and BSN Medical, Inc., an affiliate of Sorbion GmbK & Co KG, incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 5, 2015. |
| 10.53 | Purchase Agreement, dated June 30, 2016, by and between Alliqua BioMedical, Inc. and BSN medical, Inc., incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 9, 2016. |
| 10.54 | Transition Agreement, dated June 30, 2016, by and between Alliqua BioMedical, Inc. and BSN medical, Inc., incorporated by reference to Exhibit 10.4 to the Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 9, 2016. |
| 10.55 | Consent Agreement, dated August 25, 2016, by and among Alliqua BioMedical, Inc., certain subsidiaries set forth on the signature pages thereto, and Perceptive Credit Holdings, L.P., incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 4, 2016. |
| 10.56 | Forbearance and Amendment Agreement, dated January 26, 2017, by and among Alliqua BioMedical, Inc., AquaMed Technologies, Inc. and Perceptive Credit Holdings, LP., incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on January 30, 2017. |
| 10.57 | Amended Warrant, dated January 26, 2017, by and between Alliqua BioMedical, Inc. and Perceptive Credit Holdings, LP., incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on January 30, 2017. |
| 10.58 | Form of Securities Purchase Agreement, dated February 27, 2017, by and between Alliqua BioMedical, Inc. and certain accredited investors, incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on February 28, 2017. |
| 10.59 | Amendment No. 1 to Forbearance and Amendment Agreement, dated March 7, 2017, by and among Alliqua BioMedical, Inc., AquaMed Technologies, Inc. and Perceptive Credit Holdings, LP., incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on March 13, 2017. |
| 10.60 | Amended Warrant, dated March 7, 2017, by and between Alliqua BioMedical, Inc. and Perceptive Credit Holdings, LP., incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on March 13, 2017. |
| 10.61 | Amended Warrant, dated April 6, 2017, by and between Alliqua BioMedical, Inc. and Perceptive Credit Holdings, LP., incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on April 12, 2017. |
| 10.62 | |

Amendment No. 2 to Forbearance and Amendment Agreement, dated April 27, 2017, by and among Alliqua BioMedical, Inc. AquaMed Technologies and Perceptive Credit Holdings, LP., incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on May 1, 2017

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| Exhibit No. | Description |
|---|---|
| 10.63 | Amendment to Credit Agreement and Guaranty and Warrant, dated June 1, 2017, by and among Alliqua BioMedical, Inc., AquaMed Technologies, Inc. and Perceptive Credit Holdings, L.P., incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on June 5, 2017 |
| 10.64+ | Second Amendment to the Alliqua BioMedical, Inc. 2014 Long-Term Incentive Plan, effective as of June 23, 2017, incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on June 23, 2017 |
| 10.65 | Second Forbearance Agreement, dated August 9, 2017, by and among Alliqua BioMedical, Inc., AquaMed Technologies, Inc. and Perceptive Credit Holdings, LP., incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on August 10, 2017 |
| 10.66 | Consent, Forbearance and Amendment Agreement, dated August 31, 2017, by and among Alliqua BioMedical, Inc. AquaMed Technologies, Inc. and Perceptive Credit Holdings, L.P., incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on September 5, 2017 |
| 10.67 | Forbearance and Amendment Agreement, dated February 5, 2018, by and among Alliqua BioMedical, Inc., AquaMed Technologies, Inc. and Perceptive Credit Holdings, L.P., incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on February 9, 2018 |
| 21.1* | List of Subsidiaries |
| 23.1* | Consent of Independent Registered Public Accounting Firm to the Form 10-K. |
| 31.1* | Certification of Chief Executive Officer Pursuant to Section 302 of Sarbanes-Oxley Act of 2002 |
| 31.2* | Certification of Chief Financial Officer Pursuant to Section 302 of Sarbanes-Oxley Act of 2002 |
| 32.1* | Certification of Chief Executive Officer Pursuant to Section 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 |
| 32.2* | Certification of Chief Financial Officer Pursuant to Section 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 |
| 101* | The following materials from the Company's Annual Report on Form 10-K for the year ended December 31, 2017, formatted in XBRL (eXtensible Business Reporting Language), (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Operations, (iii) Consolidated Statements of Stockholders' Equity, (iv) Consolidated Statements of Cash Flows, and (v) Notes to the Consolidated Financial Statements |

*
Filed herewith.

**
Certain exhibits and schedules have been omitted and the Company agrees to furnish supplementary to the Securities and Exchange Commission a copy of any omitted exhibits upon request.

^
Confidential treatment has been granted with respect to certain portions of this exhibit.

+
Management contract or compensatory plan or arrangement.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Audit Committee of the
Board of Directors and Shareholders of
Alliqua BioMedical, Inc. and Subsidiaries

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Alliqua BioMedical, Inc. and Subsidiaries (the "Company") as of December 31, 2017 and 2016, the related consolidated statements of operations, stockholders' equity and cash flows for each of the two years in the period ended December 31, 2017, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2017, in conformity with accounting principles generally accepted in the United States of America.

Explanatory Paragraph — Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As more fully described in Note 3, the Company has a significant working capital deficiency, has incurred significant losses and needs to raise additional funds to meet its obligations and sustain its operations. The Company is currently in default of a covenant pertaining to trailing twelve-month revenue and a minimum cash balance requirement under its Credit Agreement and Guaranty with Perceptive Credit Opportunities Fund, L.P. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 3. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Marcum llp
/s/ Marcum LLP

We have served as the Company's auditor since 2010.
New York, NY
March 2, 2018
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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)

| | December 31, 2017 | December 31, 2016 |
|---|---|---|
| ASSETS: | | |
| Current Assets: | | |
| Cash and cash equivalents | $ 2,181 | $ 5,580 |
| Accounts receivable, net | 3,243 | 2,453 |
| Inventory, net | 1,551 | 2,152 |
| Prepaid expenses and other current assets | 185 | 735 |
| Current assets of discontinued operations | 317 | 857 |
| Total current assets | 7,477 | 11,777 |
| Improvements and equipment, net | 1,563 | 2,092 |
| Intangible assets, net | 22,069 | 26,605 |
| Goodwill, net | 1,659 | 11,959 |
| Other assets | 173 | 173 |
| Assets of discontinued operations – noncurrent | — | 1,893 |
| Total assets | $ 32,941 | $ 54,499 |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current Liabilities: | | |
| Accounts payable | $ 1,641 | $ 2,614 |
| Accrued expenses and other current liabilities | 4,270 | 5,224 |
| Contingent consideration, current | — | 675 |
| Senior secured term loan, net | 10,929 | 11,541 |
| Warrant liability | 130 | 20 |
| Current liabilities of discontinued operations | — | 60 |
| Total current liabilities | 16,970 | 20,134 |
| Contingent consideration, long-term | — | 1,141 |
| Deferred tax liability | — | 749 |
| Other long-term liabilities | 304 | 385 |
| Total liabilities | 17,274 | 22,409 |
| Commitments and Contingencies | | |
| Stockholders' Equity | | |
| Preferred Stock, par value $0.001 per share, 1,000,000 shares authorized, no shares issued and outstanding | — | — |
| Common Stock, par value $0.001 per share, 95,000,000 shares authorized; 4,986,034 and 2,966,904 shares issued and outstanding as of December 31, 2017 and December 31, 2016, respectively | 5 | 3 |
| Additional paid-in capital | 165,672 | 156,390 |
| Accumulated deficit | (150,010) | (124,303) |
| Total stockholders' equity | 15,667 | 32,090 |

| | | |
|---|---|---|
| Total liabilities and stockholders' equity | $ 32,941 | $ 54,499 |

The accompanying notes are an integral part of these consolidated financial statements.
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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except share and per share data)

| | Year Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Revenue, net of returns, allowances and discounts | $ 19,565 | $ 16,294 |
| Cost of revenues | 6,763 | 6,051 |
| Gross profit | 12,802 | 10,243 |
| Operating expenses | | |
| Selling, general and administrative | 28,090 | 35,325 |
| Royalties | 820 | 1,093 |
| Research and product development | 121 | 859 |
| Milestone expense to licensor | — | 1,000 |
| Acquisition-related | (365) | 2,959 |
| Change in fair value of contingent consideration liability | 35 | (10,065) |
| Impairment charges | 10,300 | 10,895 |
| Total operating expenses | 39,001 | 42,066 |
| Loss from operations | (26,199) | (31,823) |
| Other (expense) income | | |
| Interest expense | (2,282) | (2,541) |
| Change in fair value of warrant liability | 692 | 841 |
| Warrant modification expense | (803) | — |
| Loss on early extinguishment of debt, net | (214) | (373) |
| Other income | 206 | 142 |
| Total other expense | (2,401) | (1,931) |
| Loss from continuing operations before tax | (28,600) | (33,754) |
| Income tax benefit | 743 | 715 |
| Loss from continuing operations | (27,857) | (33,039) |
| Discontinued operations: | | |
| Income from discontinued operations, net of tax of $0 for the years ended December 31, 2017 and 2016 | 454 | 1,485 |
| Gain on sale of assets, net of tax of $0 for the years ended December 31, 2017 and 2016 | 1,696 | 3,311 |
| Income from discontinued operations, net of tax | 2,150 | 4,796 |
| Net loss | $ (25,707) | $ (28,243) |
| Net loss per basic and diluted common share: | | |
| Loss from continuing operations | $ (6.49) | $ (11.81) |
| Income from discontinued operations | 0.11 | 0.53 |
| Gain on sale of assets | 0.40 | 1.18 |
| Total from discontinued operations | 0.51 | 1.71 |
| Net loss per basic and diluted common share | $ (5.98) | $ (10.10) |

| | | |
|---|---|---|
| Weighted average shares used in computing net loss per basic and diluted common share | 4,291,600 | 2,796,563 |

The accompanying notes are an integral part of these consolidated financial statements.
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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands, except for share and per share data)

| | Common Stock | | Additional Paid-in Capital | Accumulated Deficit | Total Stockholders' Equity |
|---|---|---|---|---|---|
| | Shares | Amount | | | |
| Balance, December 31, 2015 | 2,766,891 | $ 3 | $ 148,484 | $ (96,060) | $ 52,427 |
| Stock-based compensation(A) | 101,653 | — | 5,336 | — | 5,336 |
| Issuance of common stock in connection with the contingent consideration of the Celleration, Inc. acquisition(B) | 98,594 | — | 2,572 | — | 2,572 |
| Net settlement on vesting of restricted stock awards | (234) | — | (2) | — | (2) |
| Net loss | — | — | — | (28,243) | (28,243) |
| Balance, December 31, 2016 | 2,966,904 | $ 3 | $ 156,390 | $ (124,303) | $ 32,090 |
| Issuance common stock for cash, net of issuance costs of $695 | 1,639,825 | 2 | 5,847 | | 5,849 |
| Stock-based compensation(C) | 181,936 | — | 2,393 | | 2,393 |
| Issuance of common stock in connection with the contingent consideration of the Celleration, Inc. acquisition(D) | 101,243 | — | 675 | | 675 |
| Issuance of common stock in connection with the contingent consideration of the Choice Therapeutics acquisition(E) | 131,579 | — | 500 | | 500 |
| Net settlement on vesting of restricted stock awards | (35,453) | — | (133) | | (133) |
| Net loss | | | | (25,707) | (25,707) |
| Balance, December 31, 2017 | 4,986,034 | $ 5 | $ 165,672 | $ (150,010) | $ 15,667 |

(A)
Includes $474,000 that was part of accrued expenses as of December 31, 2015, which was credited to equity upon the issuance of 32,456 restricted common shares during the year ended December 31, 2016.

(B)
Includes $2.6 million that was part of contingent consideration as of December 31, 2015, which was credited to equity upon the issuance of 98,594 common shares during the year ended December 31, 2016.

(C)
Includes $374,000 that was part of accrued expenses as of December 31, 2016, which was credited to equity upon the issuance of 60,000 restricted common shares during the year ended December 31, 2017.

(D)

Includes $675,000 that was part of contingent consideration as of December 31, 2016, which was credited to equity upon the issuance of 101,243 common shares during the year ended December 31, 2017.

(E)
Includes $500,000 that was part of contingent consideration as of December 31, 2016, which was credited to equity upon the issuance of 131,579 common shares during the year ended December 31, 2017.

The accompanying notes are an integral part of these consolidated financial statements.
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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

| | Year Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Operating Activities | | |
| Net loss | $ (25,707) | $ (28,243) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | |
| Depreciation and amortization | 5,415 | 4,162 |
| Amortization of deferred lease incentive | (45) | (42) |
| Lease incentive | — | 267 |
| Impairment charges | 10,300 | 10,895 |
| Deferred income tax expense | (743) | (715) |
| Provision for doubtful accounts | 122 | 38 |
| Reserve for note receivable | (650) | 1,020 |
| Provision for excess and slow moving inventory | 68 | (58) |
| Stock-based compensation expense | 2,020 | 4,863 |
| Deferred rent | 2 | 84 |
| Accrued interest receivable | — | (19) |
| Amortization of debt issuance and discount costs | 824 | 841 |
| Loss on early extinguishment of debt | 182 | 321 |
| Warrant modification expense | 803 | — |
| Change in fair value of warrant liability | (692) | (841) |
| Fair value adjustment of contingent consideration liability | 35 | (10,065) |
| Gain on sale of assets | (1,696) | (3,311) |
| Changes in operating assets and liabilities: | | |
| Accounts receivable | (621) | (281) |
| Inventory | 792 | (112) |
| Prepaid expenses and other assets | 550 | 207 |
| Accounts payable | (1,004) | (26) |
| Accrued expenses and other current liabilities | (627) | 2,680 |
| Net Cash Used in Operating Activities | (10,672) | (18,335) |
| Investing Activities | | |
| Proceeds from sale of assets | 3,411 | 4,103 |
| Purchase of improvements and equipment | (179) | (893) |
| Issuance of bridge loan | (350) | (1,000) |
| Proceeds from bridge loan | 1,000 | — |
| Net Cash Provided by Investing Activities | 3,882 | 2,210 |
| Financing Activities | | |
| Contingent purchase price payments | (675) | (2,573) |
| Repayment of long-term debt | (1,618) | (1,748) |

| | | |
|---|---|---|
| Loss on early extinguishment of debt | (32) | (52) |
| Net proceeds from issuance of common stock | 5,849 | — |
| Payment of withholding taxes related to stock-based employee compensation | (133) | (2) |
| Net Cash Provided by (Used in) Financing Activities | 3,391 | (4,375) |

The accompanying notes are an integral part of these consolidated financial statements.
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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS – (continued)
(in thousands)

| | Year Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Net Decrease in Cash and Cash Equivalents | (3,399) | (20,500) |
| Cash and Cash Equivalents – Beginning of year | 5,580 | 26,080 |
| Cash and Cash Equivalents – End of year | $ 2,181 | $ 5,580 |
| Supplemental Disclosure of Cash Flows Information | | |
| Cash paid during the period for: | | |
| Interest | $ 1,008 | $ 1,599 |
| Non-cash investing and financing activities: | | |
| 2016 Accrued bonus awarded in equity | $ 374 | $ — |
| 2015 Accrued bonus awarded in equity | — | 474 |
| Common stock issued for contingent purchase price payments | 1,175 | 2,573 |

The accompanying notes are an integral part of these consolidated financial statements.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Description of Business and Basis of Presentation

Alliqua BioMedical, Inc. (the "Company") is a regenerative technologies company that commercializes differentiated regenerative medical products which assist the body in the repair of human tissue.

On January 5, 2018, the Company entered into an Asset Purchase Agreement (the "Asset Purchase Agreement") with Celularity, Inc. ("Celularity") pursuant to which the Company agreed to sell substantially all of its assets to Celularity (the "Asset Sale Transaction"), including certain assets comprising its MIST, Biovance and Interfyl Product lines (the "Purchased Assets"). As consideration for the Purchased Assets, Celularity has agreed to pay the Company $29 million in cash. No debt or significant liabilities will be assumed by Celularity in the Asset Sale.

Under the terms of the Asset Purchase Agreement, the Company will retain certain specified assets, including, among other things, cash, accounts receivable, and its hydrogel contract manufacturing business, including its SilverSeal and Hydress product lines.

The transactions contemplated by the Asset Purchase Agreement must be approved by the affirmative vote of a majority of the voting power of issued and outstanding shares of the Company's common stock. In addition, to the receipt of the approval of the Company's stockholders, each party's obligation to consummate the Asset Sale Transaction is conditioned upon certain other customary closing conditions.

The Company's operations intended to be sold under the Asset Purchase Agreement have not been reclassified to discontinued operations since they are classified as Held for Use. These operations will be presented in continuing operations until the Asset Purchase Agreement is approved by the Company's stockholders. Upon stockholder approval of the Asset Purchase Agreement, these operations will be reclassified to discontinued operations.

Principles of Consolidation

The accompanying consolidated financial statements include the financial statements of the Company and its wholly-owned subsidiary, AquaMed Technologies, Inc. All significant inter-company transactions and accounts have been eliminated in consolidation.

Reclassifications

Certain amounts in prior periods have been reclassified to conform to the current year presentation. Such reclassifications did not have a material effect on the Company's financial condition or results of operations as previously reported.

Reverse Stock Split

The Company effected a 1-for-10 reverse stock split of its outstanding common stock on October 5, 2017. The accompanying consolidated financial statements and accompanying notes to the consolidated financial statements give retroactive effect to the reverse stock split for all periods presented. The shares of common stock retained a par value of $0.001 per share. Accordingly, stockholders' equity reflects the reverse stock split by reclassifying from common stock to additional paid-in capital an amount equal to the par value of the decreased shares resulting from the reverse stock split.

2. Summary of Significant Accounting Policies

Use of Estimates in the Financial Statements

The preparation of the consolidated financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. These estimates and

assumptions include valuing equity securities and derivative financial instruments issued in financing transactions, allowance for doubtful accounts, inventory reserves, deferred taxes and related valuation allowances, and the fair values of long lived assets, intangibles, goodwill and contingent consideration. Actual results could differ from the estimates.

Cash and Cash Equivalents

The Company considers all highly liquid investments with maturities of three months or less when purchased to be cash equivalents. The Company's balance of cash and cash equivalents at December 31, 2017 and 2016 consisted principally of bank deposits. From time to time, the Company's cash account balances may be uninsured or in deposit accounts that exceed Federal Deposit Insurance Corporation guarantee limit. The Company reduces its exposure to credit risk by maintaining its cash deposits with major financial institutions and monitoring their credit ratings.

Trade Accounts Receivable

Trade accounts receivable are stated at the amount the Company expects to collect and do not bear interest. The Company evaluates the collectability of accounts receivable based on a combination of factors. In circumstances where a specific customer is unable to meet its financial obligations to the Company, a provision to the allowances for doubtful accounts is recorded against amounts due to reduce the net recognized receivable to the amount that is reasonably expected to be collected. For all other customers, a provision to the allowances for doubtful accounts is recorded based on factors including the length of time the receivables are past due, the current business environment and the Company's historical experience. Provisions to the allowances for doubtful accounts are recorded to selling, general and administrative expenses. Account balances are charged off against the allowance when it is probable that the receivable will not be recovered. The allowance for doubtful accounts was approximately $307,000 and $213,000 as of December 31, 2017 and 2016, respectively.

Inventory

Inventory is stated at the lower of cost, the value determined by the first-in, first-out method, or net realizable value. At each balance sheet date, the Company evaluates inventories for excess quantities, obsolescence or shelf life expiration. This evaluation includes analysis of historical sales levels by product, projections of future demand, the risk of technological or competitive obsolescence for products, general market conditions, and a review of the shelf life expiration dates for products. To the extent that management determines there are excess or obsolete inventory or quantities with a shelf life that is too near its expiration for the Company to reasonably expect that it can sell those products prior to their expiration, the Company adjusts the carrying value to estimated net realizable value.

Improvements and Equipment

Improvements and equipment are recorded at cost. Depreciation of equipment is computed utilizing the straight-line method over the estimated useful lives of the assets. Amortization of leasehold improvements is computed utilizing the straight-line method over the lesser of the lease term or the estimated useful life. Repairs and maintenance costs are expensed as incurred. The cost of major additions and improvements is capitalized, while maintenance and repair costs that do not improve or extend the lives of the respective assets are charged to operations as incurred.

Goodwill and Other Indefinite-Lived Intangible Assets

The Company records goodwill and other indefinite-lived assets in connection with business combinations. Goodwill, which represents the excess of acquisition cost over the fair value of the net tangible and intangible assets of acquired companies, is not amortized. Indefinite-lived assets are stated at fair value as of the date acquired in a business combination.

The Company assesses the recoverability of goodwill and certain indefinite-lived intangible assets annually in the fourth quarter and between annual tests if an event occurs or circumstances change that would indicate the carrying amount may be impaired. Impairment testing for goodwill is done at a reporting unit level. Under Financial Accounting Standards Board ("FASB") guidance for goodwill and intangible assets, a reporting unit is defined as an operating segment or one level below the operating segment, called a component. However, two or more components of an operating segment will be aggregated and deemed a single reporting unit if the components have similar economic characteristics. The Company operates as one reporting unit.

Authoritative accounting guidance allows the Company to first assess qualitative factors to determine whether it is necessary to perform the more detailed two-step quantitative goodwill impairment test. The Company performs the quantitative test if its qualitative assessment determined it is more likely than not that a reporting unit's fair value is less than its carrying amount. The Company may elect to bypass the qualitative assessment and proceed directly to the quantitative test for any reporting unit or asset. The quantitative goodwill impairment test, if necessary, is a two-step process. The first step is to identify the existence of a potential impairment by comparing the fair value of a reporting unit (the estimated fair value of a reporting unit is usually calculated using a discounted cash flow model) with its carrying amount, including goodwill. If the fair value of a reporting unit exceeds its carrying amount, the reporting unit's goodwill is considered not to be impaired and performance of the second step of the quantitative goodwill impairment test is unnecessary. However, if the carrying amount of a reporting unit exceeds its fair value, the second step of the quantitative goodwill impairment test is performed to measure the amount of impairment loss to be recorded, if any. The second step of the quantitative goodwill impairment test compares the implied fair value of the reporting unit's goodwill with the carrying amount of that goodwill. If the carrying amount of the reporting unit's goodwill exceeds its implied fair value, an impairment loss is recognized in an amount equal to that excess. The implied fair value of goodwill is determined using the same approach as employed when determining the amount of goodwill that would be recognized in a business combination. That is, the fair value of the reporting unit is allocated to all of its assets and liabilities as if the reporting unit had been acquired in a business combination and the fair value was the purchase price paid to acquire the reporting unit.

The Company proceeded directly to the quantitative analysis considering the consideration to be received and the assets to be sold under the Asset Purchase Agreement. As a result of this test, the Company's goodwill was determined to be impaired and an impairment charge of $10.3 million was recorded for the year ended December 31, 2017.

The Company's indefinite lived intangible asset related to the MIST Therapy tradename was impaired and an impairment charge of $1.7 million was recorded for the year ended December 31, 2016. The impairment charge related to the tradename was calculated based on the fair value of the MIST Therapy tradename as compared to the carrying value of the MIST Therapy tradename as of December 31, 2016. There were no long-lived asset impairment charges recorded during the year ended December 31, 2017. At December 31, 2017 the remaining recorded goodwill was $1,659,000 compared to $12.0 million at December 31, 2016. The changes in the carrying amount of goodwill for the years ended December 31, 2017 and 2016, are as follows (in thousands):

| | Goodwill |
|---|---|
| Balance as of December 31, 2015 | $ 21,166 |
| Impairment loss | (9,207) |
| Balance as of December 31, 2016 | $ 11,959 |
| Impairment loss | (10,300) |
| Balance as of December 31, 2017 | $ 1,659 |

Long-Lived Assets

Long-lived assets, such as property and equipment, and intangibles subject to amortization, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The Company's long-lived intangible assets primarily consist of developed technology, customer lists/relationships, non-compete agreements, trade names and trademarks and are amortized ratably over a range of one to ten years which approximates customer attrition rate and technology obsolescence. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, an impairment charge is recognized of the amount by which the carrying amount of the asset exceeds the fair value of the asset.

The Company continually evaluates whether events or changes in circumstances might indicate that the remaining estimated useful life of long-lived assets may warrant revision, or that the remaining balance may not be recoverable. When factors indicate that long-lived assets should be evaluated for possible impairment, the Company uses an estimate of the related undiscounted cash flows in measuring whether the long-lived asset should be written down to fair value. Measurement of the amount of impairment is based on generally accepted valuation methodologies, as deemed appropriate. The factors used to determine fair value are subject to management's judgement and expertise and include, but are not limited to, the present value of future cash flows, net of estimated operating costs, anticipated capital expenditures and various discount rates commensurate with the risk and current market conditions associated with realizing the expected cash flows projected.

Due to the Asset Purchase Agreement, the Company expects that it is more likely than not that its long-lived asset group related to the Purchased Assets will be sold or otherwise disposed of significantly before the end of its previously estimated useful life. The Company, therefore, tested its long-lived assets for recoverability as of December 31, 2017. These long-lived assets consist of property, plant and equipment and intangible assets subject to amortization.

The expected consideration under the Asset Purchase Agreement for the sale of the long-lived assets approximate the net book value of these assets at December 31, 2017, therefore, no impairment charge was recorded for long-lived assets during the year ended December 31, 2017.

There were no long-lived asset impairment charges recorded during the year ended December 31, 2016, other than the impairment of the MIST Therapy tradename, described above and in Note 9 — Intangible Assets.

Fair Value of Financial Instruments

The carrying amounts reported in the consolidated balance sheets for cash and cash equivalents, accounts receivable and accounts payable and accrued expenses approximate fair value based on the short-term maturity of these instruments.

Fair value is defined as the price that would be received upon selling an asset or the price paid to transfer a liability on the measurement date. It focuses on the exit price in the principal or most advantageous market for the asset or liability in an orderly transaction between willing market participants. A three-tier fair value hierarchy is established as a basis for considering such assumptions and for inputs used in the valuation methodologies in measuring fair value. This hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. The three levels of inputs used to measure fair values are as follows:

Level 1:

Observable prices in active markets for identical assets and liabilities.

Level 2:
Observable inputs other than quoted prices in active markets for identical assets and liabilities.

Level 3:
Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets and liabilities.

Revenue Recognition
Revenue is recognized when persuasive evidence of an arrangement exists, delivery has occurred, title and risk of loss have passed to the customer, there is a fixed or determinable sales price, and collectability of that sales price is reasonably assured. The Company also recognizes revenue under a variety of rental programs of the MIST Therapy system, which is recognized over the term of the rental agreement.
Cost of Goods Sold and Selling, General and Administrative Expenses
Costs associated with the production and procurement of product are included in cost of goods sold, including shipping and handling costs such as inbound freight costs, purchasing and receiving costs, inspection costs and other product procurement related charges. All other expenses are included in selling, general and administrative expenses, as the predominant expenses associated therewith are general and administrative in nature.
Advertising
Advertising costs are expensed as incurred and are included in selling, general and administrative expenses. Advertising expenses for the years ended December 31, 2017 and 2016 were approximately $1.4 million and $2.4 million, respectively.
Shipping and Handling
Amounts billed to customers for shipping and handling are included in revenues. The related shipping and freight charges incurred by the Company are included in cost of goods sold and were not material for either the years ended December 31, 2017 or 2016.
Research and Development
All research and product development costs are expensed as incurred. For the years ended December 31, 2017 and 2016, the Company incurred research and development costs of approximately $121,000 and $859,000, respectively, related to a randomized controlled trial for its Biovance product in chronic diabetic foot wounds.
Income Taxes
The Company accounts for income taxes pursuant to the asset and liability method which requires us to recognize current tax liabilities or receivables for the amount of taxes we estimate are payable or refundable for the current year and deferred tax assets and liabilities for the expected future tax consequences attributable to temporary differences between the financial statement carrying amounts and their respective tax bases of assets and liabilities and the expected benefits of net operating loss and credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in operations in the period enacted. A valuation allowance is provided when it is more likely than not that a portion or all of a deferred tax asset will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income and the reversal of deferred tax liabilities during the period in which related temporary differences become deductible.

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The Company adopted the provisions of Accounting Standards Codification Topic 740 ("ASC 740") related to the accounting for uncertainty in income taxes recognized in an enterprise's consolidated financial statements. ASC 740 prescribes a comprehensive model for the financial statement recognition, measurement, presentation and disclosure of uncertain tax positions taken or expected to be taken in income tax returns.

The tax benefit positions taken or expected to be taken in the Company's income tax returns are recognized in the financial statements if such positions are more likely than not of being sustained upon examination by taxing authorities. Differences between tax positions taken or expected to be taken in a tax return and the benefit recognized and measured pursuant to the interpretation are referred to as "unrecognized benefits". A liability is recognized (or amount of net operating loss carryover or amount of tax refundable is reduced) for an unrecognized tax benefit because it represents an enterprise's potential future obligation to the taxing authority for a tax position that was not recognized as a result of applying the provisions of ASC 740. Interest costs and related penalties related to unrecognized tax benefits are required to be calculated, if applicable. The Company's policy is to classify assessments, if any, for tax related interest as interest expense and penalties as selling, general and administrative expenses. No interest or penalties were recorded during the years ended December 31, 2017 and 2016. As of December 31, 2017 and 2016, no liability for unrecognized tax benefits was required to be reported. The Company does not expect any significant changes in its unrecognized tax benefits in the next year.

Common Stock Purchase Warrants

The Company assesses classification of common stock purchase warrants at each reporting date to determine whether a change in classification between assets and liabilities or equity is required. The Company's free-standing derivatives consist of warrants to purchase common stock that were issued pursuant to a Securities Purchase Agreement on November 8, 2012 and pursuant to a Credit Agreement on May 29, 2015. The November 8, 2012 warrants expired in November 2017. The Company evaluated the common stock purchase warrants to assess their proper classification in the consolidated balance sheet and determined that the common stock purchase warrants contain exercise reset provisions. Accordingly, the outstanding portion of these instruments have been classified as warrant liabilities in the accompanying consolidated balance sheets as of December 31, 2017 and 2016. The Company re-measures warrant liabilities at each reporting and exercise date, with changes in fair value recognized in earnings for each reporting period.

Stock-Based Compensation

The Company measures the cost of services received in exchange for an award of equity instruments based on the fair value of the award. For employees and directors, the fair value of the award is measured on the grant date and for non-employees, the fair value of the award is generally re-measured on interim financial reporting dates and vesting dates until the service period is complete. The fair value amount is then recognized over the period services are required to be provided in exchange for the award, usually the vesting period. The Company recognizes stock-based compensation expense on a graded-vesting basis over the requisite service period for each separately vesting tranche of each award. Stock-based compensation expense is reflected within cost of revenues and operating expenses in the consolidated statements of operations. The Company recognizes stock-based compensation expense for awards with performance conditions if and when the Company concludes that it is probable that the performance condition will be achieved. The Company reassesses the probability of vesting at each reporting period for awards with performance conditions and adjusts stock-based compensation expense based on its probability assessment.

Recent Accounting Standards

On December 22, 2017 the U.S. government enacted significant changes to federal tax law following the passage of the Tax Cuts and Jobs Act ("the Act"). Following the enactment of the Act, the SEC staff issued Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act

("SAB 118"). The Company follows the guidance in SAB 118, which provides additional clarification regarding the application of US GAAP in situations where the Company does not have the necessary information available, prepared, or analyzed in reasonable detail to complete the accounting for certain income tax effects of the Act for the reporting period in which the Act was enacted. SAB 118 provides for a measurement period beginning in the reporting period that includes the Act's enactment date and ending when the Company has obtained, prepared, and analyzed the information needed in order to complete the accounting requirements but in no circumstances, should the measurement period extend beyond one year from the enactment date. The Company has evaluated the Act and, based on the information available, recorded provisional amounts as the impacts can be reasonably estimated. These impacts are disclosed in "Note 15 — Income Taxes" in the Notes accompanying the audited Consolidated Financial Statements.

In May 2017, the FASB issued ASU 2017-09, Compensation-Stock Compensation (Topic 718) Scope of Modification Accounting ("ASU 2017-09"). This ASU clarifies which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. The standard is effective for the Company on January 1, 2018, with early adoption permitted. The impact of this new standard will depend on the extent and nature of future changes to the terms of Company's share-based payment awards.

In January 2017, the FASB issued Accounting Standards Update (ASU) 2017-04: "Intangibles — Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment" ("ASU 2017-04"), which removes Step 2 from the goodwill impairment test. It is effective for annual and interim periods beginning after December 15, 2019. Early adoption is permitted for interim or annual goodwill impairment test performed with a measurement date after January 1, 2017. The Company adopted ASU 2017-04 during the year ended December 31, 2017.

In January 2017, the FASB issued ASU 2017-01 "Business Combinations (Topic 805): Clarifying the Definition of a Business", which clarifies the definition of a business to assist entities with evaluating whether transactions should be accounted for as acquisitions or disposals of assets or businesses. The standard introduces a screen for determining when assets acquired are not a business and clarifies that a business must include, at a minimum, an input and a substantive process that contribute to an output to be considered a business. This standard is effective for fiscal years beginning after December 15, 2017, including interim periods within that reporting period. The Company does not expect this new guidance to have a material impact on its financial position, results of operations or financial statement disclosures.

In December 2016, the FASB issued ASU 2016-18 "Statement of Cash Flows (Topic 230): Restricted Cash (a consensus of the FASB Emerging Issues Task Force," which clarifies the presentation requirements of restricted cash within the statement of cash flows. The changes in restricted cash and restricted cash equivalents during the period should be included in the beginning and ending cash and cash equivalents balance reconciliation on the statement of cash flows. When cash, cash equivalents, restricted cash or restricted cash equivalents are presented in more than one line item within the statement of financial position, an entity shall calculate a total cash amount in a narrative or tabular format that agrees to the amount shown on the statement of cash flows. Details on the nature and amounts of restricted cash should also be disclosed. This standard is effective for fiscal years beginning after December 15, 2017, including interim periods within that reporting period. The Company does not expect this new guidance to have a material impact on its financial position or results of operations.

In August 2016, the FASB issued ASU No. 2016-15, "Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments." ASU No. 2016-15 clarifies and provides specific guidance on eight cash flow classification issues that are not currently addressed by current GAAP and thereby reduce the current diversity in practice. ASU No. 2016-15 is effective for public business entities for annual periods, including interim periods within those annual periods, beginning after December 15, 2017, with early application permitted. This guidance is applicable to the Company's fiscal year beginning January 1, 2018. The Company does not anticipate that this guidance will have a material impact on its consolidated financial statements.

In March 2016, the FASB issued ASU No. 2016-09, "Compensation — Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting" ("ASU 2016-09"). The standard is intended to simplify several areas of accounting for share-based compensation arrangements, including the income tax impact, classification on the statement of cash flows and forfeitures. ASU 2016-09 is effective for fiscal years, and interim periods within those years, beginning after December 15, 2016, which for the Company will commence with the year beginning January 1, 2018, with early adoption permitted commencing January 1, 2017. The Company does not expect that this guidance will have a material impact on its consolidated financials.

In February 2016, the FASB issued Accounting Standards Update 2016-02, "Leases (Topic 842)" ("ASU 2016-02"). The standard requires a lessee to recognize assets and liabilities on the balance sheet for leases with lease terms greater than 12 months. The standard is effective for annual reporting periods beginning after December 15, 2018, which for the Company will commence with the year beginning January 1, 2019, with early application permitted. The adoption will require a modified retrospective approach for leases that exist or are entered into after the beginning of the earliest period presented. The Company is currently evaluating the standard to determine the impact of the adoption on the consolidated financial statements.

In November 2015, the FASB issued Accounting Standards Update 2015-17, "Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes" ("ASU 2015-07"), an update to accounting guidance to simplify the presentation of deferred income taxes. The guidance requires an entity to classify all deferred tax liabilities and assets, along with any valuation allowance, as noncurrent in the balance sheet. The guidance is effective for public companies with annual reporting periods beginning after December 15, 2016, including interim periods within that reporting period. Early application is permitted. The Company has elected to early adopt ASU 2015-17 during the year ended December 31, 2015 with retrospective application. The adoption of ASU 2015-17 did not have a material impact on the Company's consolidated financial statements.

In May 2014 the FASB issued Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers (Topic 606), which supersedes all existing revenue recognition requirements, including most industry-specific guidance. This new standard requires a company to recognize revenue when it transfers goods or services to customers in an amount that reflects the consideration that the company expects to receive for those goods or services. The FASB subsequently issued amendments to ASU No. 2014-09 that have the same effective date and transition date. These new standards became effective for us on January 1, 2018, and will be adopted using the modified retrospective method through a cumulative-effect adjustment, if any, directly to retained earnings as of that date. The Company has performed a review of these new standards as compared to our current accounting policies for its product and contract manufacturing revenues. As of December 31, 2017, the Company has not identified any accounting changes that would materially impact the amount of reported revenues with respect to our product and contract manufacturing revenues.

3. Going Concern

The Company's financial statements are prepared using accounting principles generally accepted in the United States of America applicable to a going concern that contemplates the realization of assets and liquidation of liabilities in the normal course of business.

As of December 31, 2017, the Company had a cash balance of $2.2 million. The Company has experienced recurring losses since its inception. The Company incurred a net loss of $25.7 million and used $10.7 million in cash from operations for the year ended December 31, 2017, and had an accumulated deficit of $150.0 million as of December 31, 2017.

The Company is currently in default of a covenant pertaining to trailing twelve-month revenue under its Credit Agreement and Guaranty (the "Credit Agreement") with Perceptive Credit Opportunities Fund, L.P. as a result of its failure to achieve $24,600,000, $27,200,000, $30,300,000, $33,800,000 and $37,800,000

of gross revenue for the twelve-month periods ended December 31, 2016, March 31, 2017, June 30, 2017, September 30, 2017 and December 31, 2017, respectively. The Company is also currently in default of a minimum cash balance requirement under the Credit Agreement due to the Company having a cash balance of less than $2,000,000. As of the date hereof, the lender has agreed to forbear from exercising any rights and remedies related to each such event of default until the earlier of April 30, 2018 or the termination of the Asset Purchase Agreement with Celularity. In addition, on December 1, 2017, the Company received notice from Celularity that it is in material breach of its License, Marketing and Development Agreement with Celularity (or its affiliates) dated as of November 14, 2013, as amended from time to time (the "License Agreement") and its Supply Agreements with Celularity (or its affiliates), dated as of April 15, 2016 and November 14, 2013, respectively, as amended from time to time (the "Supply Agreements") for failure to purchase the required amounts of materials under the Supply Agreements and failure to use commercially reasonable best efforts to undertake development activities for the licensed products under the License Agreement.

Without receipt of the cash consideration from Celularity, the Company will not be able to repay its indebtedness under the Credit Agreement and will be unable to purchase materials under the Supply Agreements. The lender under the Credit Agreement may pursue the rights and remedies available to it under the Credit Agreement including, but not limited to, declaring all or any portion of the outstanding principal amount to be immediately due and payable, imposing a default rate of interest as specified in the Credit Agreement, or pursing the lender's rights and remedies as a secured party under the Uniform Commercial Code as a secured lender. In addition, the lender has a lien on substantially all of the Company's assets and, as a result of the default, may seek to foreclose on some or substantially all of its assets. If the Company does not consummate the Asset Sale Transaction with Celularity and transfer the License Agreement and Supply Agreements to Celularity as part of the Purchased Assets, the Company may face termination or litigation with respect to the Supply Agreements and the License Agreement. If the Company was to lose its rights to license Biovance, Interfyl or other products from Celularity under the License Agreement, it will have a material adverse effect on its business, financial condition and results of operations which could force the Company to file for bankruptcy, if it is not successful in obtaining the level of financing needed for its operations.

Such action could hinder the Company's ability to recover the remaining carrying value of some or all of its intangible assets including goodwill that aggregated approximately $23.7 million at December 31, 2017.

These factors raise substantial doubt as to the Company's ability to continue as a going concern within one year from the date of this filing. The ability of the Company to continue as a going concern is dependent upon the Company's successful efforts to consummate the Asset Sale Transaction or raise additional capital.

The consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded assets and liabilities that might be necessary should the Company be unable to continue as a going concern.

4. Net Loss Per Common Share

Basic loss per share data for each period presented is computed using the weighted-average number of shares of common stock outstanding during each such period. Diluted loss per share data is computed using the weighted-average number of common and dilutive common-equivalent shares outstanding during each period. Dilutive common-equivalent shares consist of: (a) shares that would be issued upon the exercise of stock options and warrants, computed using the treasury stock method; and (b) shares of non-vested restricted stock.

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The following securities are excluded from the calculation of weighted average dilutive common shares because their inclusion would have been anti-dilutive:

| | As of December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Stock options | 809,586 | 719,929 |
| Warrants | 478,330 | 336,541 |
| Non-vested restricted stock | 189,674 | 147,023 |
| Total | 1,477,590 | 1,203,493 |

5. Discontinued Operations

Asset Sales

In order to add capital and to focus on future investments on commercializing its own regenerative technologies on August 31, 2017, the Company entered into an Asset Purchase Agreement ("the Argentum Purchase Agreement") with Argentum Medical, LLC. ("Argentum") whereby the Company agreed to sell to Argentum all of the Company's rights, including (i) all distribution rights, exclusivity rights, intellectual property rights and marketing rights to the TheraBond product line and (ii) the unsold inventory of TheraBond products and work in process previously purchased by the Company in existence as of the closing, which occurred upon execution and delivery of the Argentum Purchase Agreement. In consideration for the sale of the TheraBond product line and the unsold TheraBond inventory to Argentum by the Company, Argentum agreed to pay (i) $3.6 million for the TheraBond product line and certain other agreements between the parties and (ii) up to $112,000 for the unsold TheraBond inventory upon the Company's completion of its obligations to deliver all remaining and qualifying unsold TheraBond inventory, as specified in the Argentum Purchase Agreement. Of the $3.6 million of consideration, $300,000 is deposited in an indemnity escrow account under standard terms and conditions. This amount is classified under current assets of discontinued operations on the Company's balance sheet as of December 31, 2017.

Additionally, effective June 30, 2016, the Company entered into a purchase agreement with BSN medical, Inc. ("BSN") whereby the Company agreed to sell to BSN all of the Company's rights, including all distribution rights, exclusivity rights, intellectual property rights and marketing rights to the sorbion product line pursuant to its distribution agreement with Sorbion GmbH & Co KG.

Summarized operating results of discontinued operations for the years ended December 31, 2017 and 2016 are presented in the following table (in thousands):

| | Years Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Revenue, net of returns, allowances and discounts | $ 1,242 | $ 3,655 |
| Cost of revenues | 396 | 1,140 |
| Gross profit | 846 | 2,515 |
| Selling, general and administrative | 392 | 1,030 |
| Income from discontinued operations, net of tax | $ 454 | $ 1,485 |

Non-cash amortization expense of $185,000 and $334,000 is included in selling, general and administrative expense for the years ended December 31, 2017 and 2016, respectively.

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During the year ended December 31, 2017, the Company recorded a gain of approximately $1.7 million (net of tax of $0) on the sale of the assets related to the Argentum Purchase Agreement, pursuant to the following (in thousands):

| | | |
|---|---|---|
| Proceeds from sale | | |
| Consideration for inventory | $ 112 | |
| Consideration for intangible assets | 3,600 | |
| Total Consideration | | 3,712 |
| Less: Net book value of assets sold to Argentum | | |
| Inventory, net | (307) | |
| Intangibles, net | (1,709) | |
| Total net book value of assets | | (2,016) |
| Gain on sale of assets | | $ 1,696 |

During the year ended December 31, 2016, the Company recorded a gain of approximately $3.3 million (net of tax of $0) on the sale of the assets related to the purchase agreement with BSN, pursuant to the following (in thousands):

| | | |
|---|---|---|
| Proceeds from sale | | |
| Consideration for inventory | $ 603 | |
| Consideration for intangible assets | 3,500 | |
| Total Consideration | | 4,103 |
| Less: Net book value of assets sold BSN | | |
| Inventory, net | (603) | |
| Intangibles, net | (189) | |
| Total net book value of assets | | (792) |
| Gain on sale of assets | | $ 3,311 |

Summarized assets and liabilities of discontinued operations are presented in the following table (in thousands):

| | December 31 2017 | December 31, 2016 |
|---|---|---|
| Accounts receivable, net | $ 17 | $ 307 |
| Escrow | 300 | — |
| Inventory, net | — | 550 |
| Total current assets | 317 | 857 |
| Intangible assets, net | — | 1,893 |
| Total assets | 317 | 2,750 |
| Accounts payable | — | 19 |
| Accrued expenses and other current liabilities | — | 41 |
| Total current liabilities | $ — | $ 60 |

On June 30, 2016, the Company entered into a ninety-day transition services agreement with BSN ("Transition Agreement"). Under the Transition Agreement, the Company was required to perform certain services related to the communication with distributors, wholesalers and customers in respect of transition of the business to BSN, as specified in the Transition Agreement. As compensation, BSN paid the Company $100,000 for the services completed during the year ended December 31, 2016. This compensation was recognized over the service period and is included in other income for the year ended December 31, 2016.

On August 31, 2017, the Company entered into a ninety-day transition services agreement with Argentum ("Transition Agreement"). Under the Transition Agreement, the Company is required to perform certain services related to the communication with distributors, wholesalers and customers in respect of transition of the TheraBond product line to Argentum, as specified in the Transition Agreement. As compensation, Argentum paid the Company $200,000 for the services completed during the period from the closing of the purchase for three months ended November 30, 2017. This compensation was recognized over the service period and is included in other income for the year ended December 31, 2017.

6. Termination of Merger Agreement

On October 5, 2016, the Company entered into a merger agreement to acquire the business of Soluble Systems, LLC ("Soluble") through a series of transactions. On February 27, 2017, the Company terminated this agreement.

In connection with the merger agreement to acquire the business of Soluble, the Company provided Soluble with bridge loans in the form of subordinated promissory notes totaling approximately $1.4 million. The Company advanced Soluble $1.0 million during the year ended December 31, 2016 and $0.4 million on January 30, 2017. Pursuant to the terms of the merger agreement, the amount was to be repaid in full upon termination of the agreement. As of December 31, 2016, the Company had provided for a full reserve for the amount that had been advanced to Soluble as of that date.

On October 27, 2017, the Company received $1 million under an agreement with Soluble in connection with amounts advanced to Soluble by the Company. With the receipt of this $1 million, the Company acknowledged that all amounts due to the Company from Soluble are paid in full. During the year ended December 31, 2017, the Company recorded a reduction in acquisition-related expenses of $365,000 which consisted of the recovery of bad debt expense of $650,000, offset by approximately $285,000 of other acquisition-related expenses.

7. Inventory

Inventory consists of the following (dollars in thousands):

| | December 31, 2017 | December 31, 2016 |
|---|---|---|
| Raw materials | $ 98 | $ 134 |
| Work in process | — | 20 |
| Finished goods | 1,521 | 1,998 |
| Less: Inventory reserve for excess and slow moving inventory | (68) | — |
| Total | $ 1,551 | $ 2,152 |

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8. Improvements and Equipment, net
Improvements and equipment consist of the following (in thousands):

| | Useful Life (Years) | December 31, 2017 | 2016 |
|---|---|---|---|
| Machinery and equipment | 3 – 10 | $ 4,911 | $ 5,041 |
| Office furniture and equipment | 3 – 10 | 344 | 337 |
| Leasehold improvements | (A) | 594 | 595 |
| | | 5,849 | 5,973 |
| Less: Accumulated depreciation and amortization | | (4,286) | (3,881) |
| Improvements and equipment, net | | $ 1,563 | $ 2,092 |

(A)
Leasehold improvements are amortized over the shorter of the remaining lease term or estimated useful life.

Depreciation and amortization expense was $706,000 and $1.8 million for the years ended December 31, 2017 and 2016, respectively.
9. Intangible Assets
The gross carrying amount and accumulated amortization of intangible assets are as follows (in thousands):

| | December 31, 2017 | | | | |
|---|---|---|---|---|---|
| | Useful Life (Years) | Gross Amount | Accumulated Amortization | Impairment | Net Carrying Amount |
| Technology | 10 | $ 32,539 | $ (12,083) | | $ 20,456 |
| Customer relationships | 9 – 12 | 1,984 | (934) | | 1,050 |
| Tradename | 3 | 111 | (111) | | — |
| Tradename related to MIST Therapy(1) | 3 | 1,913 | (1,350) | | 563 |
| Non-compete | 1 | 208 | (208) | — | — |
| Total intangible assets | | 36,755 | (14,686) | — | 22,069 |

| | December 31, 2016 | | | | |
|---|---|---|---|---|---|
| | Useful Life (Years) | Gross Amount | Accumulated Amortization | Impairment | Net Carrying Amount |
| Technology | 10 | $ 32,539 | $ (9,069) | $ — | $ 23,470 |
| Customer relationships | 9 – 12 | 1,984 | (762) | — | 1,222 |
| Tradename | 3 | 111 | (111) | — | — |
| Tradename related to MIST Therapy(1) | 3 | 3,601 | — | (1,688) | 1,913 |
| Non-compete | 1 | 208 | (208) | — | — |
| Total intangible assets | | 38,443 | (10,150) | (1,688) | 26,605 |

(1)
In December 2016, the Company determined the tradename related to MIST Therapy was no longer an indefinite-lived intangible asset. The Company assigned a remaining useful of approximately 1.5 years, consistent with the Company's other trademarks.

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The Company performs its assessment of the recoverability of indefinite-lived intangible assets annually during the fourth quarter, or more frequently as impairment indicators arise, and it is based upon a comparison of the carrying value of such assets to their estimated fair values. The Company performed its most recent annual assessment during the four quarter of 2017, which resulted in no impairment charge. During the year ended December 31, 2016 the Company recorded an impairment charge of approximately $1.7 million to the MIST Therapy tradename and is included in impairment charges in the consolidated statement of operations.

Amortization expense attributable to intangible assets for the years ended December 31, 2017 and 2016 was approximately $4.7 million and $3.5 million, respectively.

Amortization expense in each of the five years and thereafter subsequent to December 31, 2017 related to the Company's intangible assets is expected to be as follows (in thousands):

| | Expected Amortization Expense |
|---|---|
| 2018 | $ 3,748 |
| 2019 | 2,910 |
| 2020 | 2,885 |
| 2021 | 2,839 |
| 2022 | 2,835 |
| Thereafter | 6,852 |
| Total | $ 22,069 |

10. Accrued Expenses

Accrued expenses and other current liabilities consist of the following (in thousands):

| | December 31, 2017 | December 31, 2016 |
|---|---|---|
| Salaries, benefits and incentive compensation | $ 1,981 | $ 3,007 |
| Milestone payment to licensor | 1,000 | 1,000 |
| Professional fees | 538 | 692 |
| Royalty fees | 227 | 197 |
| Deferred revenue | 365 | 181 |
| Other | 159 | 147 |
| Total accrued expenses and other current liabilities | $ 4,270 | $ 5,224 |

11. Operating Leases

The Company leases two corporate offices and one commercial manufacturing facility through operating lease agreements. The Company has obligations through 2023 for both corporate offices, one located in Eden Prairie, Minnesota, and one located in Yardley, Pennsylvania. The Company also has an obligation for its commercial manufacturing facility located in Langhorne, Pennsylvania, through 2026. During the year ended December 31, 2016, the landlord of the office in Yardley, Pennsylvania, made certain improvements to the facility. The Company recorded a deferred lease incentive liability of $267,000 for the improvements funded by the landlord in accrued and other long-term liabilities on the consolidated balance sheet and amortizes the deferred liability as a reduction to rent expense on the consolidated statement of operations over the term of the lease. Tenant improvements are also included in leasehold improvements on the balance sheet.

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Future minimum lease payments, excluding expense reimbursements, under noncancelable operating leases at December 31, 2017 are as follows (in thousands):

| | |
|---|---|
| 2018 | $ 506 |
| 2019 | 512 |
| 2020 | 519 |
| 2021 | 525 |
| 2022 | 530 |
| Thereafter | 780 |
| Total | $ 3,372 |

Total rent expense was $570,000 and $542,000 for the years ended December 31, 2017 and 2016, respectively.

12. Debt

Senior Secured Term Loan Facility

On May 29, 2015, the Company entered into a Credit Agreement and Guaranty (the “Credit Agreement”) with Perceptive Credit Opportunities Fund, L.P. (“Perceptive”). The Credit Agreement provided a senior secured term loan in a single borrowing to the Company in the principal amount of $15.5 million. The Credit Agreement (i) has a four-year term, (ii) accrues interest at an annual rate equal to the greater of (a) one-month LIBOR or 1% plus (b) 9.75%, (iii) is interest only for the first 24 months, followed by monthly amortization payments of $225,000, with the remaining unpaid balance due on the maturity date and (iv) is secured by a first priority lien on substantially all of the Company’s assets. The Company is required to pay an exit fee when the term loan is paid in full equal to the greater of 2% of the outstanding principal balance immediately prior to the final payment or $200,000, which was amended in conjunction with the extinguishment of debt described below from the greater of 1% of the outstanding principal balance immediately prior to the final payment or $100,000. The interest rate at December 31, 2017 was 11.125%.

In connection with the Credit Agreement, the Company incurred approximately $1.3 million of debt issuance costs. The debt issuance costs are being amortized over the term of the loan on a straight-line basis, which approximates the effective interest method. During the years ended December 31, 2017 and 2016, the Company recorded amortization of debt issuance costs of $247,000 and $273,000 respectively, which is included in interest expense for the periods presented.

In connection with the entry into the Credit Agreement, a five-year warrant (the “Warrant”) to purchase 75,000 shares of common stock, par value of $0.001 per share at an exercise price of $55.138 per share (the “Exercise Price”) was issued to Perceptive. The Company granted Perceptive customary demand and piggy-back registration rights with respect to the shares of common stock issuable upon exercise of the Warrant. The warrant contains a weighted average anti-dilution feature whereby the Exercise Price is subject to reduction if the Company issues shares of common stock (or securities convertible into common stock) in the future at a price below the current Exercise Price. As a result, the warrant was determined to be a derivative liability. The warrant had an issuance date fair value of approximately $2.7 million which was recorded as a debt discount. During the years ended December 31, 2017 and 2016, the Company recorded amortization of debt discount of $577,000 and $569,000, respectively, which is included in interest expense for the periods presented. See Note 18 — Fair Value Measurement for additional details.

As of December 31, 2017, the Company was in default of a covenant pertaining to trailing twelve-month revenue under the Credit Agreement as a result of its failure to achieve $24,600,000, $27,200,000, $30,300,000, $33,800,000 and $37,800,000 of gross revenue for the twelve-month periods ended December 31, 2016, March 31, 2017, June 30, 2017, September 30, 2017 and December 31, 2017,

respectively. At times during 2017, the Company was in default of a minimum monthly cash balance requirement under the Credit Agreement of $2,000,000. The Company has classified the entire principal balance as a current liability in its balance sheet as of December 31, 2017 and 2016.

The Company amended and restated the Warrant on each of October 25, 2016, January 26, 2017, March 7, 2017 and April 6, 2017. In addition, on June 1, 2017, the Company further amended the Warrant. The amended and restated Warrant, as amended, is exercisable for 210,000 shares of the Company's common stock at an exercise price of $4.70. The amended and restated Warrant, as amended, contains a weighted average anti-dilution feature whereby the exercise price of the amended and restated warrant is subject to reduction if the Company issues shares of common stock (or securities convertible into common stock) in the future at a price below the current exercise price of such warrant. Perceptive will not have the right to exercise the warrant to the extent that after giving effect to such exercise, Perceptive would beneficially own in excess of 9.99% of the common stock outstanding immediately after giving effect to such exercise. See Note 18 — Fair Value Measurement for additional details.

Consent and Forbearance Agreement

Under an agreement dated January 26, 2017, as amended March 7, 2017, April 27, 2017 and August 9, 2017, the lender agreed to forbear from exercising any rights and remedies related to the default until the earlier of September 30, 2017 or the date when the lender becomes aware of any other default.

On August 31, 2017, in connection with the Argentum Purchase Agreement, the Company and Perceptive entered into a Consent, Forbearance and Amendment Agreement (the "Consent and Forbearance Agreement"), pursuant to which the Company agreed to pay $1,650,000 of the proceeds from the Argentum Purchase Agreement to Perceptive, of which approximately $1,618,000 was applied towards the outstanding principal amount of the term loan under the credit agreement and approximately $32,000 was used to pay an early prepayment fee. This payment was made on August 31, 2017. During the year ended December 31, 2017, the Company recorded a loss on early extinguishment of debt of $214,000 related to the Consent and Forbearance Agreement. This amount consisted of the $32,000 prepayment penalty, the write-off of $129,000 of unamortized discount, and the write-off of $53,000 of unamortized debt issuance costs.

Under the Consent and Forbearance Agreement the lender agreed to: (a) release its liens on assets purchased by Argentum; (b) defer the commencement of the Company's remaining principal payments until January 31, 2018, and agreed to extend the forbearance period and to forbear from exercising any rights and remedies related to the Company's default of a covenant pertaining to (i) trailing twelve-month revenue under the Credit Agreement as of (A) September 30, 2016, (B) December 31, 2016 (C) March 31, 2017 and (D) June 30, 2017 and (ii) failure to maintain on a consolidated basis, a monthly minimum cash balance of at least $2,000,000, until the earlier of October 13, 2017 or the date when the lender becomes aware of any other default. On November 7, 2017, the lender agreed to extend the forbearance period and to forbear from exercising any rights and remedies to the Company's default of the aforementioned covenants, including the trailing twelve-month revenue as of September 30, 2017, until the earlier of December 31, 2017 or the date when the lender becomes aware of any other default.

Under the Forbearance and Amendment Agreement dated as of February 5, 2018, the lender agreed to defer the commencement of the Company's remaining principal payments and agreed to extend the forbearance period and to forbear from exercising any rights and remedies related to the Company's default of a covenant pertaining to (i) trailing twelve-month revenue under the Credit Agreement as of (A) September 30, 2016, (B) December 31, 2016 (C) March 31, 2017 (D) June 30, 2017 (E) September 30, 2017 and (F) December 31, 2017 and (ii) failure to maintain on a consolidated basis, a monthly minimum cash balance of at least $2,000,000, until the earlier of April 30, 2018, the termination of the Asset Purchase Agreement, or the date when the lender becomes aware of any other default. The lender reserved the rights, commencing with the occurrence of any of these events, to pursue any rights and remedies available to it, including, but not limited to, declaring all or any portion of the outstanding principal amount to be immediately due and payable, imposing a default rate of interest as

specified in the credit agreement, or pursing the lender's rights and remedies as a secured party under the UCC as a secured lender. In addition, the lender has a lien on substantially all of the Company's assets and, as a result of the default, the lender may seek to foreclose on some or substantially all of the Company's assets after the expiration of the forbearance.

2016 Extinguishment

On June 30, 2016, the Company entered into a Consent Under Credit Agreement (the "Consent Agreement") with Perceptive pursuant to which Perceptive consented to the Purchase Agreement with BSN provided that the Company agreed to pay $1.8 million of the proceeds from the Purchase Agreement to Perceptive, of which $1.7 million was applied towards the outstanding principal amount of the term loan under the Credit Agreement and $52,000 was used to pay an early prepayment fee. This payment was made on July 1, 2016. During the year ended December 31, 2016, the Company recorded a loss on early extinguishment of debt of $373,000 related to the Consent Agreement. This amount consisted of a $52,000 prepayment penalty, the write-off of $226,000 of unamortized discount, and the write-off of $95,000 of unamortized debt issuance costs. See Note 5 — Discontinued Operations for additional details.

Debt consists of the following (in thousands):

| | December 31, 2017 | December 31, 2016 |
|---|---|---|
| Principle balance | $ 12,135 | $ 13,752 |
| Unamortized debt issuance and discount costs | (1,206) | (2,211) |
| Total | $ 10,929 | $ 11,541 |

13. Commitments and Contingencies

Agreements for Human Placental Based Products with Celularity, Inc.

In November 2013, the Company entered into a License, Marketing and Development Agreement (the "License Agreement") and Supply Agreement (the "Biovance Supply Agreement") with Celgene Cellular Therapeutics ("CCT"), an affiliate of Celgene Corporation ("Celgene"). The agreements grant the Company an exclusive, royalty-bearing license in CCT's intellectual property for certain placental based products, including ECM and Biovance®, as well as provide the Company with the its requirements of Biovance for distribution. In January 2016, HLI Cellular Therapeutics, LLC ("HLI"), a genomics-based, technology-driven company, announced the purchase of LifebankUSA and other select assets from CCT. CCT assigned and HLI assumed the license and supply agreements the Company entered into with CCT, for certain placental based products. In June 2017, Celularity acquired some of the assets of HLI, including the agreements between HLI and the Company. The Company is required to pay Celularity annual license fees, designated amounts when certain milestone events occur and royalties on all sales of licensed products, with such amounts being variable and contingent on various factors. During the years ended December 31, 2017 and 2016, the Company incurred royalties of approximately $818,000 and $493,000, respectively, in connection with this agreement. Approximately $227,000 and $197,000 is included in accrued expenses as of December 31, 2017 and December 31, 2016, respectively, in connection with this agreement. The initial term of the License Agreement ends on November 14, 2023, unless sooner terminated pursuant to the termination rights under the License Agreement, and will extend for additional two-year terms unless either party gives written notice within a specified period prior to the end of a term.

The License Agreement with Celularity is terminable on a product-by-product basis if the Company fails to meet certain minimum sales thresholds in the second year or any subsequent year of commercial sales of each licensed product. Each year of commercial sales are referred to in the License Agreement as "launch years" and the calendar period constituting each launch year for each licensed product is determined in accordance with the terms of the License Agreement. To maintain its license for Biovance, the Company must meet a minimum gross sales amount for Biovance in the second year and third year of

commercial sales. If the Company fails to meet the minimum threshold in the second year of commercial sales of product, it would be able to cure such failure by making a cure payment specified in the License Agreement to Celularity; provided, however, the Company does not have the option to make a cure payment, should it fail to meet the minimum threshold for such product in the third year of commercial sales and Celularity may terminate the License Agreement with respect to such product.

In September 2014, the Company entered into a First Amendment to the License Agreement (the "Amended License Agreement"), pursuant to which the Company received the right to market Biovance for podiatric and orthopedic applications. The Amended License Agreement also amends certain terms and the related schedule for milestone payments to CCT. In May 2015, the Company amended its exclusive licensing agreement with CCT, which granted the Company the right to develop and market CCT's connective tissue matrix product, also known as Interfyl.

In April 2016, the Company entered into a Supply Agreement with HLI (now Celularity), pursuant to which Celularity supplies the Company with the Company's entire requirement of Interfyl™ Human Connective Tissue Matrix. Additionally, the Company agreed to make certain future milestone payments upon the achievement of certain milestones. The Company initiated sales and marketing efforts of Interfyl Human Connective Tissue Matrix in September 2016 and achieved two milestones under the license agreement. The Company is required to pay Celularity $500,000 related to the first commercial sale of Interfyl in the flowable matrix configuration and $500,000 related to the first commercial sale of Interfyl in the particulate form. Commercial sales of both configurations occurred in September 2016, and as such, the Company recorded $1.0 million of milestone expense during the year ended December 31, 2016. The milestone has been included in accrued expenses and other current liabilities as of December 31, 2017 and December 31, 2016. The payment of this milestone will be waived if the Asset Purchase Agreement with Celularity is consummated.

On December 1, 2017, the Company received notice from Celularity that the Company is in material breach of the License Agreement or Supply Agreements with Celuarity, for failure to purchase the required amounts of materials under the Supply Agreements and failure to use commercially reasonable best efforts to undertake development activities for the licensed products under the License Agreement. Celularity estimated that an additional purchase of at least $842,000 would have to be made by the Company to remedy the breach under the Supply Agreements. Celularity has agreed to forbear from exercising its right to terminate the supply and license agreements until the closing of the Asset Purchase Agreement or termination of the Asset Purchase Agreement for any reason.

License Agreement with Noble Fiber Technologies, LLC

On July 15, 2011, the Company entered into a license agreement with Noble Fiber Technologies, LLC, whereby the Company has the exclusive right and license to manufacture and distribute "SilverSeal Hydrogel Wound Dressings" and "SilverSeal Hydrocolloid Wound Dressings". The license is granted for ten years with an option to be extended for consecutive renewal periods of two years after the initial term. Royalties are to be paid equal to 9.75% of net sales of licensed products. The agreement calls for minimum royalties in 2016 in the amount of $600,000. There are no minimum royalties subsequent to 2016. Total royalties, for the years ended December 31, 2017 and 2016 were $1,900 and $600,000, respectively, in connection with this agreement. Approximately $0 and $598,000 is included in accounts payable as of December 31, 2017 and 2016, respectively, in connection with this agreement.

Contingent Consideration

Celleration, Inc.

On May 29, 2015, the Company acquired all outstanding equity interest of Celleration, Inc. ("Celleration"), a medical device company focused on developing and commercializing the MIST Therapy® therapeutic ultrasound platform for the treatment of acute and chronic wounds. The Company agreed to

pay contingent consideration of 3.5 times revenue from acquired MIST Therapy products in excess of certain revenue targets for the years ending December 31, 2015 and 2016, payable in equal amounts of cash and the Company's common stock. This contingent consideration was payable in two installments in March 2016 and March 2017.

The first installment consisted of $2.6 million of cash and approximately 98,600 shares of the Company's common stock valued at approximately $2.6 million and was paid in March 2016. This payment was based on 3.5 times of the excess of 2015 MIST Therapy revenue of approximately $10.2 million over 2014 MIST Therapy revenue of approximately $8.7 million.

The second installment consisted of $675,000 of cash and approximately 101,000 shares of the Company's common stock valued at approximately $675,000 and was paid in March 2017. This payment was based on 3.5 times of the excess of 2016 MIST Therapy revenue of approximately $10.5 million over 2015 MIST Therapy revenue of approximately $10.2 million. There are no further contingent payments due in connection with the Celleration acquisition.

Choice Therapeutics, Inc.

On May 5, 2014, the Company acquired all outstanding equity interest of Choice Therapeutics, Inc., a provider of innovative wound care products using proprietary TheraBond 3D® Antimicrobial Barrier Systems. The Company agreed to pay contingent consideration based upon the Company achieving specific performance metrics over the three twelve-month periods, ended April 30, 2017. The Company issued approximately 132,000 shares of its common stock valued at approximately $500,000 in June 2017. There are no further contingent payments due in connection with the Choice acquisition.

Litigation, Claims and Assessments

From time to time, the Company may become involved in lawsuits, investigations and claims that arise in the ordinary course of business. The Company believes it has meritorious defenses against all pending claims and intends to vigorously pursue them. While it is not possible to predict or determine the outcomes of any pending actions, the Company believes the amount of liability, if any, with respect to such actions, would not materially affect its financial position, results of operations or cash flows.

On February 22, 2018, a putative stockholder class action complaint was filed in the United States District Court for the District of Delaware against the Company and each member of the Board, captioned Ronald Cresta, Individually and on Behalf of All Others Similarly Situated v. Alliqua BioMedical Inc., David Johnson, Joseph M. Leone, Gary Restani, Jeffrey Sklar and Mark Wagner. The complaint alleges, among other things, that the Company and the Board violated federal securities laws and regulations by soliciting stockholder votes in connection with the Asset Sale Transaction through a proxy statement that omits material facts necessary to make the statements therein not false or misleading. The complaint seeks, among other things, to enjoin the Company and the Board from conducting the stockholder vote on the Asset Sale Transaction unless and until the allegedly omitted material information is disclosed to the Company's stockholders, damages allegedly suffered by the plaintiffs as a result of the asserted omissions, as well as related attorneys' fees and expenses.

The Company is reviewing the complaint and has not yet formally responded to it, but the Company denies the allegations and intends to defend against them vigorously.

14. Stockholders' Equity

Preferred Stock

The Company has authorized 1,000,000 shares of preferred stock, $0.001 par value per share, which may be divided into series and with preferences, limitations and relative rights determined by the Board of Directors.

Common Stock

On May 6, 2016, the Company held its 2016 annual meeting of stockholders. The stockholders approved an amendment to the Company's Certificate of Incorporation to increase the number of authorized shares of common stock from 45,714,286 to 95,000,000 shares.

2011 Plan

The Company maintains the 2011 Long-Term Incentive Plan (the "2011 Plan") that provides for the granting of stock options, restricted stock units ("RSUs"), restricted stock and other awards to employees, directors and others. A total of 182,857 shares of common stock have been authorized for issuance under the 2011 Plan, of which, as of December 31, 2017, 30,903 shares were available for future issuances.

2014 Plan

The Company maintains the 2014 Long-Term Incentive Plan (the "2014 Plan") that provides for the granting of stock options, RSUs, restricted stock and other awards to employees, directors and others. On February 26, 2015 and May 6, 2015, the Company's Board of Directors and the Company's shareholders, respectively, approved an amendment to the 2014 Plan to increase the total number of shares of common stock authorized for issuance under the 2014 Plan by an additional 350,000 shares. On April 26, 2017 and June 23, 2017, the Company's Board of Directors and the Company's shareholders, respectively, approved an amendment to the 2014 Plan to increase the total number of shares of common stock authorized for issuance under the 2014 Plan by an additional 400,000 shares. A total of 950,000 shares of common stock are reserved for award under the 2014 Plan, of which, as of December 31, 2017, 92,459 shares were available for future issuances.

Private Placement

On February 27, 2017, the Company entered into a securities purchase agreement (the "Securities Purchase Agreement") with certain accredited investors, pursuant to which the Company agreed to issue and sell to the investors in a private placement (the "Private Placement") an aggregate of 554,000 shares of the Company's common stock at a purchase price of $5.00 per share. The Company closed the Private Placement on the same day as it entered into the Securities Purchase Agreement and received aggregate gross proceeds of approximately $2.8 million. In connection with the Private Placement, the Company paid an aggregate of $196,000 of financial advisory fees and $40,000 of administrative fees, which were recorded as a reduction of additional paid-in capital.

The Securities Purchase Agreement contains a "most-favored nation" provision that provides that if the Company, during 120 days from February 27, 2017, issues or sells any common stock or common stock equivalents reasonably believed to be more favorable in terms or conditions than those in the Private Placement, then the Company must amend the terms of the Securities Purchase Agreement to give the private investors the benefit of such favorable terms or conditions. In connection with the common stock sold in the Public Offering (as defined below) and in accordance with this provision, on April 11, 2017, the Company issued an aggregate of 38,072 shares of its common stock to these investors. On June 23, 2017, the Company held its 2017 annual meeting of stockholders during which the stockholders approved the issuance of the remaining 100,428 additional shares of common stock to be issued to the investors, and, following the meeting, on June 23, 2017, the Company issued the remaining shares.

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Underwritten Public Offering

On April 3, 2017, the Company closed an underwritten public offering (the "Public Offering") of 947,325 shares of its common stock at a price to the public of $4.00 per share. The Company received aggregate gross proceeds of approximately $3.8 million. In connection with the Public Offering, the Company paid an aggregate of $365,000 of financial advisory fees and $92,000 of administrative fees, which were recorded as a reduction of additional paid-in capital. The shares of common stock were issued pursuant to the Company's shelf registration statement on Form S-3 previously filed with the Securities and Exchange Commission and declared effective on September 25, 2014.

On April 3, 2017, the Company issued warrants to purchase an aggregate of 23,686 of the Company's common stock to the underwriter of this offering. These warrants are immediately exercisable, have an exercise price of $4.40, and expire on March 29, 2022. The warrants had an aggregate issuance date fair value of $78,000 which was recorded as both a debit and credit to additional paid in capital.

Pursuant to an anti-dilution provision provided in the warrants dated November 8, 2012 to purchase common stock at an initial exercise price of $21.90, the exercise price of these warrants was adjusted to the public offering price of $4.00. As of April 3, 2017, November 2012 warrants to purchase 36,231 shares of the Company's common stock were outstanding. These warrants expired in November 2017.

Stock-Based Compensation

For the year ended December 31, 2017, the Company recognized $2.0 million of stock-based compensation expense, of which, $45,000 is included in cost of revenues and $2.0 million is included in selling, general and administrative expenses in the consolidated statements of operation. For the year ended December 31, 2016, the Company recognized $4.9 million of stock-based compensation expense, of which, $0.2 million is included in cost of revenues and $4.7 million is included in selling, general and administrative expenses in the consolidated statements of operations. As of December 31, 2017, there was $0.7 million of unrecognized stock-based compensation expense which will be amortized over a weighted average period of 0.8 years.

Restricted Stock

During the year ended December 31, 2017, the Company granted an aggregate of 181,936 shares of restricted stock to employees with an aggregate grant date value of $621,000, which will be recognized proportionate to the vesting period. The shares vest as follows: (i) 66,936 shares vest on September 21, 2017, (ii) 5,000 shares vest on December 31, 2017, (iii) 50,000 shares vest on June 23, 2018, and (iv) 60,000 shares vest pursuant to the satisfaction of certain performance conditions.

During the year ended December 31, 2016, the Company granted an aggregate of 102,500 shares of restricted stock to employees with an aggregate grant date value of $1,076,000, which will be recognized proportionate to the vesting period. The shares vest as follows:(i) 32,500 vested the earlier of February 9, 2017 or the participants termination of service by the Company without cause and (ii) 70,000 shares vest pursuant to the satisfaction of certain performance conditions.

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A summary of restricted stock award activity during the year ended December 31, 2017 and 2016 is presented below (in thousands, except per share data):

| | Number of Shares | Weighted Average Grant Date Fair Value Per Share | Total Grant Date Fair Value |
|---|---|---|---|
| Non-vested, December 31, 2015 | 69 | $ 61.10 | $ 4,226 |
| Granted | 103 | 10.50 | 1,076 |
| Vested | (24) | 60.00 | (1,428) |
| Forfeited | (1) | 14.60 | (12) |
| Non-vested, December 31, 2016 | 147 | $ 26.26 | $ 3,862 |
| Granted | 182 | 3.41 | 621 |
| Vested | (137) | 17.35 | 2,373 |
| Forfeited | (2) | 3.87 | — |
| Non-vested, December 31, 2017 | 190 | $ 11.07 | $ 6,856 |

Warrants

See Note 12 — Debt — Senior Secured Term Loan Facility for details associated with a warrant issued in connection with debt.

There were no compensatory warrants issued during the year ended December 31, 2017.

A summary of the warrant activity during the year ended December 31, 2017 and 2016 is presented below (in thousands, except years and per warrant data):

| | Number of Warrants | Weighted Average Exercise Price per Warrant | Weighted Average Remaining Life in Years | Intrinsic Value |
|---|---|---|---|---|
| Outstanding, December 31, 2015 | 338 | $ 57.00 | | |
| Issued | — | — | | |
| Exercised | — | — | | |
| Cancelled | (1) | 87.50 | | |
| Outstanding, December 31, 2016 | 337 | $ 56.90 | | $ — |
| Issued | 159 | 4.66 | | |
| Adjustment for price reset | 29 | | | |
| Exercised | — | — | | |
| Cancelled | (47) | 9.35 | | |
| Outstanding, December 31, 2017 | 478 | $ 32.79 | 2.4 | $ — |
| Exercisable, December 31, 2017 | 478 | $ 32.79 | 2.4 | $ — |

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The following table presents information related to warrants at December 31, 2017 (in thousands, except years and per warrant data):

| Warrants Outstanding | | | Warrants Exercisable |
|---|---|---|---|
| Exercise Price | Outstanding Number of Warrants | Weighted Average Remaining Life in Years | Exercisable Number of Warrants |
| $4.0 – $21.80 | 233 | 4.1 | 233 |
| $40.00 – $49.99 | 98 | 0.5 | 98 |
| $50.00 – $59.90 | 104 | 0.9 | 104 |
| $60.00 – $105.00 | 43 | 1.3 | 43 |
| | 478 | 2.4 | 478 |

As of December 31,2017 and 2016, warrants to purchase an aggregate of 210,000 and 81,628 shares of common stock at a weighted average exercise price of $4.70 and $52.40 per share, respectively, were deemed to be a derivative liability. See Note 18 — Fair Value Measurement.

Stock Options

During 2016, the Company granted ten-year options to purchase an aggregate of 164,976 shares of common stock at exercise prices ranging from $8.00 to $22.00 with an aggregate grant date value of $1.3 million to employees and directors pursuant to the 2014 Plan. The options vest as follows: (i) 22,500 shares vest one-twelfth monthly over one year, and (ii) 142,400 shares vest ratably over three years on the anniversaries of the grant date. The grant date value is being amortized over the vesting term.

During 2017, the Company granted ten-year options to purchase an aggregate of 258,105 shares of common stock at exercise prices ranging from $2.09 to $5.70 per share with an aggregate grant date value of $642,000 to non-executive employees and directors pursuant to the 2014 Plan. The options vest as follows: (i) 45,045 shares vest one-twelfth monthly over one year, and (ii) 213,060 shares vest in one-fourth increments every six months over a period of two years. The grant date value is being amortized over the vesting term.

In applying the Black-Scholes option pricing model to stock options granted, the Company used the following assumptions:

| | Year Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Risk free interest rate | 1.81% – 2.43% | 1.14% – 2.06% |
| Expected term (years) | 5.04 – 6.50 | 5.04 – 6.50 |
| Expected volatility | 81.94% – 87.00% | 89.53% – 89.95% |
| Expected dividends | 0.00% | 0.00% |

The risk-free interest rate is based on rates of treasury securities with the same expected term as the options. The Company uses the “simplified method” to calculate the expected term of employee and director stock-based options. The expected term used for consultants is the contractual life. The Company is utilizing an expected volatility figure based on a review of the Company’s historical volatility, over a period of time, equivalent to the expected life of the instrument being valued. The expected dividend yield is based upon the fact that the Company has not historically paid dividends, and does not expect to pay dividends in the near future.

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Option forfeitures are estimated at the time of valuation and reduce expense ratably over the vesting period. This estimate will be adjusted periodically based on the extent to which actual option forfeitures differ, or are expected to differ, from the previous estimate, when it is material. The Company estimated forfeitures related to options at annual rates ranging from 0% to 5% for options outstanding at December 31, 2017 and 2016.

The weighted average estimated grant date fair value of the options granted during the years ended December 31, 2017 and 2016 was $2.49 and $7.73 per share, respectively.

A summary of the stock option activity during the years ended December 31, 2017 and 2016 is presented below (in thousands, except years and per option data):

| | Number of Options | Weighted Average Exercise Price per Option | Weighted Average Remaining Life in Years | Intrinsic Value |
|---|---|---|---|---|
| Outstanding, December 31, 2015 | 623 | $ 62.60 | | |
| Granted | 165 | 10.50 | | |
| Exercised | — | — | | |
| Forfeited | (68) | 39.50 | | |
| Outstanding, December 31, 2016 | 720 | $ 52.90 | | |
| Granted | 258 | 3.53 | | |
| Exercised | — | — | | |
| Forfeited | (168) | 40.60 | | |
| Outstanding, December 31, 2017 | 810 | $ 39.67 | 6.3 | $ — |
| Exercisable, December 31, 2017 | 658 | $ 42.71 | 5.6 | $ — |

The following table presents information related to stock options at December 31, 2017 (in thousands, except years and per option data):

| | Options Outstanding | | Options Exercisable | | |
|---|---|---|---|---|---|
| Range of Exercise Price | Weighted Average Exercise Price | Outstanding Number of Options | Weighted Average Exercise Price | Weighted Average Remaining Life in Years | Exercisable Number of Options |
| $2.00 – $4.00 | $ 3.52 | 222 | 3.57 | 8.9 | 68 |
| $4.10 – $9.90 | 8.54 | 32 | 8.61 | 6.8 | 143 |
| $10.00 – $19.90 | 10.58 | 80 | 10.59 | 7.6 | 28 |
| $20.00 – $29.90 | 23.08 | 1 | 22.90 | 4.1 | 1 |
| $30.00 – $39.90 | 33.72 | 47 | 33.72 | 5.6 | 45 |
| $40.00 – $49.90 | 46.61 | 68 | 46.01 | 6.0 | 66 |
| $50.00 – $59.90 | 52.99 | 51 | 53.20 | 5.5 | 39 |
| $60.00 – $69.90 | 66.06 | 205 | 66.47 | 4.4 | 185 |
| $70.00 – $79.90 | 77.54 | 3 | 77.54 | 6.3 | 3 |
| $80.00 – $89.90 | 87.40 | 74 | 87.36 | 2.0 | 53 |

| | | | | | |
|---|---|---|---|---|---|
| $90.00 – $99.90 | 90.04 | 21 | 90.04 | 3.5 | 21 |
| $100.00 – $266.90 | 110.13 | 6 | 110.13 | 5.2 | 6 |
| | | 810 | | 5.6 | 658 |

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15. Income Taxes

The Company files corporate income tax returns in U.S. federal, state and local jurisdictions, including Pennsylvania, and has tax returns subject to examination by tax authorities generally beginning in the year ended December 31, 2013 and through December 31, 2017. However, to the extent the Company utilizes its net operating loss ("NOL") carryforwards in the future, the tax years in which the attribute was generated may still be adjusted upon examination by the Internal Revenue Service or state tax authorities of the future period tax return in which the attribute is utilized. The income tax (benefit) provision consists of the following (in thousands):

| | For The Years Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Federal: | | |
| Current | $ — | $ — |
| Deferred | (664) | (627) |
| State and local: | | |
| Current | 6 | 4 |
| Deferred | (85) | (92) |
| Income tax provision | $ (743) | $ (715) |

For the years ended December 31, 2017 and 2016, the expected tax expense based on the federal statutory rate reconciled with the actual tax expense is as follows:

| | For The Years Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| U.S. federal statutory rate | 34.0% | 34.0% |
| State tax rate, net of federal benefit | 3.0% | 4.5% |
| Permanent differences | | |
| – Change in fair value of warrant liability | (0.1)% | 0.9% |
| – Change in fair value of contingent consideration | 0.0% | 10.4% |
| – Intangible impairment | (12.0)% | (9.3)% |
| – Other | (0.3)% | (0.4)% |
| Adjustments to deferred taxes | (4.6)% | (8.2)% |
| Tax Reform – Federal Rate Change | (50.9)% | 0.0% |
| Tax Reform – Change in valuation allowance | 50.9% | 0.0% |
| Change in valuation allowance | (17.4)% | (29.7)% |
| Income tax provision | 2.6% | 2.2% |

On December 22, 2017 the U.S. government enacted significant changes to federal tax law following the passage of the Tax Cuts and Jobs Act ("the Act"). The Act significantly changes the U.S. corporate tax system. The Company has reasonably estimated the accounting for the effects of the Act during the year ended December 31, 2017. The Company's financial statements for the year ended December 31, 2017 reflect certain effects of the Act including a reduction in the corporate tax rate from 34% to 21% and changes to limitations on the deductibility of executive

compensation. As the Company has recorded a full valuation allowance against its net deferred tax assets as of December 31, 2017, these changes have no impact on the income tax benefit for year ended December 31, 2017. The Company has recorded changes to

its deferred tax assets and liabilities due to enactment of the Act. As a result of the change in U.S. corporate income tax rate, the Company recorded a decrease in its net deferred tax asset of approximately $14.6 million, which was offset by a decrease in valuation allowance. In addition, the Company analyzed changes in the executive compensation rules pursuant to the Act and determined that approximately $1.3 million of the deferred tax asset for stock compensation may not be realizable. The Company has previously recorded a valuation allowance against the deferred tax asset so this adjustment has no impact on the 2017 provision. Given the significant changes resulting from and complexities associated with the Act, the financial impacts for the fourth quarter and full year 2017 are provisional and subject to further analysis, interpretation and clarification of the Act, which could result in changes to these estimates during 2018. In order to complete the accounting for these items the Company will need to further analyze executive compensation awards and prepare its 2017 corporate income tax return. The Company will reflect any adjustments to the provisional amounts in the period the accounting is completed, and expects to complete this analysis within the one-year measurement period provided by SAB 118.

As of December 31, 2017 and 2016, the Company's deferred tax assets consisted of the effects of temporary differences attributable to the following (in thousands):

| | As of December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Deferred tax assets: | | |
| Net operating loss carryforwards | $ 29,580 | $ 40,117 |
| Stock-based compensation | 5,598 | 8,671 |
| Goodwill and Tradename | 32 | — |
| Accruals | 694 | 541 |
| Transaction costs | 39 | 732 |
| Other | 364 | 861 |
| Total deferred tax assets | 36,307 | 50,922 |
| Valuation allowance | (30,864) | (41,482) |
| Deferred tax assets, net of valuation allowance | $ 5,443 | $ 9,440 |
| Deferred tax liabilities: | | |
| Property and equipment | (65) | (281) |
| Intangible assets | (5,378) | (9,159) |
| Goodwill | — | (749) |
| Total deferred tax liabilities | (5,443) | (10,189) |
| Net deferred tax liabilities | $ — | $ (749) |

For the years ended December 31, 2017 and 2016, the Company had approximately $114.6 million and $104.9 million of federal NOL carryovers, respectively, which substantially begin to expire in 2020 and through 2037. The company also has state NOL carryovers in multiple jurisdictions, including most materially in Pennsylvania, $26.4 million and $24.6 million, and in Florida, $11.3 million and $10.9 million, as of December 31, 2017 and December 31, 2016, respectively, which substantially begin to expire in 2020 and through 2037. During 2016 the Company performed a 382 study, and as a result of the study, reduced its NOL carryforwards by $4.8 million, which is the amount of the NOL carryforwards that are expected to expire unutilized pursuant to the Section 382 study. On May 29, 2015 the Company acquired Celleration, Inc. and the company has performed a Section 382 study for Celleration, Inc. The amount of federal NOL carryforwards as of December 31, 2017 and December 31, 2016 disclosed above do not

include $47.9 million of Celleration, Inc. NOL carryforwards that are expected to expire unutilized pursuant to the Section 382 study. The Celleration, Inc. state NOL carryforwards have also been reduced accordingly. On

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May 5, 2014 the Company acquired the equity interests of Choice and the Company believes the Choice NOL carryforwards as of that date are subject to Section 382 limitations. The amount of federal NOL carryforwards as of December 31, 2017 and December 31, 2016 disclosed above do not include $2.5 million of Choice NOL carryforwards that the Company has estimated will expire unutilized pursuant to this limitation. Additionally, an ownership change pursuant to Section 382 may have occurred since 2016, or could occur in the future, such that the NOLs available for utilization could be further limited.

In assessing the realization of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will be realized. The ultimate realization of the deferred tax assets is dependent upon the future generation of taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies in making this assessment. As of December 31, 2016, the deferred tax liabilities related to goodwill and to a tradename could not be used in this determination since both assets were considered to be assets with an indefinite life for financial reporting purposes. After consideration of all the evidence, both positive and negative, management has recorded a full valuation allowance against net deferred tax assets at December 31, 2017 and December 31, 2016 because management has determined that it is more likely than not that these deferred tax assets will not be realized. The valuation allowance decreased by $10.6 million and increased by $8.5 million during the years ended December 31, 2017 and December 31, 2016, respectively. The decrease in tax year ended December 31, 2017 is primarily related to the decrease in the corporate tax rate from 34% to 21% due to the enactment of the Act, $14.7 million, offset by increases in NOL carryforwards, $3.7 million. Included in the current year increases to the valuation allowance is a $0.7 million increase related to discontinued operations. The increase in tax year ended December 31, 2016 is primarily related to increases in NOL carryforwards.

16. Related Party

In November 2015, the Company entered into a manufacturing supply agreement with a company where a Company director is a member of the Board of Directors. During the years ended December 31, 2017 and 2016, the Company incurred costs of approximately $433,000 and $491,000, respectively, from this vendor. Approximately $123,000 and $102,000 are included in accounts payable related to this related party as of December 31, 2017 and December 31, 2016, respectively.

17. Concentration of Risk

The Company had no single customer exceeding 10% of either its 2017 and 2016 revenue or its outstanding accounts receivable balance as of December 31, 2017 or 2016.

18. Fair Value Measurement

Fair value is defined as the price that would be received upon selling an asset or the price paid to transfer a liability on the measurement date. It focuses on the exit price in the principal or most advantageous market for the asset or liability in an orderly transaction between willing market participants. A three-tier fair value hierarchy is established as a basis for considering such assumptions and for inputs used in the valuation methodologies in measuring fair value. This hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. The three levels of inputs used to measure fair values are as follows:

Level 1:

Observable prices in active markets for identical assets and liabilities.

Level 2:

Observable inputs other than quoted prices in active markets for identical assets and liabilities.

Level 3:

Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets and liabilities.

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Impairment

Goodwill and other indefinite-lived intangible assets are tested for impairment annually, at the end of the fourth quarter of each fiscal year, and between annual tests if an event occurs or circumstances change that would indicate it is more likely than not that the carrying amount may be impaired. Additionally, the Company continually evaluates whether events or changes in circumstances might indicate that the remaining estimated useful life of long-lived assets may warrant revision, or that the remaining balance may not be recoverable. The factors used to determine fair value are subject to management's judgement and expertise and include, but are not limited to, the present value of future cash flows, net of estimated operating costs, internal forecasts, anticipated capital expenditures and various discount rates commensurate with the risk and current market conditions associated with realizing the expected cash flows projected. These assumptions represent Level 3 inputs. Impairment of the Company's goodwill for the year ended December 31, 2017 was $10.3 million. Impairment of the Company's goodwill and MIST Therapy tradename for the year ended December 31, 2016 was $10.9 million.

Warrant Liabilities

On December 31, 2016, the Company recomputed the fair value of its warrant liability of outstanding warrants to purchase an aggregate of 81,628 shares of common stock as $20,000 using the Binomial option pricing model (Level 3 inputs) using the following assumptions: expected volatility of 65.74%-72.16%, risk-free rate of 0.85%-1.47%, expected term of 0.86-3.41 years, and expected dividends of 0.00%. The Company recorded a gain on the change in fair value of these warrant liabilities of $841,000 during the year ended December 31, 2016.

The Company amended and restated the Warrant on each of October 25, 2016, January 26, 2017, March 7, 2017 and April 6, 2017. In addition, on June 1, 2017, the Company further amended the amended and restated Warrant. The amended and restated Warrant, as amended, is exercisable for 210,000 shares of the Company's common stock at an exercise price of $4.70 per share. See Note 12 – Debt for additional details. In connection with the amendments of January, March, April and June 2017, the Company recomputed the fair value of the original warrant and amended warrant using the Binomial option pricing model (Level 3 inputs) using the following assumptions: expected volatility of 65.33%-78.98%, risk-free rate of 1.49%-1.95%, expected term of 3.34-5.00 years, and expected dividends of 0.00%. As a result, the Company recorded warrant modification expense of $803,000 during the year ended December 31, 2017, which represents the incremental value of the amended warrant as compared to the original warrant, both valued as of the respective amendment dates.

On December 31, 2017, the Company recomputed the fair value of its warrant liability of outstanding warrants to purchase an aggregate of 210,000 shares of common stock as $130,000 using the Binomial option pricing model (Level 3 inputs) using the following assumptions: expected volatility of 73.37% risk-free rate of 2.09%, expected term of 4.07 years, and expected dividends of 0.00%. The Company recorded a gain on the change in fair value of these warrant liabilities of $692,000 during the year ended December 31, 2017.

The issuance of common stock in connection with the Private Placement and Public Offering triggered an adjustment to the exercise price of certain warrants originally issued in November 2012 from $55.10 per share to $5.00 per share to $4.00 per share with a corresponding adjustment to the number of shares underlying such warrants from 6,629 shares to 29,034 shares to 36,231 shares. The impact of such adjustment is included in the change in fair value of the warrant liabilities during the year ended December 31, 2017.

Warrants that contain exercise reset provisions and contingent consideration liabilities are Level 3 derivative liabilities measured at fair value on a recurring basis using pricing models for which at least one significant assumption is unobservable as defined in ASC 820. The fair value of contingent consideration liabilities that are classified as Level 3 were estimated using a discounted cash flow technique with significant inputs that are not observable in the market and thus represents a Level 3 fair value

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measurement as defined in ASC 820. The significant inputs in the Level 3 measurement not supported by market activity include the probability assessments of expected future cash flows related to the acquisitions, appropriately discounted considering the uncertainties associated with the obligation, and as calculated in accordance with the terms of the acquisition agreements. See Note 13 — Commitments and Contingencies for details on the contingent consideration. The development and determination of the unobservable inputs for Level 3 fair value measurements and the fair value calculations are the responsibility of the Company's Chief Financial Officer and are approved by the Chief Executive Officer.

The following table sets forth a summary of the changes in the fair value of Level 3 warrant liabilities and contingent consideration that are measured at fair value on a recurring basis (in thousands):

| | Year Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Warrant Liabilities | | |
| Beginning balance | $ 20 | $ 861 |
| Change in fair value of warrant liability | (693) | (841) |
| Warrant modification expense | 803 | — |
| Ending balance | $ 130 | $ 20 |

| | Year Ended December 31, | |
|---|---|---|
| | 2017 | 2016 |
| Contingent Consideration | | |
| Beginning balance | $ 1,816 | $ 17,028 |
| Payments of contingent consideration | (1,851) | (5,147) |
| Change in fair value of contingent consideration | 35 | (10,065) |
| Ending balance | $ — | $ 1,816 |

Assets and liabilities measured at fair value on a recurring basis are as follows (in thousands):

| | December 31, 2017 | | | Total Impairments |
|---|---|---|---|---|
| | Level 1 | Level 2 | Level 3 | |
| Assets: | | | | |
| Intangible assets | $ — | $ — | $ 22,069 | $ — |
| Goodwill | — | — | 1,659 | 10,300 |
| Total assets | $ — | $ — | $ 23,728 | $ 10,300 |

| | December 31, 2016 | | | Total Impairments |
|---|---|---|---|---|
| | Level 1 | Level 2 | Level 3 | |
| Assets: | | | | |
| Intangible assets | $ — | $ — | $ 26,605 | $ — |
| Goodwill | — | — | 11,959 | 10,895 |
| Total assets | $ — | $ — | $ 38,564 | $ 10,895 |

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| | December 31, 2017 | | |
|---|---|---|---|
| | Level 1 | Level 2 | Level 3 |
| Liabilities: | | | |
| Warrant liabilities | $ — | $ — | $ 130 |
| Total liabilities | $ — | $ — | $ 130 |

| | December 31, 2016 | | |
|---|---|---|---|
| | Level 1 | Level 2 | Level 3 |
| Liabilities: | | | |
| Warrant liabilities | $ — | $ — | $ 20 |
| Contingent consideration | — | — | 1,816 |
| Total liabilities | $ — | $ — | $ 1,836 |

19. Defined Contribution Plan

The Company maintains the Alliqua, Inc. 401(k) Profit Sharing Plan and Trust (“Plan”) in accordance with the provisions of Section 401(k) of the Code. The Plan covers substantially all full-time employees of the Company. Participants may contribute up to 100% of their total compensation to the Plan, not to exceed the limit as defined in the Code. Under this plan, the Company matches 50% of the employee’s contributions up to 6% of the employee’s annual compensation, as defined by the plan. Employees are eligible for the match after a six-month waiting period and the Company match vests immediately. The Company’s contribution to the plan was $97,000 and $105,000 for the years ended December 31, 2017 and 2016, respectively.

20. Subsequent Events

Asset Purchase Agreement

On January 5, 2018, the Company entered into the Asset Purchase Agreement pursuant to which the Company agreed to sell the Purchased Assets to Celularity. As consideration for the Purchased Assets, Celularity has agreed to pay the Company $29 million in cash. No debt or significant liabilities will be assumed by Celularity in the Asset Sale Transaction.

Under the terms of the Asset Purchase Agreement, the Company will retain certain specified assets, including, among other things, cash, accounts receivable, and its hydrogel contract manufacturing business, including its SilverSeal and Hydress product lines.

The transactions contemplated by the Asset Purchase Agreement must be approved by the affirmative vote of a majority of the voting power of issued and outstanding shares of the Company’s common stock. In addition, to the receipt of the approval of the Company’s stockholders, each party’s obligation to consummate the Asset Sale Transaction is conditioned upon certain other customary closing conditions.

Senior Secured Term Loan Facility

On February 5, 2018, the Company entered into the Forbearance and Amendment Agreement pursuant to which the lender agreed to defer the commencement of the Company’s remaining principal payments and agreed to extend the forbearance period and to forbear from exercising any rights and remedies related to the Company’s default of a covenant pertaining to (i) trailing twelve-month revenue under the Credit Agreement as of (A) September 30, 2016, (B) December 31, 2016 (C) March 31, 2017 (D) June 30, 2017 (E) September 30, 2017 and (F) December 31, 2017 and (ii) failure to maintain on a consolidated basis, a monthly minimum cash balance of at least $2,000,000, until the earlier of April 30, 2018, the termination of the Asset Purchase Agreement, or the date when the lender becomes aware of any other default.

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Annex D

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON D.C. 20549

FORM 10-K/A
(Amendment No. 1)

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended: December 31, 2017
OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to
Commission file number: 001-36278

Alliqua BioMedical, Inc.
(Exact name of registrant as specified in its charter)

| | |
|---|---|
| Delaware | 58-2349413 |
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification Number) |
| 1010 Stony Hill Road<br>Yardley, PA | 19067 |
| (Address of principal executive office) | (Zip Code) |

Registrant's telephone number, including area code: (215) 702-8550
Securities registered pursuant to Section 12(b) of the Exchange Act:

| Title of each class | Name of each exchange on which registered |
|---|---|
| Common Stock, $0.001 par value | The NASDAQ Stock Market LLC |

Securities registered pursuant to Section 12(g) of the Exchange Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act.Yes No
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.Yes No
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and

post such files).Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

| | |
|---|---|
| Large accelerated filer | Accelerated filer |
| Non-accelerated filer | |
| | (Do not check if a smaller reporting company) |
| Smaller reporting company | Emerging growth company |

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined by Rule 12b-2 of the Exchange Act). Yes No

The aggregate market value of the voting and non-voting common equity of the registrant held by non-affiliates, computed by reference to the closing sales price of such stock, as of June 30, 2017 was $13,713,853. (For purposes of determination of the aggregate market value, only directors, executive officers and 10% or greater shareholders have been deemed affiliates.

The number of shares outstanding of the registrant's common stock, par value $0.001 per share, as of April 26, 2018 was 5,005,211 shares.

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Explanatory Note

This Amendment No. 1 on Form 10-K/A (this "Amendment") amends the Annual Report on Form 10-K of Alliqua BioMedical, Inc. (the "Company" or "Alliqua") for the year ended December 31, 2017, originally filed with the U.S. Securities and Exchange Commission ("SEC") on March 2, 2018 (the "Original Filing").

This Amendment is being filed for the purpose of providing the information required by Items 10 through 14 of Part III of the Annual Report on Form 10-K. This information was previously omitted from the Original Filing in reliance on General Instruction G(3) to the Annual Report on Form 10-K, which permits the above-referenced Items to be incorporated in the Annual Report on Form 10-K by reference from a definitive proxy statement, if such definitive proxy statement is filed no later than 120 days after December 31, 2017. At this time, the Company is filing this Amendment to include Part III information in its Annual Report on Form 10-K because the Company does not intend to file a definitive proxy statement within 120 days of December 31, 2017.

In accordance with Rule 12b-15 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), Items 10 through 14 of Part III of the Original Filing are hereby amended and restated in their entirety. In addition, pursuant to Rule 12b-15 under the Exchange Act, the Company is amending and refiling Item 15 of Part IV, to reflect certain updated thereto and the inclusion of the certifications required under Section 302 of the Sarbanes-Oxley Act of 2002. Except as described above, no other changes have been made to the Original Filing. Except as otherwise indicated herein, this Amendment continues to speak as of the date of the Original Filing, and the Company has not updated the disclosures contained therein to reflect any events that occurred subsequent to the date of the Original Filing. Accordingly, this Amendment should be read in conjunction with our Original Filing and with our filings with the SEC subsequent to the filing of our Original Filing.

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ALLIQUA BIOMEDICAL, INC.

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PART III

ITEM 10.

DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The following table sets forth information regarding our executive officers and the members of our board of directors. All directors hold office for one-year terms until the election and qualification of their successors. Officers are elected by the board of directors and serve at the discretion of the board.

| Name | Age | Position |
|---|---|---|
| David Johnson | 60 | President, Chief Executive Officer and Director |
| Joseph Warusz | 61 | Chief Financial Officer, Treasurer and Secretary |
| Bradford Barton | 57 | Chief Operating Officer |
| Pellegrino Pionati | 60 | Chief Strategy and Marketing Officer |
| Joseph Leone | 64 | Director |
| Gary Restani | 71 | Director |
| Jeffrey Sklar | 55 | Director |
| Mark Wagner | 61 | Director |

The following sets forth biographical information and the qualifications and skills for our executive officers and the members of our board of directors:

David Johnson was appointed to our board and as Executive Chairman of Aquamed Technologies, Inc., our wholly owned subsidiary, on November 29, 2012. He was appointed our President and Chief Executive Officer on February 4, 2013. Mr. Johnson was formerly President of the ConvaTec Division of Bristol-Myers Squibb, Inc. until 2008 when he orchestrated a sale of the division from its pharmaceutical parent to Avista Capital Partners and Nordic Capital in a deal valued at $4.1 billion. Concurrently, he acquired and integrated the assets of Copenhagen-based Unomedical to expand ConvaTec Inc.'s manufacturing and infrastructure into Europe. From 2008 through 2012, Mr. Johnson served as the Chief Executive Officer of ConvaTec Inc. Prior to his tenure with ConvaTec Inc., Mr. Johnson held several senior positions in the U.S., Europe and Canada with Zimmer Inc., Fisher Scientific, and Baxter Corporation. He served as a member of ConvaTec Inc.'s board of directors and the board of the Advanced Medical Technology Association (AdvaMed), where he chaired the Global Wound Sector Team for four years. Mr. Johnson received an Undergraduate Business Degree in Marketing from the Northern Alberta Institute of Technology in Edmonton, Alberta, Canada, completed the INSEAD Advanced Management Program in Fontainbleau, France, and is a fellow from the Wharton School of the University of Pennsylvania. Mr. Johnson's extensive experience in the pharmaceutical and biotechnology fields, as well as his executive leadership experience, make him an asset that will serve as a bridge between the board of directors and our executive officers.

Joseph M. Warusz, CPA was appointed to serve as our Chief Financial Officer, Treasurer and Secretary on April 1, 2018. Mr. Warusz has more than 25 years of diversified management experience at a public accounting firm and array of public companies in the life sciences sector. Most recently, he served as Chief Financial Officer of Soligenix, Inc., a publicly-traded biotechnology company focused on developing products that address unmet medical needs in the areas of inflammation, oncology and biodefense, from June 2010 to June 2016, when he retired. Prior to that, he held senior financial positions at Amicus Therapeutics, Orchid BioSciences and Bristol Myers Squibb. Mr. Warusz started his career with KPMG, formerly known as Peat Marwick Main & Co. Mr. Warusz received his BS in accounting and MBA in finance at Drexel University and is a Certified Public Account in the state of Pennsylvania.

Bradford Barton has served as our Chief Operating Officer since August 29, 2014. Prior to that, he served as the Chief Operating Officer of our proprietary products division since May 2013. Mr. Barton was formerly President of the Americas division at ConvaTec Inc., where he led the company's core businesses in ostomy care, wound therapeutics and continence and critical care in the U.S., Canada and Latin America, from November 2010 until February 2013. Mr. Barton joined ConvaTec Inc. in 1996 and held several senior management positions across the company's business divisions and regions, including Vice

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President of the Americas division, with responsibility for the wound therapeutics business in the U.S., Canada and Puerto Rico, Vice President of the Intercontinental division as well as Vice President and General Manager of the ostomy care business in the U.S. Prior to his tenure at ConvaTec Inc., Mr. Barton also held a number of sales leadership positions at Calgon Corporation and Calgon Vestal Laboratories, Inc., which was acquired by the Steris Corporation in 1996.

Pellegrino Pionati has served as our Chief Strategy and Marketing Officer since June 15, 2015. Mr. Pionati joined us from Bayer HealthCare Pharmaceuticals, where he served as the Vice President of Marketing for the Essure portfolio and a member of the Global Franchise and Women's Health Care Leadership teams from May 2014 until May 2015. From March 2013 to May 2014, he was the President of 4P's Advisors LLC, a management consulting firm focused on strategy development, new product development and marketing for companies in the medical technology and healthcare industry. From 1998 until December 2012, Mr. Pionati served a 14 year tenure at ConvaTec, Inc., where he held several global marketing and management level positions, including President of Global Marketing, Business Development and International and President of the Intercontinental Region. Prior to joining ConvaTec, Inc., he held a variety of positions at Johnson & Johnson, Inc. in sales, service, clinical regulatory and marketing and co-led the development of an internally-backed startup, J&J Independence Technologies. Mr. Pionati holds an MBA from the University of Pittsburg's Katz School of Business and a Bachelors of Commerce in Marketing from Concordia University of Montreal.

Joseph Leone has served as a member of our board of directors since January 3, 2011. Mr. Leone spent more than 24 years with CIT Group, one of the nation's largest small and mid-size business lenders, and held several senior-level positions at CIT, including Vice Chairman and Chief Financial Officer from May 1995 through April 2010. From 1975 through 1983, Mr. Leone was employed by KPMG – Peat Marwick as a Senior Manager for Financial Services Clients including Citibank and Manufacturers Hanover Bank. He has been a Certified Public Accountant since 1977. Mr. Leone is a graduate of Baruch College (BBA in Accounting) and the Advanced Management Program at Harvard Business School. Mr. Leone serves as a Trustee and the Chairman of the Audit Committee of The Baruch College Fund. Since December 2012, Mr. Leone has served as Director of RMH Franchise Holdings, a privately owned company with over 150 franchise restaurants in 15 states and revenues over $350 million. Mr. Leone's extensive background in accounting and finance makes him a valuable member of the board.

Gary Restani has served as a member of our board of directors since July 21, 2014. Until April 2014, he was President and Chief Executive Officer of Spiracur Inc., a privately held medical device company focused on the development of innovative wound healing technologies. Mr. Restani has more than 40 years of experience in the medical device industry. He served as President and Chief Operating Officer of Hansen Medical, Inc. from October 2006 to February 28, 2009. From December 1999 to June 2006, he served as President of ConvaTec, Inc. From March 1995 to November 1999, Mr. Restani served as the President of various international divisions of Zimmer, Inc., a medical device and surgical tool company. From March 1990 to February 1995, Mr. Restani served as President of various international divisions of Smith & Nephew Orthopedics, Inc., an orthopedics, endoscopy and wound management company. He served as Director of Synovis Orthopedic and Woundcare, Inc. (alternate name, Pegasus Biologics, Inc.) from 2007 to 2011. Mr. Restani served as a Director of Corpak Medsystems until 2014, and with DFine Inc. from 2007 to 2012. He served on the board of AdvaMed from 1997 to 2006 as well as the Leadership Board of the Cleveland Clinic's Center for Digestive Diseases from 2000 to 2006. He served as a Director of Hansen Medical, Inc. from September 2006 to June 17, 2009. He attended Sir George Williams University and Loyola University and holds a certificate from Dartmouth College for completing the Tuck School of Business' General Management Executive Program. Mr. Restani's extensive experience in the medical technology sector, as well as his executive leadership experience, make him a valuable resource on the board.

Jeffrey Sklar has served as a member of our board of directors since January 3, 2011. Mr. Sklar has served as the Managing Partner of Sklar, Heyman Hirshfield, & Kantor LLP, a regional accounting firm, where he oversees the industry specialization team for non-bank financial institutions and for forensic and investigative auditing services, since January 2010 and prior to that, from January 2006 to December 2009, he served as an audit partner. Since 2000, Mr. Sklar has also served as the Managing Director of SHC Consulting Group, LLC. Mr. Sklar served Public Savings Bank as a Director, as the Chair of the Compliance and Risk Committee, and as a member of the Audit Committee from September 2010 to

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September 2011. In addition to being a Certified Public Accountant, Mr. Sklar is a Certified Financial Crime Specialist, Certified Anti-Money Laundering Specialist, Certified Fraud Specialist and Certified in Financial Forensics by the American Institute of CPAs. He also serves on the Advisory Board of the Association of Financial Crime Specialists. Mr. Sklar's qualifications to serve on the board include his extensive background in accounting and finance.

Mark Wagner was appointed to our board of directors on May 29, 2015. He previously served as a director and as the President and Chief Executive Officer of Celleration from June 2009 through our acquisition of Celleration. Prior to joining Celleration, he cofounded Orasi Medical Inc., a privately held medical device and technology company, and served as a member of its board of directors from 2007 through 2012. Mr. Wagner has also served as Chief Executive Officer at several emerging companies in the medical device and healthcare industry, including ProVation Medical, Inc., a health information technology company, Survivalink Corporation, a medical device manufacturer, and Altiva Corporation, a spinal implant device company. Earlier in his career, Mr. Wagner held executive and management level positions at Nellcor Puritan Bennett and numerous other positions during his 15 year tenure with GE Healthcare. He is currently on the board of directors of Minnetronix, Inc. and Preceptis Medical. Mr. Wagner holds a B.S. in Business Administration from the University of Southern California. Mr. Wagner has decades of leadership experience in the medical device field and healthcare industry, as well as his traditional corporate background with emerging growth companies, which makes him a valuable resource on the board of directors.

The board of directors regards all of the individuals above as competent professionals with many years of experience in the business community. The board of directors believes that the overall experience and knowledge of the members of the board of directors will contribute to the overall success of our business.

Family Relationships

There are no family relationships among any of our director or executive officers.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires our directors and officers, and persons who own more than ten percent of our common stock, to file with the SEC initial reports of ownership and reports of changes in ownership of our common stock. Directors, officers and persons who own more than ten percent of our common stock are required by SEC regulations to furnish us with copies of all Section 16(a) forms they file.

To our knowledge, based solely on a review of the copies of such reports furnished to us, during the fiscal year ended December 31, 2017, each of our directors, officers and greater than ten percent stockholders complied with all Section 16(a) filing requirements applicable to our directors, officers and greater than ten percent stockholders, except for one late one late Form 4 filed by Mr. Pionati with respect to one transaction.

Code of Ethics

We have adopted a code of corporate governance and ethics that applies to all our directors and employees, including the principal executive officer, principal financial officer, principal accounting officer and controller. The full text of our Amended and Restated Code of Corporate Governance and Ethics is published on the Investors section of our website at www.alliqua.com. We intend to disclose any future amendments to certain provisions of the Amended and Restated Code of Corporate Governance and Ethics, or waivers of such provisions granted to executive officers and directors, on this website within four business days following the date of any such amendment or waiver.

Involvement in Certain Legal Proceedings

There have been no material legal proceedings that would require disclosure under the federal securities laws that are material to an evaluation of the ability or integrity of our directors or executive officers, or in which any director, officer, nominee or principal stockholder, or any affiliate thereof, is a party adverse to us or has a material interest adverse to us.

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Board Committees

Our board of directors has established an audit committee, a nominating and corporate governance committee and a compensation committee, each of which has the composition and responsibilities described below.

Audit Committee. The audit committee is currently comprised of Messrs. Leone, Sklar and Restani, each of whom our board has determined to be financially literate and qualify as an independent director under Section 5605(a)(2) and Section 5605(c)(2) of the rules of the Nasdaq Stock Market. Mr. Leone is the chairman of our audit committee. In addition, each of Messrs. Leone and Sklar qualify as an audit committee financial expert, as defined in Item 407(d)(5)(ii) of Regulation S-K. The function of the audit committee is to assist the board of directors in its oversight of (1) the integrity of our financial statements, (2) compliance with legal and regulatory requirements, (3) the qualifications, independence and performance of our independent auditors and (4) the performance of our internal audit function and internal control systems.

Nominating and Corporate Governance Committee. The nominating and corporate governance committee is currently comprised of Messrs. Leone and Restani, each of whom qualifies as an independent director under Section 5605(a)(2) of the rules of the Nasdaq Stock Market. The primary function of the nominating and corporate governance committee is to identify individuals qualified to become board members, consistent with criteria approved by the board, and select the director nominees for election at each annual meeting of stockholders. The nominating and corporate governance committee will consider all proposed nominees for the board of directors, including those put forward by stockholders. Stockholder nominations should be addressed to the nominating and corporate governance committee in care of the Secretary, at the following address: Alliqua BioMedical, Inc., 1010 Stony Hill Road, Suite 200, Yardley, Pennsylvania 19067, in accordance with the provisions of the Company's bylaws. The nominating and corporate governance committee annually reviews with the board the applicable skills and characteristics required of board nominees in the context of current board composition and Company circumstances. In making its recommendations to the board, the nominating and corporate governance committee considers all factors it considers appropriate, which may include experience, accomplishments, education, understanding of the business and the industry in which the Company operates, specific skills, general business acumen and the highest personal and professional integrity.

Compensation Committee. The compensation committee is currently comprised of Messrs. Restani and Sklar, each of whom qualifies as an independent director under Section 5605(a)(2) of the rules of the Nasdaq Stock Market, an "outside director" for purposes of Section 162(m) of the Code and a "non-employee director" for purposes of Section 16b-3 under the Exchange Act and does not have a relationship to us which is material to his ability to be independent from management in connection with the duties of a compensation committee member, as described in Section 5605(d)(2) of the rules of the Nasdaq Stock Market. Mr. Sklar is the chairman of the compensation committee. The function of the compensation committee is to discharge the board of directors' responsibilities relating to compensation of our executive officers. The primary objective of the compensation committee is to approve and evaluate all of our compensation plans, policies and programs insofar as they affect our executive officers.

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ITEM 11.
EXECUTIVE COMPENSATION

Compensation Philosophy and Process

The responsibility for establishing, administering and interpreting our policies governing the compensation and benefits for our executive officers lies with our compensation committee and our board of directors. Our board of directors has not retained the services of any compensation consultants in connection with the compensation of our executive officers.

The goals of our executive compensation program are to attract, motivate and retain individuals with the skills and qualities necessary to support and develop our business within the framework of our size and available resources. We have designed our executive compensation program to achieve the following objectives:

- attract and retain executives experienced in developing and delivering products such as our own;
- motivate and reward executives whose experience and skills are critical to our success;
- reward performance; and
- align the interests of our executive officers and stockholders by motivating executive officers to increase stockholder value.

The compensation committee may delegate its responsibilities and authority to a subcommittee. Our executive officers played no role in determining or recommending the amount or form of executive and director compensation for 2016.

2017 and 2016 Summary Compensation Table

The table below sets forth the compensation earned by our named executive officers for the fiscal years ended December 31, 2017 and 2016. Unless otherwise noted, all information presented in this Item 11 reflects a one-for-ten reverse stock split of our common stock that occurred on October 5, 2017.

| Name and Principal Position | Year | Salary | Bonus | Stock Awards(1) | Option Awards(1) | All Other Compensation | Total |
|---|---|---|---|---|---|---|---|
| David Johnson President and Chief Executive Officer | 2017 | $ 350,000 | $ 276,500(3) | $ 274,000 | $ — | $ 11,400(5) | $ 911,900 |
| | 2016 | $ 350,000 | $ 245,000(4) | $ 258,000 | $ — | $ 11,400(5) | $ 864,400 |
| Brian Posner(2) Chief Financial Officer, Treasurer and Secretary | 2017 | $ 246,800 | $ 118,310(8) | $ 103,829 | $ — | $ 8,400(6) | $ 477,339 |
| | 2016 | $ 240,000 | $ 100,800(4) | $ 86,000 | $ — | $ 8,400(6) | $ 435,200 |
| Bradford Barton Chief | 2017 | $ 246,800 | $ 118,310(3) | $ 103,829 | $ — | $ 8,400(7) | $ 477,339 |
| | 2016 | $ 240,000 | $ 100,800(4) | $ 86,000 | $ — | $ 8,400(7) | $ 435,200 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Operating Officer | | | | | | | |
| Pellegrino Pionati | 2017 | $ 246,800 | $ 118,310(3) | $ 103,829 | $ — | $ 8,400(6) | $ 477,339 |
| Chief Strategy and Marketing Officer | 2016 | $ 240,000 | $ 100,800(4) | $ 86,000 | $ — | $ 8,400(6) | $ 435,200 |

(1)
The amounts reported represent the aggregate grant date fair value of the awards, calculated in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718 — Compensation — Stock Compensation ("ASC 718"), with the exception that the amount shown assumes no forfeitures. Assumptions used in the calculation of these amounts are included in "Note 2. Summary of Significant Accounting Policies — Stock-Based Compensation" and "Note 15. Stockholders' Equity" to our audited financial statements for the fiscal year ended December 31, 2017 included in this Annual Report.

(2)
Effective April 1, 2017, Mr. Posner resigned as Chief Financial Officer.

(3)
Discretionary year-end performance bonus earned in 2017 to be paid in 2018.

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(4)
Discretionary year-end performance bonus earned in 2016 and paid in 2017 in shares of restricted stock.

(5)
Comprised of (i) auto expense allowance payments of $9,000 and (ii) life insurance premium payments of $2,400.

(6)
Comprised of auto expense allowance payments.

(7)
Comprised of auto expense and telephone allowance payments.

(8)
Discretionary year-end performance bonus earned in 2017 to be paid in a lump sum payment in 2018 on the earlier of (i) July 30, 2018 or (ii) within 30 days following the closing of the Asset Sale Transaction.

Agreements with Executive Officers

David Johnson

In connection with the appointment of David Johnson as Chief Executive Officer, on February 4, 2013, we entered into an Executive Employment Agreement with Mr. Johnson. The employment agreement has an initial term of three years and will be automatically renewed for an additional one-year term unless terminated by either party upon written notice provided not less than four months before the end of the initial term. Under the employment agreement, Mr. Johnson is entitled to an annual salary of $350,000, which may be increased, but not decreased, at the board's discretion. Mr. Johnson is also eligible to receive an annual bonus of up to 100% of his base salary, provided that he is employed with us on December 31 of the year to which the bonus relates. The amount of Mr. Johnson's annual bonus, if any, will be determined based upon the achievement of certain performance criteria. The performance criteria for each year will be set by the compensation committee after consultation with Mr. Johnson. Mr. Johnson is also entitled to a monthly automobile allowance of $750 per month, reimbursement of up to $200 per month for the cost of a term life insurance policy having a face amount of $1 million, and benefit plans provided by us to all employees and executive employees.

Mr. Johnson is entitled to receive the following equity awards pursuant to our 2011 Long-Term Incentive Plan or, if there are not sufficient shares available under the 2011 Long-Term Incentive Plan, pursuant to a stand-alone award agreement:

(i)
a nonqualified stock option to purchase a number of shares of our common stock equal to three percent of the total outstanding common stock (determined on a fully-diluted basis as of February 4, 2013), with the following terms: (A) an exercise price equal the fair market value of a share of common stock on the date of grant; (B) immediate vesting; and (C) a term of 10 years; and

(ii)
an award of nonqualified stock options on the last business day of each calendar quarter through February 4, 2016 relating to a number of shares of common stock equal to 0.333% percent of our outstanding common stock as of the date of grant (determined on a fully-diluted basis), with the following terms: (A) an exercise price equal to the fair market value of a share of common stock on the date of grant, (B) the first eight (8) grants will be 100% vested on the first anniversary of their respective dates of grant and the last four (4) grants will be 100% vested on the date of grant, (C) immediate vesting of any unvested restricted stock units upon the effective date of a "Change in Control" (as defined in the 2011 Long-Term Incentive Plan) and (D) a term of ten years.

Mr. Johnson is also eligible to receive additional equity awards in such amount and on such terms as is determined by the board. Mr. Johnson received the first award set forth above on February 4, 2013. He was awarded options to

purchase 27,923 shares of common stock at an exercise price of $32.80 per share. Mr. Johnson received stock option grants for the first, second and third calendar quarters of 2013 under the second award set forth above on November 14, 2013. He was awarded an aggregate of 11,713 shares of common stock at an exercise price of $35.00 per share. The foregoing share numbers and prices have been adjusted for the 1 for 43.75 reverse stock split of our common stock that occurred on November 18, 2013 and a 1 for 10 reverse stock split of our common stock that occurred on October 5, 2017.

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On December 20, 2013, we entered into a First Amendment to Executive Employment Agreement with Mr. Johnson, which amended the employment agreement to provide for a single stock option award in lieu of all of the remaining quarterly grants thereunder. Pursuant to the amendment, Mr. Johnson received a nonqualified stock option to purchase 73,058 shares of our common stock at an exercise price equal to $68.20 per share on December 20, 2013. The option has a term of ten years, with one-ninth of the optioned shares vesting on the first day of each calendar quarter during the period commencing on January 1, 2014 and ending on February 4, 2016, provided that Mr. Johnson remains employed by us on such date, and subject to the terms and conditions of that certain nonqualified stock option agreement by and between us and Mr. Johnson, effective as of December 20, 2013.

The employment agreement also contains certain confidentiality, non-solicitation and non-disparagement requirements for Mr. Johnson.

We have the right to terminate the employment agreement at any time for cause. “Cause” is defined as Mr. Johnson’s commission of any of the following: an act of theft, embezzlement or fraud; an act of intentional dishonesty or willful misrepresentation of a material nature; any willful misconduct with regard to us; a material breach of any fiduciary duties owed to us; conviction of, or pleading nolo contendere or guilty to, a felony or misdemeanor (other than a traffic infraction) that is reasonably likely to cause damage to us or our reputation; a material violation of our written policies, standards or guidelines that is not cured within 30 days; refusal to perform the material duties and responsibilities required by the employment agreement, subject to a 30 day cure period; and a material breach of the employment agreement or any other agreement to which Mr. Johnson and we are parties that is not cured within 30 days. The employment agreement may also be terminated by either party at any time without cause upon 30 days written notice, and by Mr. Johnson with good reason upon 90 days written notice, which shall include a 30 day cure period. “Good Reason” is defined as the occurrence, without Mr. Johnson’s prior written consent, of a material reduction in base salary, a material diminution in title, duties, responsibility or authority, relocation of his primary office to an office located 35 miles from the office in Langhorne, Pennsylvania, a material breach by us of any agreement with Mr. Johnson or failure by us to have any successor assume the employment agreement.

If Mr. Johnson is terminated by reason of death or disability, we will pay to him or his estate or a pro rata portion of any earned, but unpaid, bonus for services rendered during the year preceding the date of termination. If Mr. Johnson’s employment is terminated by us without cause or by him with good reason, subject to compliance with the confidentiality, non-solicitation and non-disparagement requirements of the employment agreement and the execution of a release of claims, (i) we will pay him an amount equal to the sum of 24 months base salary; (ii) either his pro rata bonus for the year if termination of employment is in the first two years of the term, or two years of bonus calculated at the target bonus level (payable over 24 months) if termination is after the first two years of the term; (iii) all outstanding stock options and other equity awards granted to Mr. Johnson will vest, to the extent not previously vested, and the stock options will remain exercisable for three months; and (iv) we will provide continued healthcare coverage until the earlier of (x) the expiration of the severance period, or (y) the date that Mr. Johnson’s “COBRA” coverage terminates or expires or (z) the date that Mr. Johnson obtains new employment that offers substantially similar health benefits.

Brian Posner

Posner Separation Agreement

On March 15, 2018, Brian Posner delivered his resignation as Chief Financial Officer, Secretary and Treasurer of the Company, effective April 1, 2018.

In connection with his resignation, on March 15, 2018, the Company and Mr. Posner entered into a general release and severance agreement (the “Separation Agreement”), which became effective on March 23, 2018. Pursuant to the Separation Agreement, Mr. Posner released the Company from any and all claims. In consideration of the Separation Agreement and his general release of claims, Mr. Posner is entitled (i) to his 2017 performance bonus in the amount of $118,310.40 (less applicable taxes and other withholdings), and (ii) in the event of the final consummation of the Asset Sale Transaction, provided such transaction occurs on or before September 30, 2018 (the “Sale Consummation”): (A) severance pay in an

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amount equal to his base salary for twelve (12) months, less applicable taxes and other withholdings, payable in a lump sum payment on or before the thirtieth (30th) day following the date of the Sale Consummation, and (B) the stock options and restricted stock previously granted to Mr. Posner: (1) shall remain outstanding and eligible for vesting as if he were employed by the Company through the date of the Sale Consummation and shall become fully and immediately vested upon the Sale Consummation, and (2) the stock options shall remain exercisable for two (2) years following April 1, 2018, or, if sooner, until the end of the applicable stock option's term.

Posner Employment Agreement

In connection with his appointment as Chief Financial Officer, pursuant to an offer letter dated July 19, 2013, we agreed to pay Mr. Posner an annual salary of $240,000, an annual bonus of up to 60% of his prorated annual base salary based on the achievement of mutually agreed upon objectives (either in equity or cash, to be determined), a monthly stipend of $700 to cover auto expenses, and medical, dental, 401(k), group life and long-term disability benefits.

On June 5, 2015, we entered into an employment agreement with Mr. Posner (the "Posner Employment Agreement"), which amended and restated the terms set forth in that certain offer letter dated July 19, 2013 in its entirety. The Posner Employment Agreement provided for a term of employment that continues until terminated by either party. Under the Posner Employment Agreement, Mr. Posner was entitled to an annual base salary of $240,000, less applicable payroll deductions and tax withholdings. He was also eligible to receive an annual bonus of up to 60% of his annual base salary for each calendar year during employment based upon the achievement of certain performance criteria, provided that he is employed by us through the end of the applicable calendar year to which the bonus relates, subject to certain exceptions. The performance criteria for each year was established reasonably and in good faith by the board. Mr. Posner was also entitled to a monthly automobile allowance of $700 per month, reimbursement of certain out-of-pocket expenses reasonably incurred in connection with the performance of his services and benefit plans provided by us to all employees.

The Posner Employment Agreement also contained certain confidentiality, non-competition, non-solicitation and assignment of work product covenants for Mr. Posner.

Mr. Posner's employment was terminable by either party at any time upon written notice. If Mr. Posner's employment was terminated by us for cause or by Mr. Posner without good reason, we were to pay Mr. Posner an amount equal to the sum of (i) all unpaid base salary accrued through the date of termination, (ii) all unpaid performance bonus earned and accrued for a previously completed calendar year, (iii) all accrued and unpaid vacation or similar pay required by law and (iv) any unreimbursed expenses properly incurred prior to the termination date.

If Mr. Posner's employment was terminated by us without cause or by Mr. Posner for good reason, subject to the timely execution and return by Mr. Posner of an irrevocable release of claims within 60 days following the date of termination, then we were to pay Mr. Posner a lump sum amount equal to the accrued obligations set forth in (i) through (iv) above, plus severance pay in an amount equal to his base salary for 12 months, payable in equal installments in accordance with our normal payroll policies. If, prior to such termination, Mr. Posner was employed by us through at least July 1st of the applicable calendar year, he was also eligible to receive a pro-rata portion of any annual performance bonus earned during such calendar year, with the amount prorated based on the number of days employed during such calendar year. In addition, all outstanding stock options and restricted stock awards granted to Mr. Posner were to immediately vest in full and the stock options remain exercisable for two years following the termination date or, if sooner, until the end of the applicable stock option's term. We were also provide continued health benefits coverage until the earlier of the expiration of the 12 month severance period and the date that Mr. Posner becomes eligible for comparable employer sponsored health benefits.

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Bradford Barton

In connection with his appointment as Chief Operating Officer, pursuant to an offer letter dated May 14, 2013, we agreed to pay Mr. Barton an annual salary of $240,000, an annual bonus of up to 60% of his prorated annual base salary based on the achievement of mutually agreed upon objectives, a monthly stipend of $700 to cover auto and telephone expenses, and medical, dental, 401(k), group life and long-term disability benefits.

On June 5, 2015, we entered into an employment agreement with Mr. Barton (the "Barton Employment Agreement"), which amended and restated the terms set forth in that certain offer letter dated May 14, 2013 in its entirety. The Barton Employment Agreement provides for a term of employment that continues until terminated by either party. Under the Barton Employment Agreement, Mr. Barton is entitled to an annual base salary of $240,000, less applicable payroll deductions and tax withholdings. He is also eligible to receive an annual bonus of up to 60% of his annual base salary for each calendar year during employment based upon the achievement of certain performance criteria, provided that he is employed by us through the end of the applicable calendar year to which the bonus relates, subject to certain exceptions. The performance criteria for each year will be established reasonably and in good faith by the board. Mr. Barton is also entitled to a monthly automobile allowance of $700 per month, reimbursement of certain out-of-pocket expenses reasonably incurred in connection with the performance of his services and benefit plans provided by us to all employees.

The Barton Employment Agreement also contains certain confidentiality, non-competition, non-solicitation and assignment of work product covenants for Mr. Barton.

Mr. Barton's employment may be terminated by either party at any time upon written notice. If Mr. Barton's employment is terminated by us for cause or by Mr. Barton without good reason, we will pay Mr. Barton an amount equal to the sum of (i) all unpaid base salary accrued through the date of termination, (ii) all unpaid performance bonus earned and accrued for a previously completed calendar year, (iii) all accrued and unpaid vacation or similar pay required by law and (iv) any unreimbursed expenses properly incurred prior to the termination date.

If Mr. Barton's employment is terminated by us without cause or by Mr. Barton for good reason, subject to the timely execution and return by Mr. Barton of a release of claims of an irrevocable release of claims within 60 days following the date of termination, then we will pay Mr. Barton a lump sum amount equal to the accrued obligations set forth in (i) through (iv) above, plus severance pay in an amount equal to his base salary for 12 months, payable in equal installments in accordance with our normal payroll policies. If, prior to such termination, Mr. Barton was employed by us through at least July 1st of the applicable calendar year, he will also be eligible to receive a pro-rata portion of any annual performance bonus earned during such calendar year, with the amount prorated based on the number of days employed during such calendar year. In addition, all outstanding stock options and restricted stock awards granted to Mr. Barton will immediately vest in full and the stock options will remain exercisable for two years following the termination date or, if sooner, until the end of the applicable stock option's term. We will also provide continued health benefits coverage until the earlier of the expiration of the 12 month severance period and the date that Mr. Barton becomes eligible for comparable employer sponsored health benefits.

Pellegrino Pionati

In connection with Mr. Pionati's appointment as Chief Strategy and Marketing Officer, on June 3, 2015, we entered into an employment agreement with Mr. Pionati (the "Pionati Employment Agreement") for a term of employment that commenced on June 15, 2015 and continues until terminated by either party. Under the Pionati Employment Agreement, Mr. Pionati is entitled to an annual base salary of $240,000, less applicable payroll deductions and tax withholdings. He is also eligible to receive an annual bonus of up to 60% of his annual base salary for each calendar year during employment based upon the achievement of certain performance criteria, provided that he is employed by us through the end of the applicable calendar year to which the bonus relates, subject to certain exceptions. The performance criteria for each year will be established reasonably and in good faith by our board of directors.

Mr. Pionati is also entitled to a monthly automobile allowance of $700 per month, reimbursement of certain out-of-pocket expenses reasonably incurred in connection with the performance of his services and benefit plans provided by us to all employees.

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The Pionati Employment Agreement also contains certain confidentiality, non-competition, non-solicitation and assignment of work product covenants for Mr. Pionati.

Mr. Pionati's employment may be terminated by either party at any time upon written notice. If Mr. Pionati's employment is terminated by us for cause or by Mr. Pionati without good reason, we will pay Mr. Pionati an amount equal to the sum of (i) all unpaid base salary accrued through the date of termination, (ii) all unpaid performance bonus earned and accrued for a previously completed calendar year, (iii) all accrued and unpaid vacation or similar pay required by law and (iv) any unreimbursed expenses properly incurred prior to the termination date.

If Mr. Pionati's employment is terminated by us without cause or by Mr. Pionati for good reason, subject to the timely execution and return by Mr. Pionati of an irrevocable release of claims within 60 days following the date of termination, then we will pay Mr. Pionati a lump sum amount equal to the accrued obligations set forth in (i) through (iv) above, plus severance pay in an amount equal to his base salary for 12 months, payable in equal installments in accordance with our normal payroll policies. If, prior to such termination, Mr. Pionati was employed by us through at least July 1st of the applicable calendar year, he will also be eligible to receive a pro-rata portion of any annual performance bonus earned during such calendar year, with the amount prorated based on the number of days employed during such calendar year. In addition, all outstanding stock options and restricted stock awards granted to Mr. Pionati will immediately vest in full and the stock options will remain exercisable for two years following the termination date or, if sooner, until the end of the applicable stock option's term. We will also provide continued health benefits coverage until the earlier of the expiration of the 12 month severance period and the date that Mr. Pionati becomes eligible for comparable employer sponsored health benefits.

In connection with his appointment, on June 15, 2015, Mr. Pionati received (i) stock options to purchase 10,000 shares of common stock at an exercise of $52.50 per share, with one-third vesting on each of June 15, 2016, 2017 and 2018, and (ii) a restricted stock award of 12,000 shares of restricted common stock with 25% vesting on each of June 15, 2015, 2016, 2017 and 2018, in each case, provided that Mr. Pionati is employed by or providing services to us through the applicable vesting date, subject to the terms and conditions of the Alliqua BioMedical, Inc. 2014 Long-Term Incentive Plan.

Outstanding Equity Awards at Fiscal Year End

The following table sets forth information regarding equity awards that have been previously awarded to each of the named executive officers and which remained outstanding as of December 31, 2017:

| | Option Awards | | | | Stock Awards | |
|---|---|---|---|---|---|---|
| Name | Number of Securities Underlying Unexercised Options Exercisable | Number of Securities Underlying Unexercised Options Unexercisable | Option Exercise Price | Option Expiration Date | Number of Shares or Units of Stock That Have Not Vested | Market Value of Shares or Units of Stock That Have Not Vested |
| David Johnson | 5,920 | — | $ 43.80 | 11/29/22 | | |
| David Johnson | 5,920 | — | $ 65.60 | 11/29/22 | | |
| David Johnson | 5,920 | — | $ 87.50 | 11/29/22 | | |
| David Johnson | 27,923 | — | $ 32.80 | 02/04/23 | | |
| David Johnson | 11,713 | — | $ 35.00 | 11/14/23 | | |
| David Johnson | 73,058 | — | $ 68.20 | 12/20/23 | | |
| David Johnson | 7,668 | 3,834(1) | $ 62.30 | 02/06/25 | | |
| David Johnson | | | | | 10,000(2) | $ 18,100(3) |
| David Johnson | | | | | 30,000(4) | $ 54,300(3) |
| David Johnson | | | | | 50,000(5) | $ 90,500(3) |
| David Johnson | | | | | 30,000(6) | $ 54,300(3) |

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| | Option Awards | | | | Stock Awards | |
|---|---|---|---|---|---|---|
| Name | Number of Securities Underlying Unexercised Options Exercisable | Number of Securities Underlying Unexercised Options Unexercisable | Option Exercise Price | Option Expiration Date | Number of Shares or Units of Stock That Have Not Vested | Market Value of Shares or Units of Stock That Have Not Vested |
| Brian Posner | 6,172 | — | $ 43.80 | 09/03/23 | | |
| Brian Posner | 6,172 | — | $ 65.60 | 09/03/23 | | |
| Brian Posner | 6,172 | — | $ 87.50 | 09/03/23 | | |
| Brian Posner | 7,002 | — | $ 90.00 | 03/06/24 | | |
| Brian Posner | 7,668 | 3,834(1) | $ 62.30 | 02/06/25 | | |
| Brian Posner | | | | | 3,334(2) | $ 6,035(3) |
| Brian Posner | | | | | 10,002(4) | $ 18,104(3) |
| Brian Posner | | | | | 10,000(6) | $ 18,100(3) |
| Bradford Barton | 5,487 | — | $ 43.80 | 05/10/23 | | |
| Bradford Barton | 5,487 | — | $ 54.70 | 05/10/23 | | |
| Bradford Barton | 5,487 | — | $ 65.60 | 05/10/23 | | |
| Bradford Barton | 5,487 | — | $ 87.50 | 05/10/23 | | |
| Bradford Barton | 5,487 | — | $ 109.40 | 05/10/23 | | |
| Bradford Barton | 7,002 | — | $ 90.00 | 03/06/24 | | |
| Bradford Barton | 7,668 | 3,834(1) | $ 62.30 | 02/06/25 | | |
| Bradford Barton | | | | | 3,334(2) | $ 6,035(3) |
| Bradford Barton | | | | | 10,002(4) | $ 18,104(3) |
| Bradford Barton | | | | | 10,000(6) | $ 18,100(3) |
| Pellegrino Pionati | 6,668 | 3,334(7) | $ 52.50 | 06/15/25 | | |
| Pellegrino Pionati | | | | | 3,000(7) | $ 5,430(3) |
| Pellegrino Pionati | | | | | 10,002(4) | $ 18,104(3) |
| Pellegrino Pionati | | | | | 10,000(6) | $ 18,100(3) |

(1)
Vests and becomes exercisable on February 6, 2018.

(2)
Represents a restricted stock award (“RSA”) granted on February 6, 2015. The RSA vests on February 6, 2018.

(3)
Computed by multiplying the number of non-vested RSA shares by $1.81, which was the closing market price of our common stock on December 29, 2017.

(4)
Represents a RSA granted on May 11, 2016. The RSA is performance based and vests if the Company meets specific revenue targets within a five-year period from the date of grant.

(5)
Represents a RSA granted on June 23, 2017. The RSA vests on June 23, 2018.

(6)
Represents a RSA granted on June 28, 2017. The RSA is performance based and vests if the Company meets specific EBITDA targets within a five-year period from the date of grant.

(7)
Vests and becomes exercisable on June 15, 2018.

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Change of Control Agreements

We do not currently have any plans providing for the payment of retirement benefits to our officers or directors, other than as described under “Agreements with Executive Officers” above.

We do not currently have any change-of-control or severance agreements with any of our executive officers or directors, other than as described under “Agreements with Executive Officers” above. In the event of the termination of employment of the named executive officers, any and all unexercised stock options shall expire and no longer be exercisable after a specified time following the date of the termination, other than as described under “Agreements with Executive Officers” above.

2011 Long-Term Incentive Plan

Our board of directors adopted the 2011 Long-Term Incentive Plan on November 7, 2011, which was approved by our stockholders at the 2011 annual meeting held on December 19, 2011. The purpose of the 2011 Long-Term Incentive Plan is to enable us to remain competitive and innovative in its ability to attract, motivate, reward and retain the services of key employees, certain key contractors, and non-employee directors. The 2011 Long-Term Incentive Plan provides for the granting of incentive stock options, nonqualified stock options, stock appreciation rights, restricted stock, restricted stock units, performance awards, dividend equivalent rights, and other awards which may be granted singly, in combination, or in tandem, and which may be paid in cash or shares of common stock. Our 2011 Long-Term Incentive Plan is expected to provide flexibility to its compensation methods in order to adapt the compensation of employees, contractors, and non-employee directors to a changing business environment, after giving due consideration to competitive conditions and the impact of federal tax laws. The 2011 Long-Term Incentive Plan is administered by our board of directors. A total of 182,857 shares of common stock are reserved for award under the 2011 Plan, of which 30,903 remained available for future awards as of December 31, 2017.

2014 Long-Term Incentive Plan

Our board of directors approved the 2014 Long-Term Incentive Plan (the “2014 Plan”) on April 10, 2014, which was approved by our stockholders at the 2014 annual meeting held on June 5, 2014 and adopted on that date. On February 26, 2015, our board of directors approved an amendment to the 2014 Plan to increase the total number of shares available for issuance pursuant to awards under the 2014 Plan, which was approved by stockholders at our 2015 annual meeting held on May 6, 2015.

The purpose of the 2014 Plan is to enable us to remain competitive and innovative in our ability to attract, motivate, reward and retain the services of key employees, certain key contractors, and non-employee directors. The 2014 Plan provides for the granting of incentive stock options, nonqualified stock options, stock appreciation rights, restricted stock, restricted stock units, performance awards, dividend equivalent rights, and other awards which may be granted singly, in combination, or in tandem, and which may be paid in cash or shares of common stock. The 2014 Plan is expected to provide flexibility to its compensation methods in order to adapt the compensation of employees, contractors, and non-employee directors to a changing business environment, after giving due consideration to competitive conditions and the impact of federal tax laws. The 2014 Plan is administered by our board of directors. A total of 950,000 shares of common stock are reserved for award under the 2014 Plan, of which 92,459 remained available for future awards as of December 31, 2017.

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Director Compensation

The following table provides compensation information concerning our directors, other than David Johnson, during the year ended December 31, 2017:

| | Year | Fees Earned or Paid in Cash | Option Awards(1) | Total |
|---|---|---|---|---|
| Jerome Zeldis, M.D., Ph.D.(2) | 2017 | $ 30,000 | $ 22,318(3) | $ 52,318 |
| Winston Kung(4) | 2017 | $ —(5) | $ —(6) | $ — |
| Joseph Leone | 2017 | $ 28,125 | $ 22,318(3) | $ 50,443 |
| Gary Restani | 2017 | $ 27,189 | $ 22,318(3) | $ 49,507 |
| Jeffrey Sklar | 2017 | $ 28,750 | $ 22,318(3) | $ 51,068 |
| Mark Wagner | 2017 | $ 18,750 | $ 22,318(3) | $ 41,068 |

(1)
The amounts reported represent the aggregate grant date fair value of the awards, calculated in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718 — Compensation — Stock Compensation ("ASC 718"), with the exception that the amount shown assumes no forfeitures. Assumptions used in the calculation of these amounts are included in "Note 2. Summary of Significant Accounting Policies — Stock-Based Compensation" and "Note 15. Stockholders' Equity" to our audited financial statements for the fiscal year ended December 31, 2017 included in this Annual Report.

(2)
Dr. Zeldis resigned as chairman and director on December 5, 2017.

(3)
An option to purchase 9,009 shares of common stock was granted during the year ended December 31, 2017.

(4)
Mr. Kung resigned as director effective November 24, 2017.

(5)
Mr. Kung waived cash compensation for serving as a director during the year ended December 31, 2017.

(6)
Mr. Kung waived his option grant for serving as a director during the year ended December 31, 2017.

For the year ended December 31, 2017, cash compensation for non-employee directors, including the board chair, was $18,750. In addition, the audit committee chair was paid $7,500, the compensation committee chair was paid $6,250, other audit committee members were paid $3,750, other compensation committee members were paid $2,813 and nominating and corporate governance committee members, including the chair, were paid $1,875 Each non-employee director also received stock options to purchase 9,009 shares of our common stock on June 30, 2017, at an exercise price of $3.70 per share. These stock options will vest monthly over a 11 month period from the date of grant and have a ten-year term.

Mr. Kung has waived his cash compensation and stock option grant for the year ended December 31, 2017.

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ITEM 12.
SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Unless otherwise noted, all information in this Item 12 reflects a one-for-ten reverse stock split of our common stock that occurred on October 5, 2017.

Equity Compensation Plan Information

The following table provides certain information as of December 31, 2017 with respect to our equity compensation plans under which our equity securities are authorized for issuance:

| | Number of securities to be issued upon exercise of outstanding | Weighted average exercise price of outstanding options | Number of securities remaining available for future issuance |
|---|---|---|---|
| Equity compensation plans approved by security holders | 561,152 | $ 25.93 | 123,362 |
| Equity compensation plans not approved by security holders | 285,852(1) | $ 63.05 | — |
| Total | 847,004 | $ 38.46 | 123,362 |

(1)
Compromised of the following awards:

- An option granted to a director on November 27, 2012, with a term of ten years, to purchase 45,719 shares of common stock The options are scheduled to vest and become exercisable as follows: (i) options to purchase 5,715 shares of common stock with an exercise price of $87.50 per share vesting upon the date of grant; (ii) options to purchase 5,715 shares of common stock with an exercise price of $87.50 per share vesting on each of the first, second, and third year anniversaries of the date of grant; and (iii) options to purchase 22,859 shares of common stock with an exercise price of $87.50 per share vesting upon the meeting of certain performance criteria. Options to purchase 17,144 shares were forfeited prior to December 31, 2013 and are not included in the table above.

- An option granted to Mr. Johnson to purchase 17,760 shares of common stock, granted on November 27, 2012, vesting as follows: (i) options to purchase 5,920 shares of common stock at an exercise price of $43.80 per share, which vested and became exercisable on November 29, 2012; (ii) options to purchase 5,920 shares of common stock at an exercise price of $65.60 per share, which vested and became exercisable on November 29, 2013; (iii) and options to purchase 5,920 shares of common stock at an exercise price of $87.50 per share, which vested and became exercisable on November 29, 2014.

- An option granted to a consultant to purchase 4,002 shares of common stock, granted on May 10, 2013, with an exercise price of $43.80 per share and a term of ten years, vesting 2,286 shares of common stock on the date of grant and 572 shares of common stock on September 30, 2013, December 31, 2013 and March 31, 2014. 2,501 shares under this grant have been exercised and are not included in the table above.

- An option granted to an employee on May 10, 2013, with a term of ten years, to purchase 27,435 shares of common stock vesting as follows: (i) options to purchase 1,829 shares of common stock immediately on the date of grant; and

(ii) options to purchase 1,829 shares of common stock on each of the first, second, third, and fourth year anniversaries of the date of grant. The exercise price for one-fifth of each tranche is $43.80, $54.70, $65.60, $87.50 and $109.40 per share.

- An option granted to a consultant to purchase 1,716 shares of common stock, granted on May 30, 2013, with a term of ten years, vesting as follows: (i) options to purchase 572 shares of common stock vesting immediately on the date of grant with an exercise price of $43.80 per share; (ii) options to purchase 572 shares of common stock vesting on January 1, 2014 with an exercise price of $65.60 per share; and (iii) 572 shares vesting on January 1, 2015 with an exercise price of $87.50 per share.

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- An option granted to Dr. Zeldis on July 22, 2013 to purchase 62,217 shares of common stock. The options are scheduled to vest and become exercisable as follows: (i) options to purchase 20,739 shares of common stock at $65.60 per share to vest upon the filing of the Company's annual report on Form 10-K having consolidated gross revenue of at least $10 million by April 15, 2016; (ii) options to purchase 20,739 shares of common stock with an exercise price of $87.50 per share to vest upon the filing of the Company's annual report on Form 10-K having consolidated gross revenue of at least $20 million by April 17, 2017; and (iii) options to purchase 20,739 shares of common stock with an exercise price of $109.40 per share to vest upon the filing of the Company's annual report on Form 10-K having consolidated gross revenue of at least $25 million by April 17, 2018. Options to purchase 20,739 shares were forfeited prior to December 31, 2017 and are not included in the table above.

- An option granted to Mr. Posner, with a ten year term, to purchase 18,516 shares of common stock, granted on September 3, 2013. The options are scheduled to vest as follows: (i) 6,172 shares at an exercise price of $43.80 per share, which vested immediately; (ii) 6,172 shares at an exercise price of $65.60 per share, which vested upon the one year anniversary of employment; and (iii) 6,172 shares at an exercise price of $87.50 per share, which vested upon the two year anniversary of employment. The options have a term of ten years.

- A warrant to purchase 686 shares of common stock, with a five year term, at an exercise price of $43.80 was issued to a consultant on September 11, 2013, vesting in 12 equal monthly installments over the first year from the date of issuance.

- A warrant to purchase 686 shares of common stock, with a five year term, at an exercise price of $43.80 was issued to a consultant on October 28, 2013, vesting on the one year anniversary of the date of grant.

- A warrant to purchase 343 shares of common stock, with a five year term, at an exercise price of $56.90 was issued to a consultant on October 28, 2013, vesting in 12 equal monthly installments over the first year from the date of issuance.

- Warrants to two consultants to each purchase 800 shares of common stock, with a five year term, at an exercise price of $43.80 were issued on November 12, 2013, each vesting in 12 equal monthly installments over the first year from the date of issuance.

- A warrant to purchase 915 shares of common stock, with a five year term, at an exercise price of $43.80 was issued to a consultant on November 12, 2013, vesting in 12 equal monthly installments over the first year from the date of issuance.

- A warrant to purchase 1,372 shares of common stock, with a five year term, at an exercise price of $43.80 was issued to a consultant on November 12, 2013, vesting in 12 equal monthly installments over the first year from the date of issuance.

- Warrants to two consultants to each purchase 400 shares of common stock, with a five year term, at an exercise price of $56.90 were issued on November 12, 2013, each vesting in 12 equal monthly installments over the first year from

the date of issuance.

- A warrant to purchase 458 shares of common stock, with a five year term, at an exercise price of $56.90 was issued to a consultant on November 12, 2013, vesting in 12 equal monthly installments over the first year from the date of issuance.

- A warrant to purchase 686 shares of common stock, with a five year term, at an exercise price of $56.90 was issued to a consultant on November 12, 2013, vesting in 12 equal monthly installments over the first year from the date of issuance.

- An option granted to Mr. Johnson, with a term of ten years, to purchase 11,713 shares of common stock, granted on November 14, 2013 with an exercise price of $35.00. The options vested as follows: (i) options to purchase 3,255 shares vested on March 28, 2014, (ii) options to purchase 4,112 shares vested on June 28, 2014; and (iii) options to purchase 4,346 shares vested on September 30, 2014.

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- An option granted to a consultant to purchase 3,429 shares of common stock, granted on November 14, 2013, with an exercise price of $56.90 per share and a term of five years, vesting on the date of grant.

- An option granted to a consultant on November 15, 2013, with a term of ten years, to purchase 2,286 shares of common stock vesting as follows: (i) options to purchase 762 shares of common stock immediately on the date of grant with an exercise price of $39.40 per share; (ii) options to purchase 762 shares of common stock on the first year anniversary of the date of grant with an exercise price of $65.60 per share; and (iii) 762 shares of common stock on the second anniversary of the date of grant with an exercise price of $87.50 per share.

- An option granted to Mr. Johnson, with a term of ten years, to purchase 73,058 shares of common stock, granted on December 20, 2013 at an exercise price of $68.20. The options vest on the first day of each calendar quarter during the period commencing on January 1, 2014 and ending on February 4, 2016, provided that Mr. Johnson remains employed by the company on such date.

- An option granted to an employee on December 20, 2013, with a term of ten years, to purchase 5,000 shares of common stock with an exercise price of $68.20 per share vesting as follows: (i) options to purchase 1,250 shares of common stock immediately on the date of grant; and (ii) options to purchase 1,250 shares of common stock on each of the first, second, and third year anniversaries of the date of grant.

- An option granted to an employee on January 6, 2014, with a term of ten years, to purchase 5,000 shares of common stock with an exercise price of $69.90 per share. The option is scheduled to vest and become exercisable in thirds on each of the next three anniversaries of the date of grant.

- An option granted to an employee on January 6, 2014, with a term of ten years, to purchase 9,152 shares of common stock with an exercise price of $69.90 per share. The option is scheduled to vest and become exercisable in thirds on each of the next three anniversaries of the date of grant.

- An option granted to an employee on January 6, 2014, with a term of ten years, to purchase 8,001 shares of common stock with an exercise price of $69.90 per share. The option is scheduled to vest and become exercisable in thirds on each of the next three anniversaries of the date of grant.

- A warrant to purchase 4,500 shares of common stock, expiring on March 29, 2022, at an exercise price of $4.40 was issued to a consultant on April 3, 2017, vesting on the date of grant.

- A warrant to purchase 7,224 shares of common stock, expiring on March 29, 2022, at an exercise price of $4.40 was issued to a consultant on April 3, 2017, vesting on the date of grant.

- A warrant to purchase 2,961 shares of common stock, expiring on March 29, 2022, at an exercise price of $4.40 was issued to a consultant on April 3, 2017, vesting on the date of grant.

- A warrant to purchase 8,171 shares of common stock, expiring on March 29, 2022, at an exercise price of $4.40 was issued to a consultant on April 3, 2017, vesting on the date of grant.

- A warrant to purchase 593 shares of common stock, expiring on March 29, 2022, at an exercise price of $4.40 was issued to a consultant on April 3, 2017, vesting on the date of grant.

- A warrant to purchase 237 shares of common stock, expiring on March 29, 2022, at an exercise price of $4.40 was issued to a consultant on April 3, 2017, vesting on the date of grant.

Security Ownership of Certain Beneficial Owners and Management

The following table sets forth information with respect to the beneficial ownership of our common stock as of April 26, 2018 by:

- each person known by us to beneficially own more than 5.0% of our common stock;

- each of our directors;

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- each of the named executive officers; and

- all of our directors and executive officers as a group.

The percentages of common stock beneficially owned are reported on the basis of regulations of the SEC governing the determination of beneficial ownership of securities. Under the rules of the SEC, a person is deemed to be a beneficial owner of a security if that person has or shares voting power, which includes the power to vote or to direct the voting of the security, or investment power, which includes the power to dispose of or to direct the disposition of the security. Except as indicated in the footnotes to this table, each beneficial owner named in the table below has sole voting and sole investment power with respect to all shares beneficially owned and each person's address is c/o Alliqua BioMedical, Inc., 1010 Stony Hill Road, Yardley, PA 19067. As of April 26, 2017, we had 5,005,211 shares outstanding.

| Name of Beneficial Owner | Number of Shares Beneficially Owned(1) | Percentage Beneficially Owned(1) |
|---|---|---|
| 5% Owners | | |
| Celgene Corporation<br>86 Morris Avenue<br>Summit, New Jersey 07901 | 902,519(2) | 17.7% |
| Perceptive Advisors, LLC<br>499 Park Avenue, 25th Floor<br>New York, NY 10022 | 643,730(3) | 12.3% |
| Officers and Directors | | |
| David I. Johnson | 282,814(4) | 5.5% |
| Joseph Warusz | — | — |
| Brian M. Posner(12) | 64,656(5) | 1.3% |
| Bradford C. Barton | 82,798(6) | 1.6% |
| Pellegrino Pionati | 40,660(7) | * |
| Joseph M. Leone | 21,194(8) | * |
| Jeffrey Sklar | 18,805(9) | * |
| Gary Restani | 15,700(10) | * |
| Mark Wagner | 54,430(11) | 1.1% |
| Directors and executive officers as a group (9 persons) | 581,057 | 11.0% |

*
Represents ownership of less than 1%

(1)
Shares of common stock beneficially owned and the respective percentages of beneficial ownership of common stock assumes the exercise of all options, warrants and other securities convertible into common stock beneficially owned by such person or entity currently exercisable or exercisable within 60 days of April 26, 2018. Shares issuable pursuant to the exercise of stock options and warrants exercisable within 60 days are deemed outstanding and held by the holder of such options or warrants for computing the percentage of outstanding common stock beneficially owned

by such person, but are not deemed outstanding for computing the percentage of outstanding common stock beneficially owned by any other person.

(2)
Based on information contained in Amendment No. 8 to Schedule 13D filed with the SEC on June 27, 2017. Comprised of (i) 804,610 shares of our common stock owned directly by Celgene Corporation, and (ii) 97,909 shares of our common stock issuable to Celgene Corporation upon the exercise of warrants that are currently exercisable. Celgene Corporation is a publicly traded corporation listed on NASDAQ.

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(3)
Based on information contained in Schedule 13G filed on February 14, 2018. Comprised of (i) 429,108 shares of our common stock owned directly by Perceptive Advisors, LLC, and (ii) 214,622 shares of our common stock issuable to Perceptive Advisors, LLC upon the exercise of warrants that are currently exercisable.

(4)
Comprised of (i) 89,454 shares of our common stock owned directly by Mr. Johnson, (ii) 50,000 shares of restricted stock that will vest within 60 days of April 26, 2018, (iii)141,949 shares of our common stock issuable to Mr. Johnson upon the exercise of stock options that are vested or will vest within 60 days of April 26, 2018, and (iv) 1,411 shares of common stock issuable upon the exercise of warrants held by Mr. Johnson.

(5)
Comprised of (i) 27,642 shares of our common stock owned directly by Mr. Posner, and (ii) 37,014 shares of our common stock issuable to Mr. Posner upon the exercise of stock options that are vested or will vest within 60 days of April 26, 2018.

(6)
Comprised of (i) 35,882 shares of our common stock owned directly by Mr. Barton, (ii) 45,928 shares of our common stock issuable to Mr. Barton upon the exercise of stock options that are vested or will vest within 60 days of April 26, 2018, and (iii) 988 shares of common stock issuable upon the exercise of warrants held by Mr. Barton.

(7)
Comprised of (i) 27,660 shares of our common stock owned directly by Mr. Pionati, (ii) 3,000 shares of restricted stock that will vest within 60 days of April 26, 2018, and (iii) 10,000 shares of our common stock issuable to Mr. Pionati upon the exercise of vested stock options.

(8)
Comprised of (i) 4,383 shares of our common stock owned directly by Mr. Leone, (ii) 16,529 shares of our common stock issuable to Mr. Leone upon the exercise of stock options that are vested or will vest within 60 days of April 26, 2018, and (iii) 282 shares of common stock issuable upon the exercise of warrants held by Mr. Leone.

(9)
Comprised of (i) 2,436 shares of our common stock owned directly by Mr. Sklar, (ii) 69 shares of our common stock held in a custodial account for a child, of which Mr. Sklar disclaims beneficial ownership, and (iii) 16,300 shares of our common stock issuable to Mr. Sklar upon the exercise of stock options that are vested or will vest within 60 days of April 26, 2018.

(10)
Comprised of shares of our common stock issuable to Mr. Restani upon the exercise of stock options that are vested or will vest within 60 days of April 26, 2018.

(11)
Comprised of (i) 7,050 shares of our common stock owned directly by Mr. Wagner, (ii) 32,380 shares owned directly by 2003 Revocable Trust of Mark Wagner dated April 23, 2003 (the “Wagner Trust”) and (iii) 15,000 shares of our common stock issuable to Mr. Wagner upon the exercise of stock options that are vested or will vest within 60 days of April 26, 2018. Mr. Wagner is the trustee and deemed to have a pecuniary interest in, and therefore to be the beneficial owner of, shares held by the Wagner Trust. The Wagner Trust acquired 17,403 shares as part of the merger consideration for the acquisition of Celleration on May 29, 2015.

(12)

Mr. Posner resigned as our Chief Financial Officer, Secretary and Treasurer effective April 1, 2018.

ITEM 13.
CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Certain Relationships and Related Party Transactions
On April 3, 2017, we completed an underwritten public offering of 9,473,250 shares of common stock at a public offering price of $0.40 per share (the "Public Offering"), for aggregate gross proceeds of $3.8 million, before deducting underwriting discounts and offering expenses. The investors in the Public Offering included Messrs. Johnson, Wagner, Leone, Pionati and Barton, each a member of our board of directors or an executive officer, who purchased an aggregate of 462,500 shares of common stock at $0.40 per share, for an aggregate purchase price of $185,000.
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On February 27, 2017, we closed a private placement of 5,540,000 shares of common stock at a purchase price of $0.50 per share, for gross proceeds of $2,770,000. Celgene Corporation, which beneficially owns more than 5% of our common stock, purchased 4,000,000 shares of common stock for a purchase price of $2,000,000, and Dr. Zeldis, the chairman of our board of directors, purchased 400,000 shares of common stock for a purchase price of $200,000 in the private placement. Additional shares of common stock were issuable to Celgene and Dr. Zeldis pursuant to the "most favored nation" provision in the securities purchase agreement entered into in the private placement (the "Securities Purchase Agreement"), which issuance is subject to stockholder approval as may be required by the applicable rules and regulations of the NASDAQ Capital Market. Following the Public Offering, on April 11, 2017, we adjusted the per share purchase price under the Securities Purchase Agreement to equal the $0.40 per share Public Offering price and issued 296,277 additional shares of common stock to Celgene.

Following approval at the Company's 2017 annual meeting of shareholders, the Company issued 703, 723 additional shares of common stock to Celgene and 100,000 additional shares of common stock to Dr. Zeldis, in each case, pursuant to the "most favored nation" provision in the Securities Purchase Agreement.

On May 29, 2015, we and each of its subsidiaries entered into the Credit Agreement with Perceptive Credit Opportunities Fund, LP ("Perceptive"), an affiliate of Perceptive Advisors, LLC, which beneficially owns more than 5% of our common stock. The Credit Agreement provided a senior secured term loan in a single borrowing to the Company in the principal amount of $15.5 million. The Credit Agreement (i) has a four-year term, (ii) accrues interest at an annual rate equal to the greater of (a) one-month LIBOR or 1% plus (b) 9.75%, (iii) is interest only for the first 24 months, followed by monthly amortization payments of $225,000, with the remaining unpaid balance due on the maturity date and (iv) is secured by a first priority lien on substantially all of the Company's assets. The Company is required to pay an exit fee when the term loan is paid in full equal to the greater of 2% of the outstanding principal balance immediately prior to the final payment or $200,000, which was amended in conjunction with the extinguishment of debt described below from the greater of 1% of the outstanding principal balance immediately prior to the final payment or $100,000. The interest rate at March 31, 2018 was 11.4375%. The repayment of the term loan and our obligations under the Credit Agreement are secured by a first priority lien on all of our existing and after acquired tangible and intangible assets, including intellectual property.

We are currently in default of a covenant pertaining to trailing twelve-month revenue under the Credit Agreement with Perceptive as a result of our failure to achieve $22,250,000 and $24,600,000, $27,200,000, $30,300,000, $33,800,000, $37,800,000 and $40,000,000 of gross revenue for the twelve-month periods ended September 30, 2016, December 31, 2016, ended March 31, 2017, June 30, 2017, September 30, 2017, December 31, 2017 and March 31, 2018, respectively. The Company is also currently in default of a minimum cash balance requirement under the Credit Agreement due to the Company having a cash balance of less than $2,000,000. As of the date hereof, Perceptive has agreed to forbear from exercising any rights and remedies related to each such events of default until the earlier of April 30, 2018 or the termination of the Asset Purchase Agreement with Celularity. Perceptive reserved the rights, commencing with the occurrence of any of these events, to pursue any rights and remedies available to it, including, but not limited to, declaring all or any portion of the outstanding principal amount to be immediately due and payable, imposing a default rate of interest as specified in the credit agreement, or pursing the lender's rights and remedies as a secured party under the UCC as a secured lender. In addition, Perceptive has a lien on substantially all of our assets and, as a result of the default, may seek to foreclose on some or substantially all of our assets after the expiration of the forbearance. If Perceptive were to exercise its right to demand payment of the outstanding debt, we would not have sufficient funds to satisfy that obligation and Perceptive's exercise of its other remedies would have a material adverse effect on our operations and financial condition.

In connection with the entry into the Credit Agreement, a five-year warrant (the "Warrant") to purchase 75,000 shares of common stock, par value of $0.001 per share at an exercise price of $55.138 per share (the "Exercise Price") was issued to Perceptive. The Company granted Perceptive customary demand and piggy-back registration rights with respect to the shares of common stock issuable upon exercise of the Warrant. The Warrant contains a weighted average anti-dilution feature whereby the Exercise Price is subject to reduction if the Company issues shares of common stock (or securities convertible into common

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stock) in the future at a price below the current Exercise Price. The Company amended and restated the Warrant on each of October 25, 2016, January 26, 2017, March 7, 2017 and April 6, 2017. In addition, on June 1, 2017, the Company further amended the Warrant. The amended and restated Warrant, as amended, is exercisable for 210,000 shares of the Company's common stock at an exercise price of $4.70. The amended and restated Warrant, as amended, contains a weighted average anti-dilution feature whereby the exercise price of the amended and restated warrant is subject to reduction if the Company issues shares of common stock (or securities convertible into common stock) in the future at a price below the current exercise price of such warrant. Perceptive will not have the right to exercise the warrant to the extent that after giving effect to such exercise, Perceptive would beneficially own in excess of 9.99% of the common stock outstanding immediately after giving effect to such exercise.

Mark Wagner, who is a member of our board of directors, is a director of Minnetronix, Inc. ("Minnetronix"). On November 17, 2015, we entered into a manufacturing supply agreement with Minnetronix, pursuant to which Minnetronix agreed to perform manufacturing and other services in exchange for certain fees and expenses, with such amounts being variable and contingent on various factors. During the years ended December 31, 2017 and 2016, we incurred costs of approximately $412,000 and $491,000, respectively.

Director Independence

Our board of directors has determined that each of Joseph Leone, Gary Restani, Mark Wagner, and Jeffrey Sklar satisfy the requirements for independence set out in Section 5605(a)(2) of the Nasdaq Stock Market Rules and that each of these directors has no material relationship with us (other than being a director and/or stockholder). In making its independence determinations, the board of directors sought to identify and analyze all of the facts and circumstances relating to any relationship between a director, his immediate family or affiliates and our company and its affiliates and did not rely on categorical standards other than those contained in the Nasdaq rule referenced above.

ITEM 14.

PRINCIPAL ACCOUNTING FEES AND SERVICES

The following table presents aggregate fees for professional services rendered by Marcum LLP for the fiscal years ended December 31, 2017 and 2016.

| | Year Ended December 31, 2017 | Year Ended December 31, 2016 |
|---|---|---|
| Audit fees | $ 219,081 | $ 203,425 |
| Audit-related fees | 61,896 | 29,165 |
| Tax fees | — | — |
| Total | $ 281,077 | $ 232,590 |

Audit Fees

Audit fees for the years ended December 31, 2017 and 2016 consist of the aggregate fees billed by Marcum LLP for the audit of the consolidated financial statements and internal control over financial reporting included in our Annual Report on Form 10-K and review of interim condensed financial statements included in the quarterly reports on Form 10-Q for the years ended December 31, 2017 and 2016. Audit fees also include services related to providing consents to fulfill the accounting firm's responsibilities under generally accepted accounting principles.

Audit-Related Fees

Audit-related fees for the year ended December 31, 2017 include services in connection with our registration statement on Form S-1, Form S-8 and comfort and bring down letter. Audit-related fees for the year ended December 31, 2016 include services in connection with our registration statement on Form S-4 filed in November 2016 and Form S-4/A filed in December 2016.

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Tax Fees

Tax fees for the year ended December 31, 2017 consisted of fees for tax consultation services. Marcum LLP did not provide any professional services for tax compliance, tax advice or tax planning for the year ended December 31, 2016.

Pre-Approval of Independent Registered Public Accounting Firm Fees and Services Policy

Our audit committee pre-approves all auditing and permitted non-audit services to be performed for us by our independent auditor, except for de minimis non-audit services that are approved by the audit committee prior to the completion of the audit. The audit committee may form and delegate authority to subcommittees consisting of one or more members when appropriate, including the authority to grant pre-approvals of audit and permitted non-audit services. The audit committee pre-approved all of the fees set forth in the table above.

ITEM 15.

EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

The following documents are filed as part of this report:

(1)

Financial Statements:

(2)

Financial Statement Schedules:

None

(3)

Exhibits:

See “Index to Exhibits” for a description of our exhibits.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ALLIQUA BIOMEDICAL, INC.

/s/ DAVID JOHNSON

By: David Johnson
President and Chief Executive Officer

Date: April 30, 2018

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

| Signature | Title | Date |
|---|---|---|
| /s/ DAVID JOHNSON<br>David Johnson | President, Chief Executive Officer and Director (principal executive officer) | April 30, 2018 |
| /s/ JOSEPH WARUSZ<br>Joseph Warusz | Chief Financial Officer, Treasurer and Secretary (principal financial and accounting officer) | April 30, 2018 |
| /s/ JOSEPH LEONE<br>Joseph Leone | Director | April 30, 2018 |
| /s/ GARY RESTANI<br>Gary Restani | Director | April 30, 2018 |
| /s/ JEFFREY SKLAR<br>Jeffrey Sklar | Director | April 30, 2018 |
| /s/ MARK WAGNER<br>Mark Wagner | Director | April 30, 2018 |

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Index to Exhibits

| Exhibit No. | Description |
|---|---|
| 2.1 | Agreement and Plan of Merger, dated May 5, 2014, by and between Alliqua, Inc., ALQA Merger Sub, Inc., Choice Therapeutics, Inc. and E. James Hutchens, as the Stockholder Representative, incorporated by reference to Exhibit 2.1 to the Form 8-K filed May 6, 2014. |
| 2.2 | Agreement and Plan of Merger, dated June 5, 2014, by and between Alliqua, Inc. and Alliqua BioMedical, Inc., incorporated by reference to Exhibit 2.1 to the Form 8-K filed June 11, 2014. |
| 2.3** | Agreement and Plan of Merger, dated February 2, 2015, by and among Alliqua BioMedical, Inc., ALQA Cedar, Inc., Celleration, Inc. and certain representatives of the stockholders of Celleration, Inc., as identified therein, incorporated by reference to Exhibit 2.1 to the Form 8-K filed February 2, 2015. |
| 2.4** | Contribution Agreement and Plan of Merger, dated October 5, 2016, by and among Alliqua BioMedical, Inc., Alliqua Holdings, Inc., Chesapeake Merger Corp., and Soluble Systems, LLC, incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed on October 6, 2016. |
| 2.5** | Asset Purchase Agreement, dated January 5, 2018, by and between Alliqua BioMedical, Inc. and Celularity Inc., incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed on January 5, 2018. |
| 2.6** | Asset Purchase Agreement, dated August 31, 2017, by and between Alliqua BioMedical, Inc. and Argentum Medical, LLC, incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed on September 5, 2017. |
| 3.1 | Certificate of Incorporation of Alliqua BioMedical, Inc., incorporated by reference to Exhibit 3.1 to the Form 8-K filed June 11, 2014. |
| 3.2 | Certificate of Amendment to Certificate of Incorporation of Alliqua BioMedical, Inc., incorporated by reference to Exhibit 3.3 to the Form 8-K filed June 11, 2014. |
| 3.3 | Certificate of Amendment to Certificate of Incorporation of Alliqua BioMedical, Inc., incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on May 6, 2016. |
| 3.4 | Certificate of Amendment to Certificate of Incorporation of Alliqua BioMedical, Inc., incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on October 5, 2017. |
| 3.5 | Bylaws of Alliqua BioMedical, Inc., incorporated by reference to Exhibit 3.2 to the Form 8-K filed June 11, 2014. |
| 4.1 | Form of Warrant used in connection with February 16, 2012 private placement, incorporated by reference to Exhibit 10.2 to the Form 8-K filed February 21, 2012. |
| 4.2 | Form of Warrant used in connection with August 14, 2012 private placement, incorporated by reference to Exhibit 10.2 to the Form 8-K filed August 16, 2012. |
| 4.3 | Form of Warrant used in connection with November 8, 2012 private placement, incorporated by reference to Exhibit 10.2 to the Form 8-K filed November 14, 2012. |
| 4.4 | Form of Warrant used in connection with February 22, 2013 private placement, incorporated by reference to Exhibit 10.2 to the Form 8-K filed February 25, 2013. |
| 4.5 | Form of Warrant used in connection with April and May 2013 private placement, incorporated by reference to Exhibit 10.2 to the Form 8-K filed April 26, 2013. |
| 4.6 | Form of Warrant used in connection with June 28, 2013 private placement, incorporated by reference to Exhibit 10.2 to the Form 8-K filed July 5, 2013. |

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| Exhibit No. | Description |
|---|---|
| 4.7 | Form of $0.10 Warrant used in connection with October 22, 2013 private placement, incorporated by reference to Exhibit 10.2 to the Form 8-K filed October 28, 2013. |
| 4.8 | Warrant issued to Celgene Corporation on November 18, 2013, incorporated by reference to Exhibit 4.12 to the Form 10-K filed December 31, 2013. |
| 4.9 | Form of Warrant used in connection with November 18, 2013 private placement, incorporated by reference to Exhibit 4.13 to the Form 10-K filed December 31, 2013. |
| 4.10 | Form of Warrant, dated April 14, 2014, by and between Alliqua, Inc. and certain accredited investors, incorporated by reference to Exhibit 10.2 to the Form 8-K filed April 15, 2014. |
| 4.11 | Form of Warrant, dated April 3, 2017, by and between Alliqua BioMedical, Inc. and H.C. Wainwright & Co. LLC and its designees, incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K filed April 4, 2017. |
| 10.1+ | 2001 Incentive Stock Purchase Plan, incorporated by reference to Exhibit 10.2 to the Form S-8 filed on May 8, 2003. |
| 10.2+ | Form of Nonstatutory Stock Option Agreement under the 2001 Incentive Stock Purchase Plan, incorporated by reference to Exhibit 10.2 to the Form 10-K/A filed May 16, 2013. |
| 10.3+ | Form of Incentive Stock Option Agreement under the 2001 Incentive Stock Purchase Plan, incorporated by reference to Exhibit 10.3 to the Form 10-K/A filed May 16, 2013. |
| 10.4+ | Form of Indemnification Agreement, incorporated by reference to Exhibit 10.2 to the Form 8-K filed January 5, 2011. |
| 10.5 | Exclusive License Agreement, dated as of July 15, 2011, by and between Noble Fiber Technologies, LLC and Alliqua Biomedical, Inc., incorporated by reference to Exhibit 10.1 to the Form 8-K filed July 20, 2011. |
| 10.6 | Collateral Assignment of 510(k) Rights, dated as of July 15, 2011, by and between Noble Fiber Technologies, LLC and Alliqua Biomedical, Inc., incorporated by reference to Exhibit 10.1 to the Form 8-K filed July 20, 2011. |
| 10.7+ | 2011 Long-Term Incentive Plan, incorporated by reference to Exhibit 10.1 to the Form 8-K filed December 20, 2011. |
| 10.8 | Form of Securities Purchase Agreement, by and among Alliqua, Inc. and certain purchasers set forth therein, incorporated by reference to Exhibit 10.1 to the Form 8-K filed February 21, 2012. |
| 10.9 | Securities Purchase Agreement, dated as of August 14, 2012, by and among Alliqua, Inc. and certain purchasers set forth therein, incorporated by reference to Exhibit 10.1 to the Form 8-K filed August 16, 2012. |
| 10.10 | Securities Purchase Agreement, dated as of November 8, 2012, by and among Alliqua, Inc. and certain purchasers set forth therein, incorporated by reference to Exhibit 10.1 to the Form 8-K filed November 14, 2012. |
| 10.11+ | First Amendment to the 2011 Long-Term Incentive Plan, incorporated by reference to Exhibit 10.1 to the Form 8-K filed December 20, 2012. |
| 10.12+ | Form of Nonstatutory Stock Option Agreement under the 2011 Long-Term Incentive Plan, incorporated by reference to Exhibit 10.32 to the Form 10-K/A filed May 16, 2013. |
| 10.13+ | Form of Incentive Stock Option Agreement under the 2011 Long-Term Incentive Plan, incorporated by reference to Exhibit 10.33 to the Form 10-K/A filed May 16, 2013. |
| 10.14+ | Executive Employment Agreement, dated as of February 4, 2013, between Alliqua, Inc. and David Johnson, incorporated by reference to Exhibit 10.1 to the Form 8-K filed February 7, 2013. |

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| Exhibit No. | Description |
|---|---|
| 10.15+ | Indemnification Agreement, dated as of February 4, 2013, in favor of David Johnson, incorporated by reference to Exhibit 10.3 to the Form 8-K filed February 7, 2013. |
| 10.16 | Securities Purchase Agreement, dated as of February 22, 2013, by and among Alliqua, Inc. and certain purchasers set forth therein, incorporated by reference to Exhibit 10.1 to the Form 8-K filed February 25, 2013. |
| 10.17 | Securities Purchase Agreement, dated as of April 11, 2013, by and among Alliqua, Inc. and certain purchasers set forth therein, incorporated by reference to Exhibit 10.1 to the Form 8-K filed April 26, 2013. |
| 10.18 | Securities Purchase Agreement, dated as of June 28, 2013, by and among Alliqua, Inc. and certain purchasers set forth therein, incorporated by reference to Exhibit 10.3 to the Form 8-K filed July 5, 2013. |
| 10.19+ | Nonqualified Stock Option Agreement, dated September 3, 2013, between Brian Posner and Alliqua, Inc., incorporated by reference to Exhibit 10.2 to the Form 8-K filed September 9, 2013. |
| 10.20^ | Distributor Agreement, dated September 23, 2013, by and between Sorbion GmbH & Co KG and Alliqua Biomedical, Inc., incorporated by reference to Exhibit 10.5 to the Form 10-Q filed November 12, 2013. |
| 10.21^ | License, Marketing and Development Agreement, dated as of November 14, 2013, by and between Anthrogenesis Corporation, d/b/a CCT, and Alliqua, Inc., incorporated by reference to Exhibit 10.48 to the Form 10-K filed December 31, 2013. |
| 10.22^ | Supply Agreement, dated as of November 14, 2013, by and between Anthrogenesis Corporation and Alliqua, Inc., incorporated by reference to Exhibit 10.49 to the Form 10-K filed December 31, 2013. |
| 10.23 | Stock Purchase Agreement, dated as of November 14, 2013, by and between Celgene Corporation and Alliqua, Inc., incorporated by reference to Exhibit 10.50 to the Form 10-K filed December 31, 2013. |
| 10.24 | Securities Purchase Agreement, dated as of November 18, 2013, by and among Alliqua, Inc. and certain purchasers set forth therein, incorporated by reference to Exhibit 10.51 to the Form 10-K filed December 31, 2013. |
| 10.25 | First Amendment to Executive Employment Agreement dated December 20, 2013, by and between Alliqua, Inc. and David Johnson, incorporated by reference to Exhibit 10.1 to the Form 8-K filed December 27, 2013. |
| 10.26 | Nonqualified Stock Option Agreement dated December 20, 2013, by and between Alliqua, Inc. and David Johnson, incorporated by reference to Exhibit 10.2 to the Form 8-K filed December 27, 2013. |
| 10.27+ | Form of Restricted Stock Award Agreement under the 2011 Long-Term Incentive Plan, incorporated by reference to Exhibit 10.62 to the Form 10-K filed December 31, 2013. |
| 10.28+ | Form of Restricted Stock Award Agreement for 2013 Executive Bonuses under the 2011 Long-Term Incentive Plan, incorporated by reference to Exhibit 10.63 to the Form 10-K filed December 31, 2013. |
| 10.29+ | Form of Nonqualified Stock Option Agreement (outside of any incentive plan), incorporated by reference to Exhibit 99.8 to the Form S-8 filed January 23, 2014. |
| 10.30 | Form of Securities Purchase Agreement, dated April 14, 2014, by and between Alliqua, Inc. and certain accredited investors, incorporated by reference to Exhibit 10.1 to the Form 8-K filed April 15, 2014. |

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| Exhibit No. | Description |
|---|---|
| 10.31 | Form of Letter Agreement, dated April 11, 2014, by and between Alliqua, Inc. and certain holders of warrants to purchase Common Stock of Alliqua, Inc., incorporated by reference to Exhibit 10.3 to the Form 8-K filed April 15, 2014. |
| 10.32+ | Alliqua BioMedical, Inc. 2014 Long-Term Incentive Plan, incorporated by reference to Exhibit 10.1 to the Form 8-K filed June 11, 2014. |
| 10.33^ | Supply Agreement, dated April 10, 2014, by and between Alliqua, Inc. and Anthrogenesis Corporation, d/b/a Celgene Cellular Therapeutics, incorporated by reference to Exhibit 10.4 to the Form 10-Q filed August 11, 2014. |
| 10.34^ | First Amendment to Supply Agreement, dated April 10, 2014 by and between Alliqua, Inc. and Anthrogenesis Corporation, d/b/a Celgene Cellular Therapeutics, incorporated by reference to Exhibit 10.5 to the Form 10-Q filed August 11, 2014. |
| 10.35^ | First Amendment to License, Marketing and Development Agreement, dated September 30, 2014, by and between Alliqua, Inc. and Anthrogenesis Corporation, d/b/a Celgene Cellular Therapeutics, incorporated by reference to Exhibit 10.1 to the Form 10-Q filed November 5, 2014. |
| 10.36^ | Second Amendment to Supply Agreement, dated September 30, 2014, by and between Alliqua, Inc. and Anthrogenesis Corporation, d/b/a Celgene Cellular Therapeutics, incorporated by reference to Exhibit 10.2 to the Form 10-Q filed November 5, 2014. |
| 10.37 | Voting Agreement, dated February 2, 2015, by and between Alliqua BioMedical, Inc. and each of the stockholders of Celleration, Inc., as identified therein, incorporated by reference to Exhibit 10.1 to Amendment No. 1 to Registration Statement on Form S-4 filed on April 2, 2015. |
| 10.38 | Commitment Letter, dated February 2, 2015, by and between Perceptive Credit Opportunities Fund, LP and Alliqua BioMedical, Inc., incorporated by reference to Exhibit 10.2 to Amendment No. 1 to Registration Statement on Form S-4 filed on April 2, 2015. |
| 10.39 | Side Letter Agreement to Commitment Letter, dated March 10, 2015, by and between Perceptive Credit Opportunities Fund, LP and Alliqua BioMedical, Inc., incorporated by reference to Exhibit 10.3 to Amendment No. 1 to Registration Statement on Form S-4 filed on April 2, 2015. |
| 10.40^ | Second Amendment to the License, Marketing and Development Agreement, dated April 30, 2015, by and between Alliqua BioMedical, Inc. and Anthrogenesis Corporation, d/b/a Celgene Cellular Therapeutics, incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 6, 2015. |
| 10.41+ | First Amendment to the Alliqua BioMedical, Inc. 2014 Long-Term Incentive Plan, incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on May 6, 2015. |
| 10.42+ | Form of Incentive Stock Option Agreement under the 2014 Long-Term Incentive Plan, incorporated by reference to Exhibit 99.3 to the Form S-8 filed August 6, 2015. |
| 10.43+ | Form of Nonqualified Stock Option Agreement under the 2014 Long-Term Incentive Plan, incorporated by reference to Exhibit 99.4 to the Form S-8 filed August 6, 2015. |
| 10.44+ | Form of Restricted Stock Award Agreement under the 2014 Long-Term Incentive Plan, incorporated by reference to Exhibit 99.5 to the Form S-8 filed August 6, 2015. |
| 10.45+ | Form of Restricted Stock Unit Agreement under the 2014 Long-Term Incentive Plan, incorporated by reference to Exhibit 99.6 to the Form S-8 filed August 6, 2015. |

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| Exhibit No. | Description |
|---|---|
| 10.46 | Credit Agreement and Guaranty, dated May 29, 2015, by and among Alliqua BioMedical, Inc., Perceptive Credit Opportunities Fund, LP and those certain subsidiary guarantors party thereto, incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on June 1, 2015. |
| 10.47 | Pledge and Security Agreement, dated May 29, 2015, by and among Alliqua BioMedical, Inc., Perceptive Credit Opportunities Fund, LP and those certain subsidiary guarantor party thereto, incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on June 1, 2015. |
| 10.48 | Warrant, dated May 29, 2015, by and between Alliqua BioMedical, Inc. and Perceptive Credit Opportunities Fund, LP, incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on June 1, 2015. |
| 10.49+ | Employment Agreement, dated June 3, 2015, by and between Alliqua BioMedical, Inc. and Nino Pionati, incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on June 9, 2015. |
| 10.50+ | Employment Agreement, dated June 5, 2015, by and between Alliqua BioMedical, Inc. and Brian Posner, incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on June 9, 2015 |
| 10.51+ | Employment Agreement, dated June 5, 2015, by and between Alliqua BioMedical, Inc. and Bradford Barton, incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on June 9, 2015. |
| 10.52 | First Amendment to Distributor Agreement, dated July 31, 2015, by and between Alliqua BioMedical, Inc. and BSN Medical, Inc., an affiliate of Sorbion GmbK & Co KG, incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 5, 2015. |
| 10.53 | Purchase Agreement, dated June 30, 2016, by and between Alliqua BioMedical, Inc. and BSN medical, Inc., incorporated by reference to Exhibit 10.3 to the Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 9, 2016. |
| 10.54 | Transition Agreement, dated June 30, 2016, by and between Alliqua BioMedical, Inc. and BSN medical, Inc., incorporated by reference to Exhibit 10.4 to the Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 9, 2016. |
| 10.55 | Consent Agreement, dated August 25, 2016, by and among Alliqua BioMedical, Inc., certain subsidiaries set forth on the signature pages thereto, and Perceptive Credit Holdings, L.P., incorporated by reference to Exhibit 10.1 to the Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 4, 2016. |
| 10.56 | Forbearance and Amendment Agreement, dated January 26, 2017, by and among Alliqua BioMedical, Inc., AquaMed Technologies, Inc. and Perceptive Credit Holdings, LP., incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on January 30, 2017. |
| 10.57 | Amended Warrant, dated January 26, 2017, by and between Alliqua BioMedical, Inc. and Perceptive Credit Holdings, LP., incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on January 30, 2017. |
| 10.58 | Form of Securities Purchase Agreement, dated February 27, 2017, by and between Alliqua BioMedical, Inc. and certain accredited investors, incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on February 28, 2017. |

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| Exhibit No. | Description |
|---|---|
| 10.59 | Amendment No. 1 to Forbearance and Amendment Agreement, dated March 7, 2017, by and among Alliqua BioMedical, Inc., AquaMed Technologies, Inc. and Perceptive Credit Holdings, LP., incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on March 13, 2017. |
| 10.60 | Amended Warrant, dated March 7, 2017, by and between Alliqua BioMedical, Inc. and Perceptive Credit Holdings, LP., incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on March 13, 2017. |
| 10.61 | Amended Warrant, dated April 6, 2017, by and between Alliqua BioMedical, Inc. and Perceptive Credit Holdings, LP., incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on April 12, 2017. |
| 10.62 | Amendment No. 2 to Forbearance and Amendment Agreement, dated April 27, 2017, by and among Alliqua BioMedical, Inc. AquaMed Technologies and Perceptive Credit Holdings, LP., incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on May 1, 2017 |
| 10.63 | Amendment to Credit Agreement and Guaranty and Warrant, dated June 1, 2017, by and among Alliqua BioMedical, Inc., AquaMed Technologies, Inc. and Perceptive Credit Holdings, L.P., incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on June 5, 2017 |
| 10.64+ | Second Amendment to the Alliqua BioMedical, Inc. 2014 Long-Term Incentive Plan, effective as of June 23, 2017, incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on June 23, 2017 |
| 10.65 | Second Forbearance Agreement, dated August 9, 2017, by and among Alliqua BioMedical, Inc., AquaMed Technologies, Inc. and Perceptive Credit Holdings, LP., incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on August 10, 2017 |
| 10.66 | Consent, Forbearance and Amendment Agreement, dated August 31, 2017, by and among Alliqua BioMedical, Inc. AquaMed Technologies, Inc. and Perceptive Credit Holdings, L.P., incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on September 5, 2017 |
| 10.67 | Forbearance and Amendment Agreement, dated February 5, 2018, by and among Alliqua BioMedical, Inc., AquaMed Technologies, Inc. and Perceptive Credit Holdings, L.P., incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on February 9, 2018 |
| 10.68 | Amendment Agreement, dated March 13, 2018, by and among by and among Alliqua BioMedical, Inc., AquaMed Technologies, Inc. and Perceptive Credit Holdings, L.P., incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on March 15, 2018 |
| 10.69 | Bridge Loan Note, dated March 13, 2018, by and between Alliqua BioMedical, Inc. and Perceptive Credit Holdings, L.P., incorporated by reference to Exhibit 10.2 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on March 15, 2018 |
| 10.70 | General Release and Severance Agreement, dated as of March 15, 2018, by and between Brian Posner and Alliqua BioMedical, Inc., incorporated by reference to Exhibit 10.3 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on March 15, 2018 |
| 21.1 | List of Subsidiaries |
| 23.1 | Consent of Independent Registered Public Accounting Firm to the Form 10-K. |

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| Exhibit No. | Description |
|---|---|
| 31.1* | Certification of Chief Executive Officer Pursuant to Section 302 of Sarbanes-Oxley Act of 2002 |
| 31.2* | Certification of Chief Financial Officer Pursuant to Section 302 of Sarbanes-Oxley Act of 2002 |
| 32.1 | Certification of Chief Executive Officer Pursuant to Section 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 |
| 32.2 | Certification of Chief Financial Officer Pursuant to Section 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 |
| 101 | The following materials from the Company's Annual Report on Form 10-K for the year ended December 31, 2017, formatted in XBRL (eXtensible Business Reporting Language), (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Operations, (iii) Consolidated Statements of Stockholders' Equity, (iv) Consolidated Statements of Cash Flows, and (v) Notes to the Consolidated Financial Statements |

*
Filed herewith.

**
Certain exhibits and schedules have been omitted and the Company agrees to furnish supplementary to the Securities and Exchange Commission a copy of any omitted exhibits upon request.

^
Confidential treatment has been granted with respect to certain portions of this exhibit.

+
Management contract or compensatory plan or arrangement.

Previously filed.

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Annex E

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON D.C. 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended: March 31, 2018
OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to
Commission file number: 001-36278

Alliqua BioMedical, Inc.
(Exact name of registrant as specified in its charter)

| | |
|---|---|
| Delaware | 58-2349413 |
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification Number) |
| 2150 Cabot Blvd West, Suite B Langhorne, PA | 19047 |
| (Address of principal executive office) | (Zip Code) |

Registrant's telephone number, including area code: (215) 702-8550

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

| | |
|---|---|
| Large accelerated filer | Accelerated filer |
| Non-accelerated filer | |

(Do not check if a smaller reporting company)

Smaller reporting company Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined by Rule 12b-2 of the Exchange Act). Yes No

As of May 7, 2018, the registrant had 5,005,211 shares of common stock outstanding.

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ALLIQUA BIOMEDICAL, INC.

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PART I — FINANCIAL INFORMATION
ITEM 1. FINANCIAL STATEMENTS
ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)

| | March 31, 2018 (Unaudited) | December 31, 2017 |
|---|---|---|
| ASSETS: | | |
| Current Assets: | | |
| Cash and cash equivalents | $ 1,536 | $ 2,181 |
| Accounts receivable, net | 4,029 | 3,243 |
| Inventory, net | 1,655 | 1,551 |
| Prepaid expenses and other current assets | 161 | 185 |
| Current assets of discontinued operations | 217 | 317 |
| Total current assets | 7,598 | 7,477 |
| Improvements and equipment, net | 1,385 | 1,563 |
| Intangible assets, net | 20,935 | 22,069 |
| Goodwill, net | 1,659 | 1,659 |
| Other assets | 173 | 173 |
| Total assets | $ 31,750 | $ 32,941 |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current Liabilities: | | |
| Accounts payable | $ 2,875 | $ 1,641 |
| Accrued expenses and other current liabilities | 5,125 | 4,270 |
| Senior secured term loan, net | 12,831 | 10,929 |
| Warrant liability | 149 | 130 |
| Total current liabilities | 20,980 | 16,970 |
| Other long-term liabilities | 295 | 304 |
| Total liabilities | 21,275 | 17,274 |
| Commitments and Contingencies | | |
| Stockholders' Equity | | |
| Preferred Stock, par value $0.001 per share, 1,000,000 shares authorized, no shares issued and outstanding | — | — |
| Common Stock, par value $0.001 per share, 95,000,000 shares authorized; 5,005,211 and 4,986,034 shares issued and outstanding as of March 31, 2018 and December 31, 2017, respectively | 5 | 5 |
| Additional paid-in capital | 165,590 | 165,672 |
| Accumulated deficit | (155,120) | (150,010) |
| Total stockholders' equity | 10,475 | 15,667 |
| Total liabilities and stockholders' equity | $ 31,750 | $ 32,941 |

The accompanying notes are an integral part of these condensed consolidated financial statements.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)
(in thousands, except share and per share data)

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Revenue, net of returns, allowances and discounts | $ 5,381 | $ 4,125 |
| Cost of revenues | 1,704 | 1,515 |
| Gross profit | 3,677 | 2,610 |
| Operating expenses | | |
| Selling, general and administrative | 7,029 | 7,588 |
| Royalties | 266 | 186 |
| Research and product development | — | 111 |
| Transactional costs | 923 | 634 |
| Change in fair value of contingent consideration liability | — | 35 |
| Total operating expenses | 8,218 | 8,554 |
| Loss from operations | (4,541) | (5,944) |
| Other (expense) income | | |
| Interest expense | (548) | (573) |
| Interest income | 1 | 2 |
| Change in fair value of warrant liability | (19) | 118 |
| Warrant modification expense | — | (770) |
| Total other expense | (566) | (1,223) |
| Loss from continuing operations before tax | (5,107) | (7,167) |
| Income tax expense | (3) | (3) |
| Loss from continuing operations | (5,110) | (7,170) |
| Discontinued operations: | | |
| Income from discontinued operations, net of tax of $0 for the three months ended March 31, 2018 and 2017 | — | 172 |
| Net loss | $ (5,110) | $ (6,998) |
| Net loss per basic and diluted common share: | | |
| Loss from continuing operations | $ (1.19) | $ (2.33) |
| Income from discontinued operations | — | 0.06 |
| Net loss per basic and diluted common share | $ (1.19) | $ (2.27) |
| Weighted average shares used in computing net loss per basic and diluted common share | 4,302,608 | 3,071,342 |

The accompanying notes are an integral part of these condensed consolidated financial statements.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)
(in thousands)

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Operating Activities | | |
| Net loss | $ (5,110) | $ (6,998) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | |
| Depreciation and amortization | 1,312 | 1,382 |
| Amortization of deferred lease incentive | (11) | (11) |
| Deferred income tax expense | 3 | 3 |
| Provision for doubtful accounts | 155 | 7 |
| Reserve for note receivable | — | 350 |
| Provision for excess and slow moving inventory | — | 23 |
| Stock-based compensation expense | (80) | 491 |
| Deferred rent | (1) | 2 |
| Amortization of debt issuance and discount costs | 190 | 204 |
| Warrant modification expense | — | 770 |
| Change in fair value of warrant liability | 19 | (118) |
| Fair value adjustment of contingent consideration liability | — | 35 |
| Changes in operating assets and liabilities: | | |
| Accounts receivable | (941) | (108) |
| Inventory | (104) | 48 |
| Prepaid expenses and other assets | 24 | 227 |
| Accounts payable | 1,234 | (301) |
| Accrued expenses and other liabilities | 855 | (652) |
| Net Cash Used in Operating Activities | (2,455) | (4,646) |
| Investing Activities | | |
| Purchase of improvements and equipment | — | (39) |
| Issuance of bridge loan | — | (350) |
| Proceeds from escrow | 100 | — |
| Net Cash Provided by (Used In) Investing Activities | 100 | (389) |
| Financing Activities | | |
| Contingent purchase price payments | — | (675) |
| Net proceeds from bridge loan | 1,712 | — |
| Net proceeds from issuance of common stock | — | 2,534 |
| Payment of withholding taxes related to stock-based employee compensation | (2) | (54) |
| Net Cash Provided by Financing Activities | 1,710 | 1,805 |
| Net Decrease in Cash and Cash Equivalents | (645) | (3,230) |

| | | |
|---|---|---|
| Cash and Cash Equivalents – Beginning of year | 2,181 | 5,580 |
| Cash and Cash Equivalents – End of year | $ 1,536 | $ 2,350 |
| Supplemental Disclosure of Cash Flows Information | | |
| Cash paid during the period for: | | |
| Interest | $ 362 | $ 370 |
| Non-cash investing and financing activities: | | |
| Common stock issued for contingent purchase price payments | — | 675 |

The accompanying notes are an integral part of these condensed consolidated financial statements.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

1. Description of Business and Basis of Presentation

Alliqua BioMedical, Inc. (the "Company") is a regenerative technologies company that commercializes differentiated regenerative medical products which assist the body in the repair of human tissue.

Recent Developments

On January 5, 2018, the Company entered into an Asset Purchase Agreement (the "APA") with Celularity, Inc. ("Celularity") pursuant to which the Company agreed to sell substantially all of its assets to Celularity (the "Asset Sale Transaction"), including certain assets comprising its MIST, Biovance and Interfyl Product lines (the "Purchased Assets"). As consideration for the Purchased Assets, Celularity paid consideration to the Company $29 million in cash. No debt or significant liabilities were assumed by Celularity in the Asset Sale Transaction (the "AST").

Under the terms of the APA, the Company will retain certain specified assets, including, among other things, cash, accounts receivable, and its hydrogel contract manufacturing business, including its SilverSeal and Hydress product lines.

The transactions contemplated by the APA were approved by the affirmative vote of a majority of the voting power of issued and outstanding shares of the Company's common stock on April 27, 2018. The AST was completed on May 7, 2018.

The Company's operations sold under the APA have not been reclassified to discontinued operations since they are classified as Held for Use. These operations are presented in continuing operations in the first quarter of 2018. These operations will be reclassified to discontinued operations in the second quarter of 2018, when the shareholders of the company approved the sale. (See Note 12 — Subsequent Events)

The Company has, historically, served as a contract manufacturer, supplying the manufactured gels to third parties who incorporate them into their own products and will continue to manufacture said hydrogels going forward.

Basis of Presentation

The condensed consolidated financial statements contained in this report are unaudited. In the opinion of management, the condensed consolidated financial statements include all adjustments, which are of a normal recurring nature, necessary to present fairly the Company's financial position as of March 31, 2018 and results of operations and cash flows for the three months ended March 31, 2018 and 2017. While management believes that the disclosures presented are adequate to make the information not misleading, these unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and the notes thereto in the Company's latest year-end financial statements, which are included in the Company's Annual Report on Form 10-K for the year ended December 31, 2017 (the "2017 Annual Report"). The results of the Company's operations for any interim period are not necessarily indicative of the results of operations for any other interim period or for the full year.

Principles of Consolidation

The accompanying condensed consolidated financial statements include the financial statements of the Company and its wholly-owned subsidiary, AquaMed Technologies, Inc. All significant inter-company transactions and accounts have been eliminated in consolidation.

Reclassifications

Certain amounts in prior periods have been reclassified to conform to the current year presentation. Such reclassifications did not have a material effect on the Company's financial condition or results of operations as previously reported.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Discontinued Operations

In order to add capital and to focus on future investments on commercializing its own regenerative technologies on August 31, 2017 the Company entered into an Asset Purchase Agreement ("the Argentum Purchase Agreement") with Argentum Medical, LLC. ("Argentum") whereby the Company agreed to sell to Argentum all of the Company's rights, including (i) all distribution rights, exclusivity rights, intellectual property rights and marketing rights to the TheraBond product line and (ii) the unsold inventory of TheraBond products and work in process previously purchased by the Company in existence as of the closing, which occurred upon execution and delivery of the Argentum Purchase Agreement. In consideration for the sale of the TheraBond product line and the unsold TheraBond inventory to Argentum by the Company, Argentum agreed to pay (i) $3.6 million for the TheraBond product line and certain other agreements between the parties and (ii) up to $112,000 for the unsold TheraBond inventory upon the Company's completion of its obligations to deliver all remaining and qualifying unsold TheraBond inventory, as specified in the Argentum Purchase Agreement. Of the $3.6 million of consideration, $300,000 is deposited in an indemnity escrow account under standard terms and conditions. This amount is classified under current assets of discontinued operations on the Company's balance sheet as of December 31, 2017. As of March 31, 2018, $100,000 was paid from the escrow, therefore, $200,000 remains in an indemnity escrow account under standard terms and conditions; classified under current assets of discontinued operations on the Company's balance sheet.

Summarized operating results of discontinued operations for the three months ended March 31, 2017 are presented in the following table, there are no operating results in 2018 (in thousands):

| | Three Months Ended March 31, 2017 |
|---|---|
| Revenue, net of returns, allowances and discounts | $ 469 |
| Cost of revenues | 145 |
| Gross profit | 324 |
| Selling, general and administrative | 152 |
| Income from discontinued operations, net of tax | 172 |

Non-cash amortization expense of $74,000 is included in selling, general and administrative expense for the three months ended March 31, 2017.

Summarized assets of discontinued operations are presented in the following table (in thousands), there were no liabilities of discontinued operations for the three months ended March 31, 2018 and 2017 and all assets are considered current:

| | March 31, 2018 | December 31, 2017 |
|---|---|---|
| Accounts receivable, net | $ 17 | $ 17 |
| Escrow | 200 | 300 |
| Total assets | 217 | 317 |

Significant Accounting Policies and Estimates

Recent Accounting Principles

In February 2018, the FASB issued ASU 2018-02, "Income Statement—Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income. The amendments in this Update allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax

effects resulting from the Tax Cuts and Jobs Act. Consequently, the amendments eliminate the stranded tax effects resulting from the Tax Cuts and Jobs Act

and will improve the usefulness of information reported to financial statement users. However, because the amendments only relate to the reclassification of the income tax effects of the Tax Cuts and Jobs Act, the underlying guidance that requires that the effect of a change in tax laws or rates be included in income from continuing operations is not affected. The amendments in this Update also require certain disclosures about stranded tax effects. The amendments in this update are effective for all entities for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. The Company does not expect that this guidance will have a material impact on its consolidated financial statements.

2. Going Concern

The Company's financial statements are prepared using accounting principles generally accepted in the United States of America applicable to a going concern that contemplates the realization of assets and liquidation of liabilities in the normal course of business.

As of March 31, 2018, the Company had a cash balance of approximately $1.5 million. The Company has experienced recurring losses since its inception. The Company incurred a net loss of $5.1 million and utilized $2.5 million in cash from operations for the three months ended March 31, 2018 and had an accumulated deficit of $155.1 million as of March 31, 2018. Further the Company continued to be in default of certain financial covenants pertaining to its outstanding debt of approximately $12.8 million under its Credit Agreement of which the lender had agreed to forbear from exercising any rights and remedies related to such defaults until the earlier of May 7, 2018 or the termination of the APA. These factors raised substantial doubt as to the Company's ability to continue as a going concern. Upon closing the APA, the Company received gross proceeds of $29 million and part of the proceeds were utilized to satisfy its obligations under the Credit agreement in full. With the remaining proceeds from the APA, management of the Company believes substantial doubt has been mitigated and it has sufficient resources to fund its planned operations for a year from the date these financial statements are issued (See Note 12 — Subsequent Events).

3. Revenue Recognition

On January 1, 2018, the Company adopted Accounting Standards Codification ("ASC") Topic 606, "Revenue from Contracts with Customers" ("ASC 606"). The core principle of ASC 606 requires that an entity recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. ASC 606 defines a five-step process to achieve this core principle and, in doing so, it is possible more judgment and estimates may be required within the revenue recognition process than required under existing accounting principles generally accepted in the United States of America ("U.S. GAAP") including identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation.

The Company adopted ASC 606 for all applicable contracts using the modified retrospective method, which would have required a cumulative-effect adjustment, if any, as of the date of adoption. The adoption of ASC 606 did not have a material impact on the Company's condensed consolidated financial statements as of the date of adoption. As a result, a cumulative-effect adjustment was not required.

The Company recognizes revenue primarily from two different types of contracts, (i) product sales to customers and (ii) contract manufacturing. Revenue from sales of products as well as from contract manufacturing is recognized at the point where the customer obtains control of the goods and the Company satisfies its performance obligation, which generally is at the time it ships the product to the customer. To achieve this core principle, the Company applies the following five steps:

Step 1 — Identify the Contract with the Customer — A contract exists when (a) the parties to the contract have approved th contract and are committed to perform their respective obligations, (b) the entity can identify each party's rights regarding the goods or services to be transferred, (c) the entity can

identify the payment terms for the goods or services to be transferred, (d) the contract has commercial substance and it is probable that the entity will collect substantially all of the consideration to which it will be entitled in exchange for the goods or services that will be transferred to the customer.

Step 2 — Identify Performance Obligations in the Contract — Upon execution of a contract, the Company identifies as performance obligations each promise to transfer to the customer either (a) goods or services that are distinct or (b) a series of distinct goods or services that are substantially the same and have the same pattern of transfer to the customer. To the extent a contract includes multiple promised goods or services, the Company must apply judgement to determine whether the goods or services are capable of being distinct within the context of the contract. If these criteria are not met, the goods or services are accounted for as a combined performance obligation.

Step 3 — Determine the Transaction Price — The transaction price is determined based on the consideration to which the Company will be entitled in exchange for transferring products or services to the customer. Generally, all contracts include fixed consideration. If a contract did include variable consideration, the Company would determine the amount of variable consideration that should be included in the transaction price based on expected value method. Variable consideration would be included in the transaction price, if in the Company's judgement, it is probable that a significant future reversal of cumulative revenue under the contract would not occur.

Step 4 — Allocate the Transaction Price — After the transaction price has been determined, the next step is to allocate the transaction price to each performance obligation in the contract. If the contract only has one performance obligation, the entire transaction price will be applied to that obligation. If the contract has multiple performance obligations, the transaction price is allocated to the performance obligations based on the relative standalone selling price (SSP) at contract inception.

Step 5 — Satisfaction of the Performance Obligations (and Recognize Revenue) — When an asset is transferred, and the customer obtains control of the asset (or the services are rendered), the Company recognizes revenue. At contract inception, the Company determines if each performance obligation is satisfied at a point in time or over time. Revenue from sales of products as well as from contract manufacturing is recognized at the point where the customer obtains control of the goods and the Company satisfies its performance obligation, which generally is at the time it ships the product to the customer.

Disaggregation of Revenue

The following table presents our disaggregated revenues by revenue source (in millions). The Company recognizes revenue primarily from two different types of contracts, (i) product sales to customers and (ii) contract manufacturing. Revenue from sales of products as well as from contract manufacturing is recognized at the point where the customer obtains control of the goods and the Company satisfies its performance obligation, which generally is at the time it ships the product to the customer.

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Product | $ 4,841 | $ 3,896 |
| Contract manufacturing | 540 | 229 |
| Total revenues, net | $ 5,381 | $ 4,125 |

As of March 31, 2018, or December 31, 2017, the Company did not have any contract assets or contract liabilities from contracts with customers. During the three months ended March 31, 2018 and 2017, there was no revenue recognized from performance obligations satisfied (or partially satisfied) in previous periods. As of March 31, 2018, there were no remaining performance obligations that the Company had not satisfied.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

4. Net Loss Per Common Share

Basic loss per share data for each period presented is computed using the weighted-average number of shares of common stock outstanding during each such period. Diluted loss per share data is computed using the weighted-average number of common and dilutive common-equivalent shares outstanding during each period. Dilutive common-equivalent shares consist of: (a) shares that would be issued upon the exercise of stock options and warrants, computed using the treasury stock method; and (b) shares of non-vested restricted stock.

The following securities are excluded from the calculation of weighted average dilutive common shares because their inclusion would have been anti-dilutive:

| | As of March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Stock options | 722,446 | 707,328 |
| Warrants | 471,070 | 454,112 |
| Non-vested restricted stock | 193,006 | 82,667 |
| Total | 1,386,522 | 1,244,107 |

5. Inventory

Inventory consists of the following (in thousands):

| | March 31, 2018 | December 31, 2017 |
|---|---|---|
| Raw materials | $ 168 | $ 98 |
| Work in process | 58 | — |
| Finished goods | 1,497 | 1,521 |
| Less: Inventory reserve for excess and slow moving inventory | (68) | (68) |
| Total | $ 1,655 | $ 1,551 |

6. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consist of the following (in thousands):

| | March 31, 2018 | December 31, 2017 |
|---|---|---|
| Salaries, benefits and incentive compensation | $ 2,386 | $ 1,981 |
| Milestone payment to licensor | 1,000 | 1,000 |
| Professional fees | 841 | 538 |
| Royalty fees | 266 | 227 |
| Deferred revenue | 407 | 365 |
| Other | 225 | 159 |
| Total accrued expenses and other current liabilities | $ 5,125 | $ 4,270 |

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

7. Debt

Senior Secured Term Loan Facility

On May 29, 2015, the Company entered into a Credit Agreement and Guaranty (the "CAG") with Perceptive Credit Opportunities Fund, L.P. ("Perceptive"). The CAG provided a senior secured term loan in a single borrowing to the Company in the principal amount of $15.5 million. The CAG (i) has a four-year term, (ii) accrues interest at an annual rate equal to the greater of (a) one-month LIBOR or 1% plus (b) 9.75%, (iii) is interest only for the first 24 months, followed by monthly amortization payments of $225,000, with the remaining unpaid balance due on the maturity date and (iv) is secured by a first priority lien on substantially all of the Company's assets. The Company is required to pay an exit fee when the term loan is paid in full equal to the greater of 2% of the outstanding principal balance immediately prior to the final payment or $200,000, which was amended in conjunction with the extinguishment of debt described below from the greater of 1% of the outstanding principal balance immediately prior to the final payment or $100,000. The interest rate at March 31, 2018 was 11.4375%.

In connection with the CAG, the Company incurred approximately $1.3 million of debt issuance costs. The debt issuance costs are being amortized over the term of the loan on a straight-line basis, which approximates the effective interest method. For the three months ended March 31, 2018 and 2017, the Company recorded amortization of debt issuance costs of $57,000 and $64,000, respectively, which is included in interest expense for the periods presented.

In connection with the entry into the CAG, a five-year warrant (the "Warrant") to purchase 75,000 shares of common stock, par value of $0.001 per share at an exercise price of $55.138 per share (the "Exercise Price") was issued to Perceptive. The Company granted Perceptive customary demand and piggy-back registration rights with respect to the shares of common stock issuable upon exercise of the Warrant. The Warrant contains a weighted average anti-dilution feature whereby the Exercise Price is subject to reduction if the Company issues shares of common stock (or securities convertible into common stock) in the future at a price below the current Exercise Price. As a result, the Warrant was determined to be a derivative liability. The Warrant had an issuance date fair value of approximately $2.7 million which was recorded as a debt discount. For the three months ended March 31, 2018 and 2017, the Company recorded amortization of debt discount of $134,000 and $140,000, respectively, which is included in interest expense for the periods presented. See Note 11 — Fair Value Measurement for additional details.

As of March 31, 2018, the Company was in default of a covenant pertaining to trailing twelve-month revenue under the CAG as a result of the Company's failure to achieve $27,200,000, $30,300,000, $33,800,000, $37,800,000, and $40,000,000 of gross revenue for the twelve-month periods ended March 31, 2017, June 30, 2017, September 30, 2017, December 31, 2017, and March 31, 2018 respectively. Additionally, the Company is in default of the of the minimum cash balance of $2.0 million as of March 31, 2018. Perceptive had agreed to forbear from exercising any rights and remedies related to such defaults until the earlier of May 7, 2018 or the termination of the APA. The Company has classified the entire principal balance as a current liability in its balance sheet as of March 31, 2018 and December 31, 2017.

The Company amended and restated the Warrant on each of October 25, 2016, January 26, 2017, March 7, 2017 and April 6, 2017. In addition, on June 1, 2017, the Company further amended the Warrant. The amended and restated Warrant, as amended, is exercisable for 210,000 shares of the Company's common stock at an exercise price of $4.70. The amended and restated Warrant, as amended, contains a weighted average anti-dilution feature whereby the exercise price of the amended and restated warrant is subject to reduction if the Company issues shares of common stock (or securities convertible into common stock) in the future at a price below the current exercise price of such warrant. Perceptive will not have the right to exercise the warrant to the extent that after giving effect to such exercise, Perceptive would beneficially own in excess of 9.99% of the common stock outstanding immediately after giving effect to such exercise. See Note 11 — Fair Value Measurement for additional details.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Debt consists of the following (in thousands):

| | March 31, 2018 | December 31, 2017 |
|---|---|---|
| Principal balance | $ 13,847 | $ 12,135 |
| Unamortized debt issuance and discount costs | (1,016) | (1,206) |
| Total | $ 12,831 | $ 10,929 |

On March 13, 2018, Alliqua BioMedical, Inc., AquaMed Technologies, Inc., a wholly owned subsidiary of the Company, and Perceptive Credit Holdings, L.P. entered into an Amendment Agreement, pursuant to which the parties agreed to certain amendments and modifications to the terms of the Credit Agreement and Guaranty, dated May 29, 2015, by and among the Company, the Guarantor and Perceptive. The Amendment Agreement provides for, an additional bridge term loan to the Company in the aggregate principal amount of $2,000,000 pursuant to a Bridge Loan Note ("BLN"). Under the Amendment Agreement, the Company agreed to pay an upfront fee of $250,000 and all fees, costs and expenses payable pursuant to the Credit Agreement (including reasonable attorney's fees of Perceptive). The BLN bears interest at a rate per annum equal to the sum of (i) the greater of (x) LIBOR and (y) 1%, plus (ii) an applicable margin of 9.75%. The BLN matures on the earlier of (i) May 7, 2018 and (ii) the closing date in connection with the previously announced APA, by and between the Company and Celularity Inc, dated January 5, 2018.
On May 7, 2018, the Company extinguished the debt obligation, the BLN and associated fees relating to the aforementioned obligation.

8. Commitments and Contingencies

Agreements for Human Placental Based Products

Human Longevity, Inc.

In November 2013, the Company entered into a License, Marketing and Development Agreement (the "License Agreement") and Supply Agreement (the "Biovance Supply Agreement") with Celgene Cellular Therapeutics ("CCT"), an affiliate of Celgene Corporation ("Celgene"). The agreements grant the Company an exclusive, royalty-bearing license in CCT's intellectual property for certain placental based products, including ECM and Biovance®, as well as provide the Company with the its requirements of Biovance for distribution. In January 2016, HLI Cellular Therapeutics, LLC ("HLI"), a genomics-based, technology-driven company, announced the purchase of LifebankUSA and other select assets from CCT. CCT assigned and HLI assumed the license and supply agreements the Company entered into with CCT, for certain placental based products. In June 2017, Celularity, Inc. ("Celularity") acquired all of the assets of HLI, including the agreements between HLI and the Company. The Company is required to pay Celularity annual license fees, designated amounts when certain milestone events occur and royalties on all sales of licensed products, with such amounts being variable and contingent on various factors. For the three months ended March 31, 2018 and 2017, the Company incurred royalties of approximately $266,000 and $185,000, respectively, in connection with this agreement. Approximately $266,000 is included in accrued expenses as of March 31, 2018, in connection with this agreement. The initial term of the License Agreement ends on November 14, 2023, unless sooner terminated pursuant to the termination rights under the License Agreement and will extend for additional two-year terms unless either party gives written notice within a specified period prior to the end of a term. The License Agreement with Celularity is terminable on a product-by-product basis if the Company fails to meet certain minimum sales thresholds in the second year or any subsequent year of commercial sales of each licensed product. Each year of commercial sales are referred to in the License Agreement as "launch years" and the calendar period constituting each launch year for each licensed product is determined in accordance with the terms of the License Agreement. To maintain its license for Biovance, the Company must meet a minimum gross sales amount for Biovance in

the second year and third year of commercial sales. If the Company fails to meet the minimum threshold in the second year of commercial sales of product, it would be able to cure such failure by making a cure payment specified in the License Agreement to Celularity; provided, however, the Company does not have the option to make a cure payment, should it fail to meet the minimum threshold for such product in the third year of commercial sales and Celularity may terminate the License Agreement with respect to such product.

In September 2014, the Company entered into a First Amendment to the License Agreement (the "Amended License Agreement"), pursuant to which the Company received the right to market Biovance for podiatric and orthopedic applications. The Amended License Agreement also amends certain terms and the related schedule for milestone payments to CCT. In May 2015, the Company amended its exclusive licensing agreement with CCT, which granted the Company the right to develop and market CCT's connective tissue matrix product, also known as Interfyl.

In April 2016, the Company entered into a Supply Agreement with HLI (now Celularity), pursuant to which Celularity supplies the Company with the Company's entire requirement of Interfyl™ Human Connective Tissue Matrix. Additionally, the Company agreed to make certain future milestone payments upon the achievement of certain milestones. The Company initiated sales and marketing efforts of Interfyl Human Connective Tissue Matrix in September 2016 and achieved two milestones under the license agreement. The Company is required to pay Celularity $500,000 related to the first commercial sale of Interfyl in the flowable matrix configuration and $500,000 related to the first commercial sale of Interfyl in the particulate form. Commercial sales of both configurations occurred in September 2016, and as such, the Company recorded $1.0 million of milestone expense during the year ended December 31, 2016. The milestone has been included in accrued expenses and other current liabilities as of March 31, 2018 and December 31, 2017.

On December 1, 2017, we received notice from Celularity that we are in material breach of our License, Marketing and Development Agreement with Celularity (or its affiliates) dated as of November 14, 2013, as amended from time to time (the "License Agreement") and our Supply Agreements with Celularity (or its affiliates), dated as of April 15, 2016 and November 14, 2013, respectively, as amended from time to time (the "Supply Agreements") for failure to purchase the required amounts of materials under the Supply Agreements and failure to use commercially reasonable best efforts to undertake development activities for the licensed products under the License Agreement (the "Notices"). Celularity estimated that an additional purchase of at least $842,000 would have to be made by us to remedy the breach under the Supply Agreements. Celularity has agreed to forbear from exercising its right to terminate the Supply Agreements and License Agreements until the closing of the Asset Sale Transaction or termination of the Asset Purchase Agreement for any reason.

On May 7, 2018, the License Agreement and the Supply Agreements were transferred to Celularity in connection with the completion of the AST.

License Agreement with Noble Fiber Technologies, LLC

On July 15, 2011, the Company entered into a license agreement with Noble Fiber Technologies, LLC, whereby the Company has the exclusive right and license to manufacture and distribute "SilverSeal Hydrogel Wound Dressings" and "SilverSeal Hydrocolloid Wound Dressings". The license is granted for ten years with an option to be extended for consecutive renewal periods of two years after the initial term. Royalties are to be paid equal to 9.75% of net sales of licensed products. The agreement calls for minimum royalties in 2016 in the amount of $600,000. There are no minimum royalties subsequent to 2016. Total royalties, for the three months ended March 31, 2018 and 2017 were $43 and $1,900, respectively.

Litigation, Claims and Assessments

From time to time, the Company may become involved in lawsuits, investigations and claims that arise in the ordinary course of business. The Company believes it has meritorious defenses against all pending claims and intends to vigorously pursue them. While it is not possible to predict or determine the outcomes

of any pending actions, the Company believes the amount of liability, if any, with respect to such actions, would not materially affect its financial position, results of operations or cash flows.

On February 22, 2018, a putative stockholder class action complaint was filed in the United States District Court for the District of Delaware against the Company and each member of the Board, captioned Ronald Cresta, Individually and on Behalf of All Others Similarly Situated v. Alliqua BioMedical Inc., David Johnson, Joseph M. Leone, Gary Restani, Jeffrey Sklar and Mark Wagner. The complaint alleges, among other things, that the Company and the Board violated federal securities laws and regulations by soliciting stockholder votes in connection with the Asset Sale Transaction through a proxy statement that omits material facts necessary to make the statements therein not false or misleading. The complaint seeks, among other things, to enjoin the Company and the Board from conducting the stockholder vote on the Asset Sale Transaction unless and until the allegedly omitted material information is disclosed to the Company's stockholders, damages allegedly suffered by the plaintiffs as a result of the asserted omissions, as well as related attorneys' fees and expenses.

On April 4, 2018, the court approved the parties' stipulation and proposed order to withdraw the motion for preliminary injunction and dismiss the action and the case was closed. The court retained jurisdiction of the action solely for determining any potential fee application if the parties are unable to reach agreement and a fee application becomes necessary.

9. Stockholders' Equity

Stock-Based Compensation

During the three months ended March 31, 2018, the Company recognized a credit of $80,000 related to stock-based compensation resulting from the forfeiture of certain unvested awards, consisting of expense of $14,000 included in cost of revenues that is offset by a credit of $94,000 which is included in selling, general and administrative expenses in the condensed consolidated statements of operations. During the three months ended March 31, 2017, the Company recognized $491,000 of stock-based compensation expense, of which, $11,000 is included in cost of revenues and $480,000 is included in selling, general and administrative expenses in the condensed consolidated statements of operations. As of March 31, 2018, there was $343,000 of unrecognized stock-based compensation expense which will be amortized over a weighted average period of 0.7 years.

Reverse Stock Split

The Company effected a 1-for-10 reverse stock split of its outstanding common stock on October 5, 2017. The accompanying consolidated financial statements and accompanying notes to the consolidated financial statements give retroactive effect to the reverse stock split for all periods presented. The shares of common stock retained a par value of $0.001 per share.

10. Related Party

In November 2015, the Company entered into a manufacturing supply agreement with a company where a Company director was then a member of the Board of Directors. During the three months ended March 31, 2018 and 2017, the Company incurred costs of approximately $189,000 and $127,000, respectively, from this vendor. Approximately $122,000 and $102,000 is included in accounts payable related to this related party as of March 31, 2018 and December 31, 2017, respectively.

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11. Fair Value Measurement

Fair value is defined as the price that would be received upon selling an asset or the price paid to transfer a liability on the measurement date. It focuses on the exit price in the principal or most advantageous market for the asset or liability in an orderly transaction between willing market participants. A three-tier fair value hierarchy is established as a basis for considering such assumptions and for inputs used in the valuation methodologies in measuring fair value. This hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. The three levels of inputs used to measure fair values are as follows:

Level 1:

Observable prices in active markets for identical assets and liabilities.

Level 2:

Observable inputs other than quoted prices in active markets for identical assets and liabilities.

Level 3:

Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets and liabilities.

Warrant Liabilities

On March 31, 2018, the Company recomputed the fair value of its warrant liability of outstanding warrants to purchase an aggregate of 210,000 shares of common stock as $149,000 using the Binomial option pricing model (Level 3 inputs) using the following assumptions: expected volatility of 76.81% risk-free rate of 2.48%, expected term of 3.83 years, and expected dividends of 0.00%. The Company recorded a loss on the change in fair value of these warrant liabilities of $19,000 during the three months ended March 31, 2018.

Warrants that contain exercise reset provisions and contingent consideration liabilities are Level 3 derivative liabilities measured at fair value on a recurring basis using pricing models for which at least one significant assumption is unobservable as defined in ASC 820. The fair value of contingent consideration liabilities that are classified as Level 3 were estimated using a discounted cash flow technique with significant inputs that are not observable in the market and thus represents a Level 3 fair value measurement as defined in ASC 820. The significant inputs in the Level 3 measurement not supported by market activity include the probability assessments of expected future cash flows related to the acquisitions, appropriately discounted considering the uncertainties associated with the obligation, and as calculated in accordance with the terms of the acquisition agreements. The development and determination of the unobservable inputs for Level 3 fair value measurements and the fair value calculations are the responsibility of the Company’s Chief Financial Officer and are approved by the Chief Executive Officer.

The following table sets forth a summary of the changes in the fair value of Level 3 warrant liabilities that are measured at fair value on a recurring basis (in thousands):

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Warrant Liabilities | | |
| Beginning balance as of January 1, | $ 130 | $ 20 |
| Change in fair value of warrant liability | 19 | (118) |
| Warrant modification expense | — | 770 |
| Ending balance as of March 31, | $ 149 | $ 672 |

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| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Contingent Consideration | | |
| Beginning balance as of January 1, | $ — | $ 1,816 |
| Payments of contingent consideration | — | (1,350) |
| Change in fair value of contingent consideration | — | 34 |
| Ending balance as of March 31, | $ — | $ 500 |

Assets and liabilities measured at fair value on a recurring basis are as follows (in thousands):

| | March 31, 2018 | | |
|---|---|---|---|
| | Level 1 | Level 2 | Level 3 |
| Liabilities: | | | |
| Warrant liabilities | $ — | $ — | $ 149 |
| Total liabilities | $ — | $ — | $ 149 |

| | December 31, 2017 | | |
|---|---|---|---|
| | Level 1 | Level 2 | Level 3 |
| Liabilities: | | | |
| Warrant liabilities | $ — | $ — | $ 130 |
| Total liabilities | $ — | $ — | $ 130 |

Warrants that contain exercise reset provisions and contingent consideration liabilities are Level 3 derivative liabilities measured at fair value on a recurring basis using pricing models for which at least one significant assumption is unobservable as defined in ASC 820. The fair value of contingent consideration liabilities that are classified as Level 3 were estimated using a discounted cash flow technique with significant inputs that are not observable in the market and thus represents a Level 3 fair value measurement as defined in ASC 820. The significant inputs in the Level 3 measurement not supported by market activity include the probability assessments of expeced future cash flows related to the acquisitions, appropriately discounted considering the uncertainties associated with the obligation, and as calculated in accordance with the terms of the acquisition agreements. The development and determination of the unobservable inputs for Level 3 fair value measurements and the fair value calculations are the responsibility of the Company’s Chief Financial Officer and are approved by the Chief Executive Officer.

12. Subsequent Event

On May 7, 2018, the Company closed the APA with Celularity pursuant to which the Company sold substantially all of its assets to Celularity, including certain assets comprising its MIST, Biovance and Interfyl product lines. As consideration under the APA, Celularity paid the Company $29 million in cash. No debt or significant liabilities were assumed by Celularity associated with the APA. Under the terms of the APA, the Company will retain certain specified assets which include, cash, accounts receivable, and the Company’s hydrogel contract manufacturing business, including its SilverSeal and Hydress product lines.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
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The following proforma summary information reflects the Company's balance sheet as if the APA closed on March 31, 2018. The below summary does not include all closing costs relating to the AST or the impact of the Company's business operations for the period from April 1, 2018 through the date of closing. The proforma is meant only to depict the elimination of the March 31, 2018 balances for those assets that were part of the APA, in addition to the repayment of the Company's outstanding debt with Perceptive. It was also meant to exclude the impact of certain transaction costs, including severance cost and other professional fees to be incurred during the Company's second quarter, 2018. Upon the closing of the AST, substantially all of the inventory and fixed assets were part of the assets sold, and the goodwill and intangible assets related to those operations that remained on the Company's books and records were eliminated. The Company's cash position increased resulting from closing the AST, offset by the payment of its debt obligation including associated fees to Perceptive.

ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)

| | As Reported March 31, 2018 (Unaudited) | Proforma March 31, 2018 (Unaudited) |
|---|---|---|
| ASSETS: | | |
| Current Assets: | | |
| Cash and cash equivalents | $ 1,536 | $ 15,735 |
| Other current assets | 6,062 | 4,545 |
| Total current assets | 7,598 | 20,280 |
| Goodwill and intangible assets | 22,594 | — |
| Other long term assets | 1,558 | 619 |
| Total assets | $ 31,750 | $ 20,899 |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current Liabilities: | | |
| Senior secured debt | $ 12,831 | $ — |
| Other current liabilities | 8,149 | 6,743 |
| Total current liabilities | 20,980 | 6,743 |
| Other liabilities | 295 | 68 |
| Total liabilities | 21,275 | 6,811 |
| Equity | 10,475 | 14,088 |
| Total liabilities and stockholders' equity | $ 31,750 | $ 20,899 |

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ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the condensed consolidated financial statements and related notes above.

Forward-Looking Statements

This Quarterly Report on Form 10-Q contains "forward-looking statements," which include information relating to future events, future financial performance, strategies, expectations, competitive environment and regulation. Words such as "may," "should," "could," "would," "predict," "potential," "continue," "expect," "anticipate," "future," "intend," "plan "estimate," and similar expressions, as well as statements in future tense, identify forward-looking statements. Forward-looking statements should not be read as a guarantee of future performance or results and may not be accurate indications of when such performance or results will actually be achieved. Forward-looking statements are based on information we have when those statements are made or our management's good faith belief as of that time with respect to future events and are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in or suggested by the forward-looking statements. Important factors that could cause such differences include, but are not limited to:

- our ability to continue as a going concern;
- inadequate capital;
- the uncertainty regarding the adequacy of our liquidity to pursue our complete business objectives;
- our ability to recover the carrying value of some or all of our intangible assets including goodwill;
- our ability to obtain reimbursement from third party payers for our products;
- our ability to achieve and maintain minimum sales requirements under our license agreements;
- our ability to obtain and maintain regulatory approval of our existing products and any future products we may develop;
- our ability to cure or obtain forbearance or waivers for existing covenant defaults under our outstanding indebtedness and to remain in compliance with our debt covenants;
- market acceptance of our existing and future products;
- loss or retirement of key executives;
- our plans to make significant additional outlays of working capital before we expect to generate significant revenues and the uncertainty regarding when we will begin to generate significant revenues, if we are able to do so;

- an unfavorable decision on product reimbursement;
- adverse economic conditions and/or intense competition;
- loss of a key customer or supplier;
- entry of new competitors and products;
- adverse federal, state and local government regulation;
- technological obsolescence of our products;
- technical problems with our research and products;
- risks of mergers and acquisitions including the time and cost of implementing transactions and the potential failure to achieve expected gains, revenue growth or expense savings;
- price increases for supplies and components; and
- the inability to carry out research, development and commercialization plans.

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For a discussion of these and other risks that relate to our business and investing in shares of our common stock, you should carefully review the risks and uncertainties described under the heading "Part II — Item 1A. Risk Factors" and elsewhere in this Quarterly Report on Form 10-Q and in our Annual Report on form 10-K for the year ended December 31, 2017. The forward-looking statements contained in this Quarterly Report on Form 10-Q are expressly qualified in their entirety by this cautionary statement. We do not undertake any obligation to publicly update any forward-looking statement to reflect events or circumstances after the date on which any such statement is made or to reflect the occurrence of unanticipated events.

Overview

We are a regenerative technologies company that commercializes differentiated regenerative medical products which assist the body in the repair or replacement of soft tissue. Through our sales and distribution network, together with our proprietary products, we believe we offer solutions that allow clinicians to utilize the latest advances in regenerative technologies to bring improved patient outcomes to their practices. Our contract manufacturing business provides custom hydrogels to the OEM market.

Recent Events

Completion of the Asset Sale Transaction with Celularity

On May 7, 2018, Alliqua BioMedical, Inc. (the "Company") completed the sale under the Asset Purchase Agreement (the "APA") of substantially all of the Company's assets (the "Asset Sale Transaction") to Celularity, Inc. ("Celularity"), including certain assets comprising its MIST, Biovance and Interfyl product lines pursuant to the terms of the APA, dated January 5, 2018 with Celularity. As consideration under the APA, Celularity paid a purchase price of $29 million in cash. No debt or significant liabilities were assumed by the Celularity.

Under the terms of the APA, the Company retained certain specified assets, including, among other things, cash, accounts receivable and its hydrogel contract manufacturing business, including its SilverSeal and Hydress product lines.

On May 7, 2018, in connection with the completion of the Asset Sale Transaction (the "AST"), the Company terminated its Credit Agreement and Guaranty (the "Credit Agreement"), dated as of May 29, 2015, as amended, by and among the Company, AquaMed Technologies, Inc., a wholly owned subsidiary of the Company ("Guarantor"), and Perceptive Credit Holdings LP ("Perceptive"). The Credit Agreement provided for a senior secured term loan in a single borrowing to the Company in the initial principal amount of approximately $15.5 million, of which approximately $12 million remained outstanding on the termination date. The full unpaid principal amount of the term loan was to mature on May 29, 2019. In connection with the termination of the Credit Agreement, the Company also paid to Perceptive an exit fee in the amount of $0.24 million and a prepayment premium of $0.24 million.

The Company also terminated the related Pledge and Security Agreement, dated as of May 29, 2015, by and among the Company, Guarantor and Perceptive.

Bridge Loan

On March 13, 2018, the Company, Guarantor and Perceptive entered into an Amendment Agreement (the "Amendment Agreement"), pursuant to which the parties agreed to certain amendments and modifications to the terms of the Credit Agreement. The Amendment Agreement provided for, among other things, an additional bridge term loan to the Company in the aggregate principal amount of $2,000,000 (the "Bridge Loan") pursuant to a bridge loan note (the "Bridge Loan Note"). Under the Amendment Agreement, the Company agreed to pay an upfront fee of $250,000 and all fees, costs and expenses payable pursuant to the Credit Agreement (including reasonable attorney's fees of Perceptive). The Bridge Loan Note bore interest at a rate per annum equal to the sum of (i) the greater of (x) LIBOR and (y) 1%, plus (ii) an applicable margin of 9.75%. The Bridge Loan Note was to mature on the earlier of (i) May 7, 2018 and (ii) the closing of the AST. In connection with the completion of the AST, the Company repaid its obligations to Perceptive under the Bridge Loan Note.

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Results of Operations

Three Months Ended March 31, 2018 Compared to the Three Months Ended March 31, 2017

Our operations intended to be sold under the APA have not been reclassified to discontinued operations since they are classified as Held for Use. These operations are presented in continuing operations in the first quarter of 2018. These operations will be reclassified to discontinued operations in the second quarter of 2018, as a result of receiving the shareholder approval for the sale on April 27, 2018.

Revenues, net. For the three months ended March 31, 2018 revenues increased by $1.3 million, or 30%, to $5.4 million from $4.1 million for the three months ended March 31, 2017. The increase in our overall revenue was due to a 20% increase in product sales, primarily attributable to growth in our biologic products.

The components of revenue were as follows for the three months ended March 31, 2018 and 2017 (in thousands):

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Revenues | | |
| Product | $ 4,841 | $ 3,896 |
| Contract manufacturing | 540 | 229 |
| Total revenues, net | $ 5,381 | $ 4,125 |

Gross profit. Our gross profit was $3.7 million for the three months ended March 31, 2018 compared to gross profit of $2.6 million for the three months ended March 31, 2017. The improved results for the three months ended March 31, 2018, as compared to the three months ended March 31, 2017 was primarily due to the greater volume of product sales as product revenue typically commands higher gross profit margins. Gross margin on our product sales was approximately 76%, while our overall gross margin was approximately 68% for the three months ended March 31, 2018. Gross margin on our product sales was approximately 76%, while our overall gross margin was approximately 63% for the three months ended March 31, 2017.

The components of cost of revenues are as follows for the three months ended March 31, 2018 and 2017 (in thousands):

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Cost of revenues | | |
| Materials and finished products | $ 1,066 | $ 860 |
| Stock-based compensation | 14 | 11 |
| Compensation and benefits | 135 | 230 |
| Depreciation and amortization | 218 | 206 |
| Equipment, production and other expenses | 271 | 208 |
| Total cost of revenues | $ 1,704 | $ 1,515 |

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Selling, general and administrative expenses. The following table highlights selling, general and administrative expenses by type for the three months ended March 31, 2018 and 2017 (in thousands):

| | Three Months Ended March 31, | |
|---|---|---|
| | 2018 | 2017 |
| Selling, general and administrative expenses | | |
| Compensation and benefits | $ 3,125 | $ 3,773 |
| Stock-based compensation | (94) | 480 |
| Professional fees | 1,155 | 733 |
| Marketing | 367 | 355 |
| Depreciation and amortization | 1,099 | 1,102 |
| Other expenses | 1,377 | 1,145 |
| Total selling, general and administrative expenses | $ 7,029 | $ 7,588 |

Selling, general and administrative expenses decreased by $559,000 to $7.0 million for the three months ended March 31, 2018, as compared to $7.6 million for the three months ended March 31, 2017. The decrease in selling, general and administrative expenses is consistent with our goal of decreasing our operating expenditures.

Compensation and benefits decreased by $648,000 to $3.1 million for the three months ended March 31, 2018, as compared to $3.8 million for the three months ended March 31, 2017. The decrease in compensation and benefits was primarily due to the decrease in the average number of full-time employees in 2018 compared to 2017, offset by an increase in sales-based commission due to the increase in product revenue. We expect our average headcount for the full year of 2018 to be lower than the full year of 2017.

Stock-based compensation decreased by $574,000, to ($94,000) for the three months ended March 31, 2018, as compared to $480,000 for the three months ended March 31, 2017. The decrease in stock-based compensation is primarily due to the reversal of the stock based compensation for terminated employees' unvested restricted stock awards.

Professional fees increased by $422,000 to $1.2 million for the three months ended March 31, 2018, as compared to $733,000 for the three months ended March 31, 2017. The increase in professional fees was primarily due to an increase in legal, specifically expenses incurred related to efforts including the settlement of a putative stockholder class action complain, unrelated to the APA which was withdrawn, and independent sales commissions, directly attributable to increased sales.

Other expenses increased by $232,000 to $1.4 million for the three months ended March 31, 2018 from $1.1 million for the three months ended March 31, 2017. Other selling, general and administrative expenses consist of costs associated with our selling efforts and general management, including information technology, travel, training and recruiting.

Transactional costs. During the three months ended March 31, 2018, we incurred $923,000 in transactional costs related to the APA and AST, which closed on May 7, 2018. These costs were mainly due to professional fees, including accounting, legal and consulting fees. During the three months ended March 31, 2017 we incurred $635,000 in transactional costs related to business development opportunities.

Warrant modification expense. During the three months ended March 31, 2017, we recognized $770,000 of warrant modification expense in connection with the warrant issued to Perceptive. In connection with entry into the January 2017 forbearance agreement, as amended March 2017, we also amended and restated the warrant issued to Perceptive in connection with the closing of the Credit Agreement in May 2015. The amended and restated warrant is exercisable for 2,000,000 shares of our common stock. The expense recorded during the three months ended March 31, 2017 represents the incremental value of the modified warrant as compared to the original warrant, both valued as of the January 26, 2017 modification date.

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Liquidity and Capital Resources

As of March 31, 2018, we had cash and cash equivalents totaling approximately $1.5 million compared to $2.2 million at December 31, 2017. The decrease was largely attributable to cash used in operating activities of approximately $2.5 million, offset by $1.7 million received from net proceeds from the proceeds of a bridge loan and $100,000 from the proceeds of an escrow payment from Argentum Medical.

Net cash used in operating activities was $2.5 million and $4.6 million for the three months ended March 31, 2018 and 2017, respectively.

Net cash provided in investing activities was $100,000 and net cash used in investing activities was $389,000 million for the three months ended March 31, 2018, and 2017, respectively. Cash provided by investing activities during the three months ended March 31, 2018 included a payment from escrow for the Argentum TheraBond sale. Cash used by investing activities during the three months ended March 31, 2017 included $350,000 provided to Soluble as a bridge loan and $39,000 in purchases of improvements and equipment.

Net cash provided by financing activities for the three months ended March 31, 2018 consisted of $1.7 million of net proceeds received from a bridge loan issued by Perceptive Advisors. Net cash provided by financing activities for the three months ended March 31, 2017 consisted of $2.5 million of net proceeds received from the issuance of our common stock offset by $675,000 utilized to pay the cash portion of the contingent consideration related to the Celleration acquisition.

At March 31, 2018, current assets totaled $7.6 million and current liabilities totaled $20.9 million, as compared to current assets totaling $7.5 million and current liabilities totaling $17.0 million at December 31, 2017. As a result, we had negative working capital of $13.3 million at March 31, 2018 compared to negative working capital of $9.5 million at December 31, 2017.

Upon closing of the AST, we received gross proceeds of $29 million, a portion of which was used to repay our outstanding indebtedness and other obligations to Perceptive under the Credit Agreement and Bridge Loan Note. With the remaining proceeds from the APA, we believe substantial doubt of going concern has been mitigated and we have sufficient resources to fund our planned operations for a year from the date these financial statements are issued.

Off Balance Sheet Arrangements

As of March 31, 2018, we had no off-balance sheet arrangements in the nature of guarantee contracts, retained or contingent interests in assets transferred to unconsolidated entities (or similar arrangements serving as credit, liquidity or market risk support to unconsolidated entities for any such assets), or obligations (including contingent obligations) arising out of variable interests in unconsolidated entities providing financing, liquidity, market risk or credit risk support to us, or that engage in leasing, hedging or research and development services with us.

Critical Accounting Policies

There have been no significant changes to our critical accounting policies and estimates from the information provided in Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” included in the Annual Report on Form 10-K for the year ended December 31, 2017.

Recent Accounting Pronouncements

Recently issued accounting pronouncements are addressed in Note 1 in the Notes to Condensed Consolidated Financial Statements.

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ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not required.

ITEM 4. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures.

As of March 31, 2018, we conducted an evaluation of the effectiveness of our “disclosure controls and procedures” (“Disclosure Controls”), as defined by Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). The Disclosure Controls evaluation was done under the supervision and with the participation of management, including our chief executive officer and chief financial officer. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives. Based upon this evaluation, our chief executive officer and chief financial officer have concluded that our Disclosure Controls were effective at the reasonable assurance level as of March 31, 2018.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting during the fiscal quarter ended March 31, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Effective April 1, 2018, Joseph Warusz assumed the position of Chief Financial Officer, Treasurer and Secretary of the Company. Mr. Warusz succeeded Brian Posner who resigned as our Chief Financial Officer, Treasurer and Secretary effective April 1, 2018, to pursue another professional opportunity.

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PART II — OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

From time to time, the Company may become involved in lawsuits, investigations and claims that arise in the ordinary course of business. The Company believes it has meritorious defenses against all pending claims and intends to vigorously pursue them. While it is not possible to predict or determine the outcomes of any pending actions, the Company believes the amount of liability, if any, with respect to such actions, would not materially affect its financial position, results of operations or cash flows.

On February 22, 2018, a putative stockholder class action complaint was filed in the United States District Court for the District of Delaware against the Company and each member of the Board, captioned Ronald Cresta, Individually and on Behalf of All Others Similarly Situated v. Alliqua BioMedical Inc., David Johnson, Joseph M. Leone, Gary Restani, Jeffrey Sklar and Mark Wagner. The complaint alleged, among other things, that the Company and the Board violated federal securities laws and regulations by soliciting stockholder votes in connection with the Asset Sale Transaction through a proxy statement that omits material facts necessary to make the statements therein not false or misleading. The complaint sought, among other things, to enjoin the Company and the Board from conducting the stockholder vote on the Asset Sale Transaction unless and until the allegedly omitted material information was disclosed to the Company's stockholders, damages allegedly suffered by the plaintiffs as a result of the asserted omissions, as well as related attorneys' fees and expenses.

On April 4, 2018, the court approved the parties' stipulation and proposed order to withdraw the motion for preliminary injunction and dismiss the action and the case was closed. The court retained jurisdiction of the action solely for determining any potential fee application if the parties are unable to reach agreement and a fee application becomes necessary.

ITEM 1A. RISK FACTORS

During the three months ended March 31, 2018, there were no material changes to the risk factors previously discussed in Part I, Item 1A "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2017.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

(a) Unregistered Sales of Equity Securities

None

(b) Issuer Purchases of Equity Securities

None

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

Not applicable.

ITEM 6. EXHIBITS

See "Index to Exhibits" for a description of our exhibits.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

ALLIQUA BIOMEDICAL, INC.

By:
/s/ David Johnson

Date: May 14, 2018

Name: David Johnson
Title: Chief Executive Officer
(Principal Executive Officer)

By:
/s/ Joseph Warusz

Name: Joseph Warusz
Title: Chief Financial Officer
(Principal Financial Officer)

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Index to Exhibits

| Exhibit No. | Description |
|---|---|
| 2.1 | Asset Purchase Agreement, dated January 5, 2018, by and between Alliqua BioMedical, Inc. and Celularity Inc., (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed on January 5, 2018). |
| 3.1 | Certificate of Incorporation of Alliqua BioMedical, Inc. (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on June 11, 2014). |
| 3.2 | Bylaws of Alliqua BioMedical, Inc. (incorporated by reference to Exhibit 3.2 to the Current Report on Form 8-K filed on June 11, 2014). |
| 3.3 | Certificate of Amendment to Certificate of Incorporation of Alliqua BioMedical, Inc. (incorporated by reference to Exhibit 3.3 to the Current Report on Form 8-K filed on June 11, 2014). |
| 3.4 | Certificate of Amendment to Certificate of Incorporation of Alliqua BioMedical, Inc. (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on May 6, 2016). |
| 3.5 | Certificate of Amendment of Certificate of Incorporation of Alliqua BioMedical, Inc. dated October 5, 2017 (incorporated by reference in Exhibit 3.1 to the Current Report on Form 8-K filed on October 5, 2017). |
| 10.1 | Forbearance and Amendment Agreement, dated February 5, 2018, by and among Alliqua BioMedical, Inc., AquaMed Technologies, Inc. and Perceptive Credit Holdings, L.P., (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed with the Securities and Exchange Commission on February 9, 2018). |
| 10.2 | Amendment Agreement, dated March 13, 2018, by and among Alliqua BioMedical, Inc. and Perceptive Credit Opportunities Fund, LP (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on March 15, 2018). |
| 10.3 | Bridge Loan Note, dated March 13, 2018, by and among Alliqua BioMedical, Inc. and Perceptive Credit Opportunities Fund, LP (incorporated by reference to Exhibit 10.2 the Current Report on Form 8-K filed on March 15, 2018). |
| 10.4 | General Release and Severance Agreement, dated March 15, 2018, by and between Alliqua BioMedical, Inc. and Brian Posner (incorporated by reference to Exhibit 10.3 the Current Report on Form 8-K filed on March 15, 2018). |
| 31.1* | Certification of Chief Executive Officer Pursuant to Section 302 of Sarbanes-Oxley Act of 2002. |
| 31.2* | Certification of Chief Financial Officer Pursuant to Section 302 of Sarbanes-Oxley Act of 2002. |
| 32.1* | Certification of Chief Executive Officer Pursuant to Section 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. |
| 32.2* | Certification of Chief Financial Officer Pursuant to Section 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. |
| 101* | The following materials from the Company's Quarterly Report on Form 10-Q for the fiscal quarter March 31, 2018, formatted in XBRL (eXtensible Business Reporting Language), (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Operations, (iii) Consolidated Statements of Stockholders' Equity, (iv) Consolidated Statements of Cash Flows, and (v) Notes to the Consolidated Financial Statements. |

*

Filed herewith.

**

Certain exhibits and schedules have been omitted and the Company agrees to furnish supplementary to the Securities and Exchange Commission a copy of any omitted exhibits upon request.

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Annex F

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON D.C. 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended: June 30, 2018
OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to
Commission file number: 001-36278

Alliqua BioMedical, Inc.
(Exact name of registrant as specified in its charter)

| | |
|---|---|
| Delaware | 58-2349413 |
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification Number) |
| 2150 Cabot Blvd West, Suite B Langhorne, PA | 19047 |
| (Address of principal executive office) | (Zip Code) |

Registrant's telephone number, including area code: (215) 702-8550

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

| | |
|---|---|
| Large accelerated filer | Accelerated filer |
| Non-accelerated filer | |

(Do not check if a smaller reporting company)

Smaller reporting company Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined by Rule 12b-2 of the Exchange Act). Yes No

As of August 10, 2018, the registrant had 5,005,210 shares of common stock outstanding.

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ALLIQUA BIOMEDICAL, INC.

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PART I — FINANCIAL INFORMATION
ITEM 1. FINANCIAL STATEMENTS
ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)

| | June 30, 2018 (Unaudited) | December 31, 2017 |
|---|---|---|
| ASSETS: | | |
| Current Assets: | | |
| Cash and cash equivalents | $ 11,021 | $ 2,181 |
| Accounts receivable, net | 442 | 99 |
| Inventory, net | 139 | 93 |
| Prepaid expenses and other current assets | 180 | 41 |
| Current assets of discontinued operations | 1,224 | 5,062 |
| Total current assets | 13,006 | 7,476 |
| Improvements and equipment, net | 367 | 522 |
| Other assets | 178 | 173 |
| Assets of discontinued operations – noncurrent | — | 24,769 |
| Total assets | $ 13,551 | $ 32,940 |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current Liabilities: | | |
| Accounts payable | $ 509 | $ 684 |
| Accrued expenses and other current liabilities | 249 | 712 |
| Warrant liability | 164 | 130 |
| Current liabilities of discontinued operations | 2,300 | 15,443 |
| Total current liabilities | 3,222 | 16,969 |
| Other long-term liabilities | 55 | 59 |
| Long term liabilities of discontinued operations | — | 245 |
| Total liabilities | 3,277 | 17,273 |
| Commitments and Contingencies | | |
| Stockholders' Equity | | |
| Preferred Stock, par value $0.001 per share, 1,000,000 shares authorized, no shares issued and outstanding | — | — |
| Common Stock, par value $0.001 per share, 95,000,000 shares authorized; 5,005,210 and 4,986,034 shares issued and outstanding as of June 30, 2018 and December 31, 2017, respectively | 5 | 5 |
| Additional paid-in capital | 166,651 | 165,672 |
| Accumulated deficit | (156,382) | (150,010) |
| Total stockholders' equity | 10,274 | 15,667 |
| Total liabilities and stockholders' equity | $ 13,551 | $ 32,940 |

The accompanying notes are an integral part of these condensed consolidated financial statements.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)
(in thousands, except share and per share data)

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | 2018 | 2017 | 2018 | 2017 |
| Revenue, net of returns, allowances and discounts | $ 864 | $ 616 | $ 1,408 | $ 855 |
| Cost of revenues | 593 | 513 | 1,010 | 935 |
| Gross profit/(loss) | 271 | 103 | 398 | (80) |
| Operating expenses | | | | |
| Selling, general and administrative | 1,275 | 1,407 | 3,146 | 2,536 |
| Business development costs | 201 | — | 201 | 635 |
| Total operating expenses | 1,476 | 1,407 | 3,347 | 3,171 |
| Loss from operations | (1,205) | (1,304) | (2,949) | (3,251) |
| Other (expense) income | | | | |
| Interest income | 4 | 2 | 5 | 4 |
| Change in fair value of warrant liability | (15) | 250 | (34) | 369 |
| Loss on early extinguishment of debt, net | (1,706) | — | (1,706) | — |
| Total other (expense) income | (1,717) | 252 | (1,735) | 373 |
| Loss from continuing operations before tax | (2,922) | (1,052) | (4,684) | (2,878) |
| Income tax benefit (expense) | 3 | (3) | — | (6) |
| Loss from continuing operations | (2,919) | (1,055) | (4,684) | (2,884) |
| Discontinued operations: | | | | |
| Loss from discontinued operations, net of tax of $0, for the three and six months ended June 30, 2018 and 2017 | (3,864) | (3,149) | (7,207) | (8,317) |
| Gain on sale of assets, net of tax of $0.5 million for the three and six months ended June 30, 2018 | 5,521 | — | 5,521 | — |
| Income/(loss) from discontinued operations, net of tax | 1,657 | (3,149) | (1,686) | (8,317) |
| Net loss | $ (1,262) | $ (4,204) | $ (6,370) | $ (11,201) |
| Net loss per basic and diluted common share: | | | | |
| Loss from continuing operations | $ (0.66) | $ (0.23) | $ (1.07) | $ (0.76) |
| Loss from discontinued operations | (0.88) | (0.70) | (1.65) | (2.19) |
| Gain on sale of assets | 1.25 | — | 1.27 | — |
| Total from discontinued operations | 0.37 | (0.70) | (0.38) | (2.19) |
| Net loss per basic and diluted common share | $ (0.29) | $ (0.93) | $ (1.45) | $ (2.95) |
| Weighted average shares used in computing net loss per basic and diluted common share | 4,407,168 | 4,523,689 | 4,358,866 | 3,801,527 |

The accompanying notes are an integral part of these condensed consolidated financial statements.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)
(in thousands)

| | Six Months Ended June 30, | |
|---|---|---|
| | 2018 | 2017 |
| Operating Activities | | |
| Net loss | $ (6,370) | $ (11,201) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | |
| Depreciation and amortization | 1,714 | 2,761 |
| Amortization of deferred lease incentive | (16) | (23) |
| Deferred income tax expense | — | 6 |
| Provision for doubtful accounts | 497 | 75 |
| Reserve for note receivable | — | 350 |
| Provision for excess and slow moving inventory | (8) | 12 |
| Stock-based compensation expense | 980 | 918 |
| Deferred rent | 2 | 3 |
| Amortization of debt issuance and discount costs | 254 | 425 |
| Loss on early extinguishment of debt | 1,706 | — |
| Warrant modification expense | — | 803 |
| Change in fair value of warrant liability | 34 | (369) |
| Fair value adjustment of contingent consideration liability | — | 35 |
| Gain on sale of assets | (5,521) | — |
| Changes in operating assets and liabilities: | | |
| Accounts receivable | 1,297 | (887) |
| Inventory | (159) | (93) |
| Prepaid expenses and other assets | 15 | 494 |
| Accounts payable | 525 | 56 |
| Accrued expenses and other liabilities | (2,408) | (1,349) |
| Net Cash Used in Operating Activities | (7,458) | (7,984) |
| Investing Activities | | |
| Proceeds from sale of assets | 29,000 | — |
| Purchase of improvements and equipment | 89 | (79) |
| Issuance of bridge loan | — | (350) |
| Release of escrow deposit | 100 | — |
| Net Cash Provided by (Used In) Investing Activities | 29,189 | (429) |
| Financing Activities | | |
| Contingent purchase price payments | — | (675) |
| Net proceeds from bridge loan | 1,712 | — |
| Repayment of long-term debt | (14,135) | — |

| | | |
|---|---|---|
| Fees paid on early extinguishment of debt | (466) | — |
| Net proceeds from issuance of common stock | — | 5,865 |
| Payment of withholding taxes related to stock-based employee compensation | (2) | (58) |
| Net Cash Provided by (Used In) Financing Activities | (12,891) | 5,132 |
| Net Increease (Decrease) in Cash and Cash Equivalents | 8,840 | (3,281) |
| Cash and Cash Equivalents – Beginning of period | 2,181 | 5,580 |
| Cash and Cash Equivalents – End of period | $ 11,021 | $ 2,299 |
| Supplemental Disclosure of Cash Flows Information | | |
| Cash paid during the period for: | | |
| Interest | $ 362 | $ 620 |
| Non-cash investing and financing activities: | | |
| 2016 Accrued bonus awarded in equity | $ — | $ 374 |
| 2015 Accrued bonus awarded in equity | — | — |
| Common stock issued for contingent purchase price payments | — | 1,175 |

The accompanying notes are an integral part of these condensed consolidated financial statements.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

1. Description of Business and Basis of Presentation

Alliqua BioMedical, Inc. (the "Company") manufactures high water content, electron beam cross-linked, aqueous polymer hydrogels, or gels, used for wound care, medical diagnostics, transdermal drug delivery and cosmetics. The Company believes that it is one of the leading manufacturers of high performance gels in the United States. The Company specializes in custom gels by capitalizing on proprietary manufacturing technologies. The Company has, historically, served as a contract manufacturer, supplying its gels to third parties who incorporate them into their own products.

Recent Developments

On May 7, 2018, the Company completed its previously announced Asset Sale Transaction (the "AST") with Celularity, Inc. ("Celularity"), pursuant to which the Company sold substantially all of its assets to Celularity, including certain assets comprising its MIST, Biovance and Interfyl Product Lines (the "Purchased Assets"). As consideration for the Purchased Assets, Celularity paid $29.0 million to the Company in cash. No debt or significant liabilities were assumed by Celularity in the AST. Under the terms of the Asset Purchase Agreement (the "APA"), the Company retained certain specified assets, including, among other things, cash, accounts receivable, and its hydrogel contract manufacturing business, including its SilverSeal and Hydress product lines. Approximately $14.8 million of the consideration received from Celularity was used to pay down in full all outstanding debt and related costs owed to Perceptive Credit Holdings LP ("Perceptive").

The transactions contemplated by the APA were approved by the affirmative vote of a majority of the voting power of issued and outstanding shares of the Company's common stock on April 27, 2018.

The Company's operations sold under the APA have been reclassified to discontinued operations in the second quarter of 2018, when the shareholders of the Company approved the sale. The AST was completed on May 7, 2018.

Basis of Presentation

The condensed consolidated financial statements contained in this report are unaudited. In the opinion of management, the condensed consolidated financial statements include all adjustments, which are of a normal recurring nature, necessary to present fairly the Company's financial position as of June 30, 2018 and results of operations and cash flows for the three and six months ended June 30, 2018 and 2017. While management believes that the disclosures presented are adequate to make the information not misleading, these unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and the notes thereto in the Company's latest year-end financial statements, which are included in the Company's Annual Report on Form 10-K for the year ended December 31, 2017 (the "2017 Annual Report"). The results of the Company's operations for any interim period are not necessarily indicative of the results of operations for any other interim period or for the full year.

Principles of Consolidation

The accompanying condensed consolidated financial statements include the financial statements of the Company and its wholly-owned subsidiary, AquaMed Technologies, Inc. All significant inter-company transactions and accounts have been eliminated in consolidation.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Reclassifications
Certain amounts in prior periods have been reclassified to conform to the current year presentation. Such reclassifications did not have a material effect on the Company's financial condition or results of operations as previously reported.

Discontinued Operations
In addition to the aforementioned AST with Celularity, effective August 31, 2017 the Company entered into an Asset Purchase Agreement ("the Argentum Purchase Agreement") with Argentum Medical, LLC. ("Argentum") whereby the Company agreed to sell to Argentum all of the Company's rights, including (i) all distribution rights, exclusivity rights, intellectual property rights and marketing rights to the TheraBond product line and (ii) the unsold inventory of TheraBond products and work in process previously purchased by the Company in existence as of the closing, which occurred upon execution and delivery of the Argentum Purchase Agreement. In consideration for the sale of the TheraBond product line and the unsold TheraBond inventory to Argentum by the Company, Argentum agreed to pay (i) $3.6 million for the TheraBond product line and certain other agreements between the parties and (ii) up to $0.1 million for the unsold TheraBond inventory upon the Company's completion of its obligations to deliver all remaining and qualifying unsold TheraBond inventory, as specified in the Argentum Purchase Agreement. Of the $3.6 million of consideration, $0.3 million was initially deposited in an indemnity escrow account under standard terms and conditions. This amount is classified under current assets of discontinued operations on the Company's balance sheet as of December 31, 2017. As of June 30, 2018, $0.1 million was paid from the escrow, and $0.2 million remains in the indemnity escrow account under standard terms and conditions; classified under current assets of discontinued operations on the Company's balance sheet.

Summarized operating results of discontinued operations for the three and six months ended June 30, 2018 and 2017 are presented in the following table (in thousands):

| | Three Months Ended June 30, | | Six Months Ended June 30, | |
|---|---|---|---|---|
| | 2018 | 2017 | 2018 | 2017 |
| Revenue, net of returns, allowances and discounts | $ 1,844 | $ 4,905 | $ 6,681 | $ 9,261 |
| Cost of revenues | 504 | 1,337 | 1,791 | 2,575 |
| Gross profit | 1,340 | 3,568 | 4,890 | 6,686 |
| Selling, general and administrative | 5,140 | 6,088 | 11,485 | 13,031 |
| Interest expense | 64 | 596 | 612 | 1,169 |
| Warrant modification expense | — | 33 | — | 803 |
| Loss from discontinued operations, net of tax | (3,864) | (3,149) | (7,207) | (8,317) |

Note: The discontinued operations were sold on May 7, 2018.

Non-cash amortization expense of $0.4 million and $1.2 million is included in selling, general and administrative expense for the three months ended June 30, 2018 and 2017, respectively. Non-cash amortization expense of $1.4 million and $2.3 million is included in selling, general and administrative expense for the six months ended June 30, 2018 and 2017, respectively.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

During the three and six months ended June 30, 2018, the Company recorded a net gain of approximately $5.5 million (net of state income tax of $0.5 million) on the sale of the assets related to the purchase agreement with Celularity, as shown in the following table (in thousands):

| | | |
|---|---|---|
| Proceeds from sale | | |
| Total Consideration | | 29,000 |
| Less: Net book value of assets sold to Celularity | | |
| Inventory, net | (1,578) | |
| Intangibles, net | (20,557) | |
| Goodwill | (1,659) | |
| Fixed Assets, net | (904) | |
| Other current assets | 15 | |
| Total net book value of assets | | (24,683) |
| Add: Net book value of liabilities extinguished due to sale | | |
| Milestone payment | 1,000 | |
| Other liabilities | 717 | |
| Total net book value of liabilities | | 1,717 |
| Less: State tax expense | | (513) |
| Net gain on sale of assets | | $ 5,521 |

Summarized assets and liabilities of discontinued operations are presented in the following table (in thousands):

| | June 30, 2018 | December 31, 2017 |
|---|---|---|
| Accounts receivable, net | $ 1,024 | $ 3,161 |
| Inventory, net | — | 1,458 |
| Prepaid expenses and other current assets | 200 | 443 |
| Total current assets | 1,224 | 5,062 |
| Fixed assets, net | — | 1,041 |
| Intangible assets, net | — | 22,069 |
| Goodwill, net | — | 1,659 |
| Total assets of discontinued operations | 1,224 | 29,831 |
| Accounts payable | 2,169 | 957 |
| Accrued expenses and other current liabilities | 131 | 3,557 |
| Senior secured term loan, net | — | 10,929 |
| Total current liabilities | $ 2,300 | $ 15,443 |
| Other long-term liabilities | — | 245 |
| Total liabilities of discontinued operations | $ 2,300 | $ 15,688 |

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Significant Accounting Policies and Estimates

The Company's significant accounting policies are disclosed in Note 2 — Summary of Significant Accounting Policies in the 2017 Annual Report. Since the date of the 2017 Annual Report, there have been no material changes to the Company's significant accounting policies. The preparation of the condensed consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the condensed consolidated financial statements and accompanying notes. These estimates and assumptions include valuing equity securities and derivative financial instruments issued in financing transactions, allowance for doubtful accounts, inventory reserves, deferred taxes and related valuation allowances. Actual results could differ from the estimates.

Recent Accounting Principles

In June 2018, the FASB issued ASU 2018-07, "Compensation — Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting". The amendments in this update is to maintain or improve the usefulness of the information provided to the users of financial statements while reducing cost and complexity in financial reporting. The areas for simplification in this Update involve several aspects of the accounting for nonemployee share-based payment transactions resulting from expanding the scope of Topic 718, to include share-based payment transactions for acquiring goods and services from nonemployees. Some of the areas for simplification apply only to nonpublic entities. The amendments in this update are effective for all entities for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. The Company does not expect that this guidance will have a material impact on its consolidated financial statements.

In February 2018, the FASB issued ASU 2018-02, "Income Statement — Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income". The amendments in this Update allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act. Consequently, the amendments eliminate the stranded tax effects resulting from the Tax Cuts and Jobs Act and will improve the usefulness of information reported to financial statement users. However, because the amendments only relate to the reclassification of the income tax effects of the Tax Cuts and Jobs Act, the underlying guidance that requires that the effect of a change in tax laws or rates be included in income from continuing operations is not affected. The amendments in this Update also require certain disclosures about stranded tax effects. The amendments in this update are effective for all entities for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. The Company does not expect that this guidance will have a material impact on its consolidated financial statements.

2. Going Concern

The Company's financial statements are prepared using accounting principles generally accepted in the United States of America applicable to a going concern that contemplates the realization of assets and liquidation of liabilities in the normal course of business.

The Company has experienced recurring losses since its inception. For the six months ended June 30, 2018, the Company incurred a net loss of $6.4 million, utilized $7.5 million in cash from operations and had an accumulated deficit of $156.4 million. These factors raised substantial doubt as to the Company's ability to continue as a going concern.

Upon closing the APA, the Company received gross proceeds of $29.0 million and part of the proceeds, $14.8 million, were utilized to satisfy its obligations under the Credit Agreement and Guaranty (the "CAG") with Perceptive. As of June 30, 2018, the Company had a cash balance of approximately $11.0 million.

Given the Company's current cash position and reduced cash burn, the Company believes substantial doubt has been mitigated and it has sufficient resources to support its planned operations for a year from the date these financial statements are issued.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

3. Revenue Recognition

On January 1, 2018, the Company adopted Accounting Standards Codification ("ASC") Topic 606, "Revenue from Contracts with Customers" ("ASC 606"). The core principle of ASC 606 requires that an entity recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. ASC 606 defines a five-step process to achieve this core principle and, in doing so, it is possible more judgment and estimates may be required within the revenue recognition process than required under existing accounting principles generally accepted in the United States of America ("U.S. GAAP") including identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation.

The Company adopted ASC 606 for all applicable contracts using the modified retrospective method, which would have required a cumulative-effect adjustment, if any, as of the date of adoption. The adoption of ASC 606 did not have a material impact on the Company's condensed consolidated financial statements as of the date of adoption. As a result, a cumulative-effect adjustment was not required.

The Company recognizes revenue predominately from one type of revenue, contract manufacturing and recognizes an immaterial amount from the sale of products. Revenue from both contract manufacturing and products is recognized at the point where the customer obtains control of the goods and the Company satisfies its performance obligation, which generally is at the time it ships the product to the customer. To achieve this core principle, the Company applies the following five steps:

Step 1 — Identify the Contract with the Customer — A contract exists when (a) the parties to the contract have approved th contract and are committed to perform their respective obligations, (b) the entity can identify each party's rights regarding the goods or services to be transferred, (c) the entity can identify the payment terms for the goods or services to be transferred, (d) the contract has commercial substance and it is probable that the entity will collect substantially all of the consideration to which it will be entitled in exchange for the goods or services that will be transferred to the customer.

Step 2 — Identify Performance Obligations in the Contract — Upon execution of a contract, the Company identifies as performance obligations each promise to transfer to the customer either (a) goods or services that are distinct or (b) a series of distinct goods or services that are substantially the same and have the same pattern of transfer to the customer. To the extent a contract includes multiple promised goods or services, the Company must apply judgement to determine whether the goods or services are capable of being distinct within the context of the contract. If these criteria are not met, the goods or services are accounted for as a combined performance obligation.

Step 3 — Determine the Transaction Price — The transaction price is determined based on the consideration to which the Company will be entitled in exchange for transferring products or services to the customer. Generally, all contracts include fixed consideration. If a contract did include variable consideration, the Company would determine the amount of variable consideration that should be included in the transaction price based on expected value method. Variable consideration would be included in the transaction price, if in the Company's judgement, it is probable that a significant future reversal of cumulative revenue under the contract would not occur.

Step 4 — Allocate the Transaction Price — After the transaction price has been determined, the next step is to allocate the transaction price to each performance obligation in the contract. If the contract only has one performance obligation, the entire transaction price will be applied to that obligation. If the contract has multiple performance obligations, the transaction price is allocated to the performance obligations based on the relative standalone selling price (SSP) at contract inception.

Step 5 — Satisfaction of the Performance Obligations (and Recognize Revenue) — When an asset is transferred, and the customer obtains control of the asset (or the services are rendered), the Company recognizes revenue. At contract inception, the Company determines if each performance obligation is

satisfied at a point in time or over time. Revenue from both product sales and contract manufacturing is recognized at the point where the customer obtains control of the goods and the Company satisfies its performance obligation, which generally is at the time it ships the product to the customer.

Disaggregation of Revenue

The Company recognizes revenue predominately from contract manufacturing and recognizes an immaterial amount from products. Revenue from both products and contract manufacturing is recognized at the point where the customer obtains control of the goods and the Company satisfies its performance obligation, which generally is at the time it ships the product to the customer.

As of June 30, 2018, or December 31, 2017, the Company did not have any contract assets or contract liabilities from contracts with customers. During the three and six months ended June 30, 2018 and 2017, there was no revenue recognized from performance obligations satisfied (or partially satisfied) in previous periods. As of June 30, 2018, there were no remaining performance obligations that the Company had not satisfied.

4. Net Loss Per Common Share

Basic loss per share data for each period presented is computed using the weighted-average number of shares of common stock outstanding during each such period. Diluted loss per share data is computed using the weighted-average number of common and dilutive common-equivalent shares outstanding during each period. Dilutive common-equivalent shares consist of: (a) shares that would be issued upon the exercise of stock options and warrants, computed using the treasury stock method; and (b) shares of non-vested restricted stock.

The following securities are excluded from the calculation of weighted average dilutive common shares because their inclusion would have been anti-dilutive:

| | As of June 30, | |
|---|---|---|
| | 2018 | 2017 |
| Stock options | 706,666 | 921,050 |
| Warrants | 400,307 | 517,167 |
| Non-vested restricted stock | 20,000 | 261,603 |
| Total | 1,126,973 | 1,699,820 |

5. Inventory

Inventory consists of the following (in thousands):

| | June 30, 2018 | December 31, 2017 |
|---|---|---|
| Raw materials | $ 129 | $ 98 |
| Work in process | 8 | — |
| Finished goods | 2 | — |
| Less: Inventory reserve for excess and slow moving inventory | — | (5) |
| Total | $ 139 | $ 93 |

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6. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consist of the following (in thousands):

| | June 30, 2018 | December 31, 2017 |
|---|---|---|
| Salaries, benefits and incentive compensation | $ 71 | $ 509 |
| Professional fees | 129 | 176 |
| Other | 49 | 27 |
| Total accrued expenses and other current liabilities | $ 249 | $ 712 |

7. Debt

Senior Secured Term Loan Facility

On May 29, 2015, the Company entered into the CAG with Perceptive Credit Opportunities Fund, L.P. The CAG provided a senior secured term loan in a single borrowing to the Company in the principal amount of $15.5 million. On March 13, 2018, the Company, AquaMed Technologies, Inc., a wholly owned subsidiary of the Company, and Perceptive entered into an Amendment Agreement, pursuant to which the parties agreed to certain amendments and modifications to the terms of the CAG. The Amendment Agreement provided for, an additional bridge term loan to the Company in the aggregate principal amount of $2.0 million pursuant to a Bridge Loan Note ("BLN"). Under the Amendment Agreement, the Company agreed to pay an upfront fee of $0.25 million and all fees, costs and expenses payable pursuant to the CAG (including reasonable attorney's fees of Perceptive). The BLN bore interest at a rate per annum equal to the sum of (i) the greater of (x) LIBOR and (y) 1%, plus (ii) an applicable margin of 9.75%. The BLN matured on the earlier of (i) May 7, 2018 and (ii) the closing date in connection with the APA.

On May 7, 2018, the Company paid approximately $14.8 million in full satisfaction of all debt obligations due Perceptive.

8. Commitments and Contingencies

License Agreement with Noble Fiber Technologies, LLC

On July 15, 2011, the Company entered into a license agreement with Noble Fiber Technologies, LLC, whereby the Company has the exclusive right and license to manufacture and distribute "SilverSeal Hydrogel Wound Dressings" and "SilverSeal Hydrocolloid Wound Dressings". The license is granted for ten years with an option to be extended for consecutive renewal periods of two years after the initial term. Royalties are to be paid equal to 9.75% of net sales of licensed products. Total royalties, for the three and six months ended June 30, 2018 and 2017 were nominal.

Litigation, Claims and Assessments

From time to time, the Company may become involved in lawsuits, investigations and claims that arise in the ordinary course of business. The Company believes it has meritorious defenses against all pending claims and intends to vigorously pursue them. While it is not possible to predict or determine the outcomes of any pending actions, the Company believes the amount of liability, if any, with respect to such actions, would not materially affect its financial position, results of operations or cash flows.

On February 22, 2018, a putative stockholder class action complaint was filed in the United States District Court for the District of Delaware against the Company and each member of the Board, captioned Ronald Cresta, Individually and on Behalf of All Others Similarly Situated v. Alliqua BioMedical Inc., David Johnson, Joseph M. Leone, Gary Restani, Jeffrey Sklar and Mark Wagner. The complaint alleges,

among other things, that the Company and the Board violated federal securities laws and regulations by soliciting stockholder votes in connection with the AST through a proxy statement that omits material facts necessary to make the statements therein not false or misleading. The complaint seeks, among other things, to enjoin the Company and the Board from conducting the stockholder vote on the AST unless and until the allegedly omitted material information is disclosed to the Company's stockholders, damages allegedly suffered by the plaintiffs as a result of the asserted omissions, as well as related attorneys' fees and expenses.

On April 4, 2018, the court approved the parties' stipulation and proposed order to withdraw the motion for preliminary injunction and dismiss the action and the case was closed. The court retained jurisdiction of the action solely for determining any potential fee application if the parties are unable to reach agreement and a fee application becomes necessary.

9. Stockholders' Equity

Stock-Based Compensation

On May 7, 2018, in connection with the closing of the sale under the APA of substantially all of the Company's assets to Cellularity, which triggered certain change in control provisions of the Company's equity plans, all unvested and outstanding options and restricted stock awards under the 2011 Plan and 2014 Plan became vested and exercisable. As a result, a summary of the Company's outstanding and exercisable options as of June 30, 2018 was as follows (in thousands, except per share data):

| | Options Outstanding | | Options Exercisable | | |
|---|---|---|---|---|---|
| Range of Exercise Price | Weighted Average Exercise Price | Outstanding Number of Options | Weighted Average Exercise Price | Weighted Average Remaining Life in Years | Exercisable Number of Options |
| $2.00 – $4.00 | $ 3.51 | 215 | 3.51 | 2.3 | 215 |
| $4.10 – $9.90 | 8.53 | 28 | 8.53 | 6.3 | 28 |
| $10.00 – $19.90 | 10.57 | 76 | 10.57 | 1.2 | 76 |
| $20.00 – $29.90 | 23.80 | 1 | 23.80 | 0.1 | 1 |
| $30.00 – $39.90 | 33.63 | 46 | 33.63 | 4.3 | 46 |
| $40.00 – $49.90 | 46.34 | 69 | 46.34 | 1.7 | 69 |
| $50.00 – $59.90 | 52.92 | 43 | 52.92 | 1.1 | 43 |
| $60.00 – $69.90 | 66.09 | 176 | 66.09 | 3.4 | 176 |
| $70.00 – $79.90 | 77.54 | 3 | 77.54 | 1.2 | 3 |
| $80.00 – $89.90 | 87.18 | 23 | 87.18 | 1.7 | 23 |
| $90.00 – $99.90 | 90.04 | 21 | 90.04 | 1.8 | 21 |
| $100.00 – $266.90 | 109.49 | 6 | 109.49 | 1.8 | 6 |
| | | 707 | | 2.6 | 707 |

For the three months ended June 30, 2018 and 2017, the Company recognized $1.0 million and $0.4 million of stock-based compensation expense, of which, $0.009 million and $0.015 million is included in cost of revenues and $1.0 million and $0.4 million is included in selling, general and administrative expenses in the condensed consolidated statements of operations, respectively. For the six months ended June 30, 2018 and 2017, the Company recognized $0.9 million and $0.9 million of stock-based compensation expense, of which, $0.02 million and $0.026 million is included in cost of revenues and

$0.9 million and $0.9 million is included in selling, general and administrative expenses in the condensed consolidated statements of operations, respectively. As of June 30, 2018, there was $0.02 million of unrecognized stock-based compensation expense which will be amortized over a weighted average period of 0.3 years.

Reverse Stock Split

The Company effected a 1-for-10 reverse stock split of its outstanding common stock on October 5, 2017. The accompanying consolidated financial statements and accompanying notes to the consolidated financial statements give retroactive effect to the reverse stock split for all periods presented. The shares of common stock retained a par value of $0.001 per share.

10. Related Party

In November 2015, the Company entered into a manufacturing supply agreement with a company where a Company director was then a member of the Board of Directors. During the three months ended June 30, 2018 and 2017, the Company incurred costs of approximately $0.07 million and $0.1 million, respectively, from this vendor. During the six months ended June 30, 2018 and 2017, the Company incurred costs of approximately $0.26 million and $0.26 million, respectively. Approximately $0 and $0.1 million is included in accounts payable related to this related party as of June 30, 2018 and December 31, 2017, respectively.

11. Fair Value Measurement

Fair value is defined as the price that would be received upon selling an asset or the price paid to transfer a liability on the measurement date. It focuses on the exit price in the principal or most advantageous market for the asset or liability in an orderly transaction between willing market participants. A three-tier fair value hierarchy is established as a basis for considering such assumptions and for inputs used in the valuation methodologies in measuring fair value. This hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. The three levels of inputs used to measure fair values are as follows:

Level 1:

Observable prices in active markets for identical assets and liabilities.

Level 2:

Observable inputs other than quoted prices in active markets for identical assets and liabilities.

Level 3:

Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets and liabilities.

Warrant Liabilities

On June 30, 2018, the Company recomputed the fair value of its warrant liability of outstanding warrants to purchase an aggregate of 210,000 shares of common stock as $164,000 using the Binomial option pricing model (Level 3 inputs) using the following assumptions: expected volatility of 79.54% risk-free rate of 2.68%, expected term of 3.58 years, and expected dividends of 0.00%. The Company recorded a loss on the change in fair value of these warrant liabilities of $15,000 and $34,000 during the three and six months ended June 30, 2018, respectively. Warrants that contain exercise reset provisions and contingent consideration liabilities are Level 3 derivative liabilities measured at fair value on a recurring basis using pricing models for which at least one significant assumption is unobservable as defined in ASC 820. The fair value of contingent consideration liabilities that are classified as Level 3 were estimated using a discounted cash flow technique with significant inputs that are not observable in the market and thus represents a Level 3 fair value measurement as defined in ASC 820. The significant inputs in the Level 3 measurement not supported by market activity include the probability assessments of expected future cash flows related to the acquisitions,

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appropriately discounted considering the uncertainties associated with the obligation, and as calculated in accordance with the terms of the acquisition agreements. The development and determination of the unobservable inputs for Level 3 fair value measurements and the fair value calculations are the responsibility of the Company's Chief Financial Officer and are approved by the Chief Executive Officer.

The following table sets forth a summary of the changes in the fair value of Level 3 warrant liabilities that are measured at fair value on a recurring basis (in thousands):

| | Six Months Ended June 30, | |
|---|---|---|
| | 2018 | 2017 |
| Warrant Liabilities | | |
| Beginning balance as of January 1, | $ 130 | $ 20 |
| Change in fair value of warrant liability | 34 | (369) |
| Warrant modification expense | — | 803 |
| Ending balance as of March 31, | $ 164 | $ 454 |

| | Six Months Ended June 30, | |
|---|---|---|
| | 2018 | 2017 |
| Contingent Consideration | | |
| Beginning balance as of January 1, | $ — | $ 1,816 |
| Payments of contingent consideration | — | (1,851) |
| Change in fair value of contingent consideration | — | 35 |
| Ending balance as of March 31, | $ — | $ — |

Assets and liabilities measured at fair value on a recurring basis are as follows (in thousands):

| | June 30, 2018 | | |
|---|---|---|---|
| | Level 1 | Level 2 | Level 3 |
| Liabilities: | | | |
| Warrant liabilities | $ — | $ — | $ 164 |
| Total liabilities | $ — | $ — | $ 164 |

| | December 31, 2017 | | |
|---|---|---|---|
| | Level 1 | Level 2 | Level 3 |
| Liabilities: | | | |
| Warrant liabilities | $ — | $ — | $ 130 |
| Total liabilities | $ — | $ — | $ 130 |

12. Income Taxes

In accordance with ASC 740-270, Income Taxes — Interim Reporting, the Company is required at the end of each interim period to determine the best estimate of its annual effective tax rate and apply that rate to year-to-date ordinary income or loss. The resulting tax expense (or benefit) is adjusted for the tax effect of specific events, if any, required to be discretely recognized in the interim period as they occur. For the six months ended June 30, 2018 and 2017, the Company recorded $0.5 million and immaterial tax expense (or benefit), respectively. The gain on sale of assets to Celularity, in the period ended June 30, 2018, resulted in current state tax expense, primarily due to limitations on the use of net operating loss carryforwards in certain state jurisdictions. The Company has not recorded net deferred tax assets as of June 30, 2018 or

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December 31, 2017 because it maintained a full valuation allowance against all material deferred tax assets, and management has determined that it is more likely than not that the Company will be unable to realize those future benefits. The Company's effective tax rate differs from the statutory rates of 21% and 34% as of June 30, 2018 and 2017, respectively, due to losses for which no future benefit is expected. As of June 30, 2018, and December 31, 2017, the Company had no uncertain tax positions recorded in its consolidate balance sheets.

The United States enacted the Tax Cuts and Jobs Act ("Act") on December 22, 2017, most provisions of which took effect in years beginning after December 31, 2017. The Act made substantial changes to U.S. taxation of corporations, including a reduction in the U.S. federal corporate income tax rate from 34% to 21% and changes to limitations on the deductibility of executive compensation. The effect on deferred tax assets and liabilities of a change in law or tax rates is recognized in income in the period that includes the enactment date.

After the enactment of the Act, the SEC issued Staff Accounting Bulletin No. 118 ("SAB 118") to address the application of U.S. GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Act. In our financial statements for the period ended December 31, 2017, we calculated an estimate of the impact of the Act related to the remeasurement of our net U.S. deferred tax asset due to the change in U.S. federal corporate income tax rate. The provisional amount recorded was deferred tax expense of $14.6 million, but which was fully and equally offset by a deferred tax benefit related to a corresponding reduction in our valuation allowance. In addition, due to changes in executive compensation rules pursuant to the Act, the Company determined that approximately $1.3 million of deferred tax asset for stock compensation may not be realizable. The Company had previously recorded a valuation allowance against the deferred tax asset so this adjustment had no impact on the financial statements for the period ended December 31, 2017. The Company has not adjusted the provisional amounts in these financial statements for the period ended June 30, 2018, but we expect to complete this analysis within the one-year measurement period provided by SAB 118.

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ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the condensed consolidated financial statements and related notes above.

Forward-Looking Statements

This Quarterly Report on Form 10-Q contains "forward-looking statements," which include information relating to future events, future financial performance, strategies, expectations, competitive environment and regulation. Words such as "may," "should," "could," "would," "predict," "potential," "continue," "expect," "anticipate," "future," "intend," "plan "estimate," and similar expressions, as well as statements in future tense, identify forward-looking statements. Forward-looking statements should not be read as a guarantee of future performance or results and may not be accurate indications of when such performance or results will actually be achieved. Forward-looking statements are based on information we have when those statements are made or our management's good faith belief as of that time with respect to future events and are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in or suggested by the forward-looking statements. Important factors that could cause such differences include, but are not limited to:

- our ability to continue as a going concern;
- inadequate capital;
- the uncertainty regarding the adequacy of our liquidity to pursue our complete business objectives, including a return of capital to shareholders and execution of a definitive business restructure;
- our ability to comply with current good manufacturing practices ("cGMPs");
- loss or retirement of key executives;
- our plans to make significant additional outlays of working capital before we expect to generate significant revenues and the uncertainty regarding when we will begin to generate significant revenues, if we are able to do so;
- adverse economic conditions and/or intense competition;
- loss of a key customer or supplier;
- entry of new competitors;
- adverse federal, state and local government regulation;
- technological obsolescence of our manufacturing process and equipment;

- technical problems with our research and products;

- risks of mergers and acquisitions including the time and cost of implementing transactions and the potential failure to achieve expected gains, revenue growth or expense savings;

- price increases for supplies and components; and

- the inability to carry out our business plans.

For a discussion of these and other risks that relate to our business and investing in shares of our common stock, you should carefully review the risks and uncertainties described under the heading "Part II — Item 1A. Risk Factors" and elsewhere in this Quarterly Report on Form 10-Q. The forward-looking statements contained in this Quarterly Report on Form 10-Q are expressly qualified in their entirety by this cautionary statement. We do not undertake any obligation to publicly update any forward-looking statement to reflect events or circumstances after the date on which any such statement is made or to reflect the occurrence of unanticipated events.

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Overview

We manufacture a high-water content, electron beam cross-linked, aqueous polymer hydrogels, or gels, used for wound care, medical diagnostics, transdermal drug delivery and cosmetics. We believe that we are one of the leading manufacturers of high performance gels in the United States. We specialize in custom gels by capitalizing on proprietary manufacturing technologies. We have historically served as a contract manufacturer, supplying our gels to third parties who incorporate them into their own products. Our contract manufacturing business provides custom hydrogels to the OEM market.

Recent Events

Completion of the Asset Sale Transaction with Celularity

On May 7, 2018, we completed the previously announced sale of substantially all of our assets (the "AST") to Celularity, Inc. ("Celularity"), including certain assets comprising its MIST, Biovance and Interfyl product lines (the "Purchased Assets") pursuant to the terms of the Asset Purchase Agreement (the "APA"), dated January 5, 2018 with Celularity. As consideration for the Purchased Assets, Celularity paid a purchase price of $29.0 million in cash. No debt or significant liabilities were assumed by Celularity.

Under the terms of the APA, we retained certain specified assets, including, among other things, cash, accounts receivable and our hydrogel contract manufacturing business, including our SilverSeal and Hydress product lines.

In connection with the completion of the AST, we terminated our Credit Agreement and Guaranty (the "Credit Agreement"), dated as of May 29, 2015, as amended, by and among us, AquaMed Technologies, Inc., a wholly owned subsidiary of us ("Guarantor"), and Perceptive Credit Holdings LP ("Perceptive"). Additionally, we terminated the related Pledge and Security Agreement, dated as of May 29, 2015, by and among us, Guarantor and Perceptive. The Credit Agreement provided for a senior secured term loan in a single borrowing to us in the initial principal amount of approximately $15.5 million, of which approximately $12.0 million remained outstanding on the termination date. The full unpaid principal amount of the term loan and associated fees were paid off.

Liquidity and Capital Resources

The AST was completed on May 7, 2018. As consideration for the Purchased Assets, Celularity paid consideration to us of $29.0 million in cash. No debt or significant liabilities were assumed by Celularity in the AST. A portion of the proceeds, approximately $14.8 million, was used to extinguish our debt obligations and associated costs to Perceptive under the Credit Agreement. As of June 30, 2018, we had cash and cash equivalents totaling approximately $11.0 million compared to $2.2 million at December 31, 2017.

Net cash used in operating activities was $7.5 million and $8.0 million for the six months ended June 30, 2018 and 2017, respectively.

Net cash provided in investing activities was $29.2 million and net cash used in investing activities was $0.4 million for the six months ended June 30, 2018, and 2017, respectively. Cash provided by investing activities during the six months ended June 30, 2018 was primarily due to the consideration received from Celularity in connection with the AST. Cash used by investing activities during the six months ended June 30, 2017 included $0.35 million provided to Soluble Systems, LLC as a bridge loan and $0.08 million in purchases of improvements and equipment.

Net cash used in financing activities for the six months ended June 30, 2018 consisted of $14.8 million in the payment of obligations owed to Perceptive under the Credit Agreement, offset by $1.7 received from proceeds of a Bridge Loan Note. Net cash provided by financing activities for the six months ended June 30, 2017 consisted of $5.9 million of net proceeds received from the issuance of our common stock offset by $0.7 million utilized to pay the cash portion of the contingent consideration related to the Celleration acquisition.

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At June 30, 2018, current assets totaled $13.0 million and current liabilities totaled $3.2 million, as compared to current assets totaling $7.5 million and current liabilities totaling $17.0 million at December 31, 2017. As a result, we had working capital of $9.8 million at June 30, 2018 compared to working capital deficit of $9.5 million at December 31, 2017.

Given our current cash position and reduced cash burn, we believe substantial doubt has been mitigated and we have sufficient resources to support our planned operations for a year from the date these financial statements are issued.

Results of Operations

Three Months Ended June 30, 2018 Compared to the Three Months Ended June 30, 2017

Our MIST, Biovance and Interfyl product lines sold under the APA and have been reclassified to discontinued operations.

Revenues, net. For the three months ended June 30, 2018 revenues increased by $0.2 million, or 40%, to $0.9 million from $0.6 million for the three months ended June 30, 2017. The increase in our overall revenue was due to an increase in orders from contract manufacturing customers.

Gross profit. Our gross profit was $0.3 million for the three months ended June 30, 2018 compared to gross profit of $0.1 million for the three months ended June 30, 2017. The improved results for the three months ended June 30, 2018, as compared to the three months ended June 30, 2017 was primarily due to the greater volume of orders fulfilled for our contract manufacturing customers and a stricter emphasis on operating efficiency. Gross margin was approximately 31% for the three months ended June 30, 2018. Gross margin was approximately 17% for the three months ended June 30, 2017.

The components of cost of revenues are as follows for the three months ended June 30, 2018 and 2017 (in thousands):

| | Three Months Ended June 30, | |
|---|---|---|
| | 2018 | 2017 |
| Cost of revenues | | |
| Materials and finished products | $ 308 | $ 225 |
| Stock-based compensation | 9 | 15 |
| Compensation and benefits | 101 | 118 |
| Depreciation and amortization | 72 | 71 |
| Equipment, production and other expenses | 103 | 84 |
| Total cost of revenues | $ 593 | $ 513 |

Selling, general and administrative expenses. The following table highlights selling, general and administrative expenses by type for the three months ended June 30, 2018 and 2017 (in thousands):

| | Three Months Ended June 30, | |
|---|---|---|
| | 2018 | 2017 |
| Selling, general and administrative expenses | | |
| Compensation and benefits | $ 222 | $ 460 |
| Stock-based compensation | 411 | 102 |
| Depreciation and amortization | 12 | 6 |
| Other expenses and professional fees | 630 | 839 |
| Total selling, general and administrative expenses | $ 1,275 | $ 1,407 |

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Selling, general and administrative expenses decreased by $0.1 million to $1.3 million for the three months ended June 30, 2018, as compared to $1.4 million for the three months ended June 30, 2017. The decrease in selling, general and administrative expenses is attributable to our organizational restructuring post the completion of the AST and continued focus on operating expenditures.

Compensation and benefits decreased by $0.2 million to $0.2 million for the three months ended June 30, 2018, as compared to $0.4 million for the three months ended June 30, 2017. The decrease in compensation and benefits was primarily due to the decrease in the average number of full-time employees in 2018 compared to 2017, due to the completion of the AST.

Stock-based compensation increased by $0.3 million, to $0.4 million for the three months ended June 30, 2018, as compared to $0.1 million for the three months ended June 30, 2017. The increase in stock-based compensation is primarily due to the vesting for stock-based compensation for terminated employees' unvested restricted stock awards resulting from the completion of the AST.

Other expenses and professional fees decreased by $0.2 million to $0.6 million for the three months ended June 30, 2018 from $0.8 million for the three months ended June 30, 2017. Other selling, general and administrative expenses consist of costs associated with our selling efforts and general management, including information technology, travel, training and recruiting. The decrease is due to lower legal and consulting fees.

Business development costs. During the three months ended June 30, 2018, we incurred $0.2 million in costs related to business development opportunities. These costs were mainly due to professional fees, including accounting, legal and consulting fees. During the three months ended June 30, 2017 we did not incur any business development costs.

Six Months Ended June 30, 2018 Compared to the Six Months Ended June 30, 2017

Our operations sold under the AST have been reclassified to discontinued operations.

Revenues, net. For the six months ended June 30, 2018 revenues increased by $0.5 million, or 65%, to $1.4 million from $0.9 million for the six months ended June 30, 2017. The increase in our overall revenue was due to an increase in orders fulfilled for our contract manufacturing customers.

Gross profit. Our gross profit was $0.4 million for the six months ended June 30, 2018 compared to gross loss of $0.08 million for the six months ended June 30, 2017. The improved results for the six months ended June 30, 2018, as compared to the six months ended June 30, 2017 was primarily due to the greater volume of contract manufacturing sales and a stricter emphasis on operating efficiency. Gross margin was approximately 28% for the six months ended June 30, 2018. Gross margin was approximately negative 9% for the six months ended June 30, 2017.

The components of cost of revenues are as follows for the six months ended June 30, 2018 and 2017 (in thousands):

| | Six Months Ended June 30, | |
|---|---|---|
| | 2018 | 2017 |
| Cost of revenues | | |
| Materials and finished products | $ 428 | $ 317 |
| Stock-based compensation | 23 | 26 |
| Compensation and benefits | 205 | 285 |
| Depreciation and amortization | 144 | 143 |
| Equipment, production and other expenses | 210 | 164 |
| Total cost of revenues | $ 1,010 | $ 935 |

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Selling, general and administrative expenses. The following table highlights selling, general and administrative expenses by type for the six months ended June 30, 2018 and 2017 (in thousands):

| | Six Months Ended June 30, | |
|---|---|---|
| | 2018 | 2017 |
| Selling, general and administrative expenses | | |
| Compensation and benefits | $ 877 | $ 1,021 |
| Stock-based compensation | 275 | (120) |
| Depreciation and amortization | 20 | 12 |
| Other expenses and professional fees | 1,974 | 1,623 |
| Total selling, general and administrative expenses | $ 3,146 | $ 2,536 |

Selling, general and administrative expenses increased by $0.6 million to $3.1 million for the six months ended June 30, 2018, as compared to $2.5 million for the six months ended June 30, 2017. The increase in selling, general and administrative expenses is directly attributable to organizational restructure post the completion of the AST, specifically in consulting and the stock-based compensation adjustment.

Compensation and benefits decreased by $0.1 million to $0.9 million for the six months ended June 30, 2018, as compared to $1.0 million for the six months ended June 30, 2017. The decrease in compensation and benefits was primarily due to the decrease in the average number of full-time employees in 2018 compared to 2017, due to the completion of the AST.

Stock-based compensation increased by $0.4 million, to $0.3 million for the six months ended June 30, 2018, as compared to a credit of $0.1 million to stock-based compensation for the six months ended June 30, 2017. The increase in stock-based compensation is primarily due to the vesting of stock-based compensation for terminated employees' unvested restricted stock awards resulting from the completion of the AST.

Other expenses and professional fees increased by $0.3 million to $1.9 million for the six months ended June 30, 2018 from $1.6 million for the six months ended June 30, 2017. Other selling, general and administrative expenses consist of costs associated with our selling efforts and general management, including information technology, travel, training and recruiting. The increase was due to higher legal expenses.

Business development costs. During the six months ended June 30, 2018, we incurred $0.2 million in costs related to business development opportunities. These costs were mainly due to professional fees, including accounting, legal and consulting fees. During the six months ended June 30, 2017 we incurred $0.6 million in costs related to business development opportunities.

Off Balance Sheet Arrangements

As of June 30, 2018, we had no off-balance sheet arrangements in the nature of guarantee contracts, retained or contingent interests in assets transferred to unconsolidated entities (or similar arrangements serving as credit, liquidity or market risk support to unconsolidated entities for any such assets), or obligations (including contingent obligations) arising out of variable interests in unconsolidated entities providing financing, liquidity, market risk or credit risk support to us, or that engage in leasing, hedging or research and development services with us.

Critical Accounting Policies

There have been no significant changes to our critical accounting policies and estimates from the information provided in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," included in the Annual Report on Form 10-K for the year ended December 31, 2017.

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Recent Accounting Pronouncements

Recently issued accounting pronouncements are addressed in Note 1 in the Notes to Condensed Consolidated Financial Statements.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not required.

ITEM 4. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures.

As of June 30, 2018, we conducted an evaluation of the effectiveness of our “disclosure controls and procedures” (“Disclosure Controls”), as defined by Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). The Disclosure Controls evaluation was done under the supervision and with the participation of management, including our chief executive officer and chief financial officer. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives. Based upon this evaluation, our chief executive officer and chief financial officer have concluded that our Disclosure Controls and Procedures were effective at the reasonable assurance level as of June 30, 2018.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting during the fiscal quarter ended June 30, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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PART II — OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

From time to time, the Company may become involved in lawsuits, investigations and claims that arise in the ordinary course of business. The Company believes it has meritorious defenses against all pending claims and intends to vigorously pursue them. While it is not possible to predict or determine the outcomes of any pending actions, the Company believes the amount of liability, if any, with respect to such actions, would not materially affect its financial position, results of operations or cash flows.

On February 22, 2018, a putative stockholder class action complaint was filed in the United States District Court for the District of Delaware against the Company and each member of the Board, captioned Ronald Cresta, Individually and on Behalf of All Others Similarly Situated vs. Alliqua BioMedical Inc., David Johnson, Joseph M. Leone, Gary Restani, Jeffrey Sklar and Mark Wagner. The complaint alleged, among other things, that the Company and the Board violated federal securities laws and regulations by soliciting stockholder votes in connection with the Asset Sale Transaction through a proxy statement that omits material facts necessary to make the statements therein not false or misleading. The complaint sought, among other things, to enjoin the Company and the Board from conducting the stockholder vote on the Asset Sale Transaction unless and until the allegedly omitted material information was disclosed to the Company's stockholders, damages allegedly suffered by the plaintiffs as a result of the asserted omissions, as well as related attorneys' fees and expenses.

On April 4, 2018, the court approved the parties' stipulation and proposed order to withdraw the motion for preliminary injunction and dismiss the action and the case was closed. The court retained jurisdiction of the action solely for determining any potential fee application if the parties are unable to reach agreement and a fee application becomes necessary.

ITEM 1A. RISK FACTORS

During the three months ended June 30, 2018, there were no material changes to the risk factors previously discussed in Part I, Item 1A "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2017 and Form 10-Q for the quarter ended March 31, 2018, except that the risk factors related to the failure of the consummation of the AST are no longer applicable.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

(a) Unregistered Sales of Equity Securities

None

(b) Issuer Purchases of Equity Securities

None

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

Not applicable.

ITEM 6. EXHIBITS

See "Index to Exhibits" for a description of our exhibits.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

ALLIQUA BIOMEDICAL, INC.

By:
/s/ David Johnson

Date: August 10, 2018

Name: David Johnson
Title: Chief Executive Officer
(Principal Executive Officer)

By:
/s/ Joseph Warusz

Name: Joseph Warusz
Title: Chief Financial Officer
(Principal Financial Officer)

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Index to Exhibits

| Exhibit No. | Description |
|---|---|
| 2.1 | Asset Purchase Agreement, dated January 5, 2018, by and between Alliqua BioMedical, Inc. and Celularity Inc., (incorporated by reference to Exhibit 2.1 to the Current Report on Form 8-K filed on January 5, 2018). |
| 3.1 | Certificate of Incorporation of Alliqua BioMedical, Inc. (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on June 11, 2014). |
| 3.2 | Bylaws of Alliqua BioMedical, Inc. (incorporated by reference to Exhibit 3.2 to the Current Report on Form 8-K filed on June 11, 2014). |
| 3.3 | Certificate of Amendment to Certificate of Incorporation of Alliqua BioMedical, Inc. (incorporated by reference to Exhibit 3.3 to the Current Report on Form 8-K filed on June 11, 2014). |
| 3.4 | Certificate of Amendment to Certificate of Incorporation of Alliqua BioMedical, Inc. (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on May 6, 2016). |
| 3.5 | Certificate of Amendment of Certificate of Incorporation of Alliqua BioMedical, Inc. dated October 5, 2017 (incorporated by reference in Exhibit 3.1 to the Current Report on Form 8-K filed on October 5, 2017). |
| 10.1 | General Release and Severance Agreement, dated May 7, 2018, by and between Alliqua BioMedical, Inc. and Bradford Barton (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on May 11, 2018) |
| 10.2 | General Release and Severance Agreement, dated May 7, 2018, by and between Alliqua BioMedical, Inc. and Pellegrino Pionati (incorporated by reference to Exhibit 10.1 to the Current Report on Form 8-K filed on May 11, 2018) |
| 31.1* | Certification of Chief Executive Officer Pursuant to Section 302 of Sarbanes-Oxley Act of 2002. |
| 31.2* | Certification of Chief Financial Officer Pursuant to Section 302 of Sarbanes-Oxley Act of 2002. |
| 32.1* | Certification of Chief Executive Officer Pursuant to Section 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. |
| 32.2* | Certification of Chief Financial Officer Pursuant to Section 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. |
| 101* | The following materials from the Company’s Quarterly Report on Form 10-Q for the fiscal quarter June 30, 2018, formatted in XBRL (eXtensible Business Reporting Language), (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Operations, (iii) Consolidated Statements of Stockholders’ Equity, (iv) Consolidated Statements of Cash Flows, and (v) Notes to the Consolidated Financial Statements. |

*

Filed herewith.

**

Certain exhibits and schedules have been omitted and the Company agrees to furnish supplementary to the Securities and Exchange Commission a copy of any omitted exhibits upon request.

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Annex G

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON D.C. 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended: September 30, 2018
OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to
Commission file number: 001-36278

Alliqua BioMedical, Inc.
(Exact name of registrant as specified in its charter)

| | |
|---|---|
| Delaware | 58-2349413 |
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification Number) |
| 2150 Cabot Blvd West, Suite B Langhorne, PA | 19047 |
| (Address of principal executive office) | (Zip Code) |

Registrant’s telephone number, including area code: (215) 702-8550

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

| | |
|---|---|
| Large accelerated filer | Accelerated filer |
| Non-accelerated filer | |

Smaller reporting company Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined by Rule 12b-2 of the Exchange Act).
Yes No

As of October 26, 2018, the registrant had 5,005,210 shares of common stock outstanding.

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ALLIQUA BIOMEDICAL, INC.

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PART I — FINANCIAL INFORMATION
ITEM 1. FINANCIAL STATEMENTS
ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)

| | September 30, 2018 (Unaudited) | December 31, 2017 |
|---|---|---|
| ASSETS: | | |
| Current Assets: | | |
| Cash and cash equivalents | $ 11,095 | $ 2,181 |
| Accounts receivable, net | 172 | 99 |
| Inventory, net | 183 | 93 |
| Prepaid expenses and other current assets | 341 | 41 |
| Current assets of discontinued operations | 445 | 5,062 |
| Total current assets | 12,236 | 7,476 |
| Improvements and equipment, net | 279 | 522 |
| Other assets | 178 | 173 |
| Assets of discontinued operations – noncurrent | — | 24,769 |
| Total assets | $ 12,693 | $ 32,940 |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | |
| Current Liabilities: | | |
| Accounts payable | $ 305 | $ 684 |
| Accrued expenses and other current liabilities | 256 | 712 |
| Warrant liability | 186 | 130 |
| Current liabilities of discontinued operations | 2,351 | 15,443 |
| Total current liabilities | 3,098 | 16,969 |
| Other long-term liabilities | 53 | 59 |
| Long term liabilities of discontinued operations | — | 245 |
| Total liabilities | 3,151 | 17,273 |
| Commitments and Contingencies | | |
| Stockholders' Equity | | |
| Preferred Stock, par value $0.001 per share, 1,000,000 shares authorized, no shares issued and outstanding | — | — |
| Common Stock, par value $0.001 per share, 95,000,000 shares authorized; 5,005,210 and 4,986,034 shares issued and outstanding as of September 30, 2018 and December 31, 2017, respectively | 5 | 5 |
| Additional paid-in capital | 166,674 | 165,672 |
| Accumulated deficit | (157,137) | (150,010) |
| Total stockholders' equity | 9,542 | 15,667 |
| Total liabilities and stockholders' equity | $ 12,693 | $ 32,940 |

The accompanying notes are an integral part of these condensed consolidated financial statements.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited)
(in thousands, except share and per share data)

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2018 | 2017 | 2018 | 2017 |
| Revenue, net of returns, allowances and discounts | $ 348 | $ 499 | $ 1,756 | $ 1,354 |
| Cost of revenues | 361 | 400 | 1,371 | 1,335 |
| Gross profit/(loss) | (13) | 99 | 385 | 19 |
| Operating expenses | | | | |
| Selling, general and administrative | 745 | 1,522 | 3,892 | 4,057 |
| Business development costs | 212 | — | 413 | 635 |
| Total operating expenses | 957 | 1,522 | 4,305 | 4,692 |
| Loss from operations | (970) | (1,423) | (3,920) | (4,673) |
| Other (expense) income | | | | |
| Interest income | 8 | 1 | 12 | 5 |
| Change in fair value of warrant liability | (22) | 35 | (56) | 404 |
| Loss on early extinguishment of debt, net | — | (182) | (1,706) | (182) |
| Total other (expense) income | (14) | (146) | (1,750) | 227 |
| Loss from continuing operations before tax | (984) | (1,569) | (5,670) | (4,446) |
| Income tax expense | — | (3) | — | (9) |
| Loss from continuing operations | (984) | (1,572) | (5,670) | (4,455) |
| Discontinued operations: | | | | |
| Gain/(loss) from discontinued operations, net of tax of $0, for the three and nine months ended September 30, 2018 and 2017 | 204 | (2,828) | (7,003) | (11,145) |
| Gain on sale of assets, net of tax of ($0.026) million and $0.5 million for the three and nine months ended September 30, 2018, respectively | 26 | 1,700 | 5,546 | 1,700 |
| Income/(loss) from discontinued operations, net of tax | 230 | (1,128) | (1,457) | (9,445) |
| Net loss | $ (754) | $ (2,700) | $ (7,127) | $ (13,900) |
| Net loss per basic and diluted common share: | | | | |
| Loss from continuing operations | $ (0.20) | $ (0.33) | $ (1.16) | $ (1.08) |
| Income/(loss) from discontinued operations | 0.04 | (0.59) | (1.43) | (2.70) |
| Gain on sale of assets | 0.01 | 0.36 | 1.13 | 0.41 |
| Total from discontinued operations | 0.05 | (0.23) | (0.30) | (2.29) |
| Net loss per basic and diluted common share | $ (0.15) | $ (0.56) | $ (1.46) | $ (3.37) |
| Weighted average shares used in computing net loss per basic and diluted common share | 4,984,923 | 4,753,789 | 4,902,657 | 4,125,653 |

The accompanying notes are an integral part of these condensed consolidated financial statements.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited)
(in thousands)

| | Nine Months Ended September 30, | |
|---|---|---|
| | 2018 | 2017 |
| Operating Activities | | |
| Net loss | $ (7,127) | $ (13,900) |
| Adjustments to reconcile net loss to net cash used in operating activities: | | |
| Depreciation and amortization | 1,802 | 4,111 |
| Amortization of deferred lease incentive | (19) | (34) |
| Deferred income tax expense | — | 9 |
| Provision for doubtful accounts | 177 | 169 |
| Reserve for note receivable | — | 350 |
| Provision for excess and slow moving inventory | (8) | 12 |
| Stock-based compensation expense | 1,004 | 1,604 |
| Deferred rent | 2 | 2 |
| Amortization of debt issuance and discount costs | 254 | 631 |
| Loss on early extinguishment of debt | 1,706 | 182 |
| Warrant modification expense | — | 803 |
| Change in fair value of warrant liability | 56 | (404) |
| Fair value adjustment of contingent consideration liability | — | 35 |
| Gain on sale of assets | (5,546) | (1,700) |
| Changes in operating assets and liabilities: | | |
| Accounts receivable | 2,465 | (499) |
| Inventory | (202) | 414 |
| Prepaid expenses and other assets | (146) | 439 |
| Accounts payable | 498 | (1,023) |
| Accrued expenses and other liabilities | (2,500) | (1,000) |
| Net Cash Used in Operating Activities | (7,584) | (9,799) |
| Investing Activities | | |
| Proceeds from sale of assets | 29,000 | 3,412 |
| Purchase of improvements and equipment | 89 | (126) |
| Issuance of bridge loan | — | (350) |
| Release of escrow deposit | 300 | — |
| Net Cash Provided by Investing Activities | 29,389 | 2,936 |
| Financing Activities | | |
| Contingent purchase price payments | — | (675) |
| Net proceeds from bridge loan | 1,712 | — |
| Repayment of long-term debt | (14,135) | (1,618) |

| | | |
|---|---|---|
| Fees paid on early extinguishment of debt | (466) | (32) |
| Net proceeds from issuance of common stock | — | 5,865 |
| Payment of withholding taxes related to stock-based employee compensation | (2) | (151) |
| Net Cash (Used In) Provided by Financing Activities | (12,891) | 3,389 |
| Net Increase (Decrease) in Cash and Cash Equivalents | 8,914 | (3,474) |
| Cash and Cash Equivalents – Beginning of period | 2,181 | 5,580 |
| Cash and Cash Equivalents – End of period | $ 11,095 | $ 2,106 |
| Supplemental Disclosure of Cash Flows Information | | |
| Cash paid during the period for: | | |
| Interest | $ 362 | $ 1,008 |
| Non-cash investing and financing activities: | | |
| 2016 Accrued bonus awarded in equity | $ — | $ 374 |
| 2015 Accrued bonus awarded in equity | — | — |
| Common stock issued for contingent purchase price payments | — | 1,175 |

The accompanying notes are an integral part of these condensed consolidated financial statements.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

1. Description of Business and Basis of Presentation

Alliqua BioMedical, Inc. (the "Company") manufactures high water content, electron beam cross-linked, aqueous polymer hydrogels, or gels, used for wound care, medical diagnostics, transdermal drug delivery and cosmetics. The Company believes that it is one of the leading manufacturers of high-performance gels in the United States. The Company specializes in custom gels by capitalizing on proprietary manufacturing technologies. The Company has, historically, served as a contract manufacturer, supplying its gels to third parties who incorporate them into their own products.

Recent Developments

On October 11, 2018, the Company, Embark Merger Sub Inc., a Delaware corporation and a wholly-owned subsidiary of the Company ("Merger Sub"), and Adynxx, Inc., a privately-held Delaware corporation ("Adynxx"), entered into an Agreement and Plan of Merger and Reorganization (the "Merger Agreement"), pursuant to which, among other things, subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, Merger Sub will merge with and into Adynxx, with Adynxx becoming a wholly-owned subsidiary of the Company and the surviving corporation of the merger (the "Merger"). Subject to the terms and conditions of the Merger Agreement, at the effective time of the Merger (the "Effective Time"), (a) each outstanding share of Adynxx common stock, on an as-converted basis taking into consideration all outstanding common stock, preferred stock, restricted stock and all other securities convertible or exercisable for Adynxx common stock, will be converted into the right to receive the number of shares of the Company's common stock (the "Company Common Stock") equal to the exchange ratio described below; (b) each outstanding Adynxx stock option that has not previously been exercised prior to the Effective Time will be assumed by the Company; and (c) each outstanding warrant to acquire Adynxx capital stock that has not previously been exercised prior to the Effective Time will be assumed by the Company.

Under the exchange ratio formula in the Merger Agreement, as of immediately after the Merger, but excluding the effect of certain financings (as further described in the Merger Agreement), the former Adynxx securityholders are expected to own approximately 86% of the aggregate number of shares of the Company Common Stock issued and outstanding following the consummation of the Merger (the "Post-Closing Shares"), and the stockholders of the Company as of immediately prior to the Merger are expected to own approximately 14% of the aggregate number of Post-Closing Shares. This exchange ratio will be fixed immediately prior to the Effective Time to reflect the Company's and Adynxx's equity capitalization as of immediately prior to such time. In addition, to the extent Adynxx consummates a Permitted Financing, as specifically defined in the Merger Agreement, in excess of $10.0 million dollars prior to the Effective Time, the exchange ratio may be further adjusted in a manner that would reduce the percentage of the aggregate number of Post-Closing Shares held by stockholders of the Company as of immediately prior to the Merger.

Immediately following the Merger, the name of the Company will be changed from "Alliqua BioMedical, Inc." to "Adynxx, Inc." At the Effective Time, the Merger Agreement contemplates that the Board of Directors of the Company will consist of such directors selected by Adynxx, with the Company having the right to designate one member. The executive officers of the Company immediately after the Effective Time will be designated by Adynxx; the merger will be a change of control and accounted for as a reverse business combination whereby Adynxx will be deemed the accounting acquiror.

The Merger Agreement contains customary representations, warranties and covenants made by the Company and Adynxx, including covenants relating to obtaining the requisite approvals of the stockholders of the Company and Adynxx, indemnification of directors and officers, and the Company's and Adynxx's conduct of their respective businesses between the date of signing the Merger Agreement and the closing of the Merger. Consummation of the Merger is subject to certain closing conditions, including, among other things, approval by the stockholders of the Company and Adynxx. The Merger Agreement

contains certain termination rights for both the Company and Adynxx, and further provides that, upon termination of the Merger Agreement under specified circumstances, the Company or Adynxx, as applicable, may be required to pay the other party a termination fee of $0.249 million.

The Merger Agreement contemplates that the Company will also seek approval from its stockholders to effect a reverse stock split, if applicable, with the split ratio to be mutually agreed to by the Company and Adynxx within the range approved by the Company's stockholders immediately prior to the Effective Time. In addition, the Merger Agreement requires the Company to use commercially reasonable efforts to consummate a spin-off of its hydrogel contract manufacturing business prior to the closing of the Merger.

The Company's operations contemplated under the Merger Agreement are classified as Held for Use.

On May 7, 2018, the Company completed its previously announced Asset Sale Transaction (the "AST") with Celularity, Inc. ("Celularity"), pursuant to which the Company sold substantially all of its assets to Celularity, including certain assets comprising its MIST, Biovance and Interfyl Product Lines (the "Purchased Assets"). As consideration for the Purchased Assets, Celularity paid $29.0 million to the Company in cash. No debt or significant liabilities were assumed by Celularity in the AST. Under the terms of the Asset Purchase Agreement (the "APA"), the Company retained certain specified assets, including, among other things, cash, accounts receivable, and its hydrogel contract manufacturing business, including its SilverSeal and Hydress product lines. Approximately $14.8 million of the consideration received from Celularity was used to pay down in full all outstanding debt and related costs owed to Perceptive Credit Holdings LP ("Perceptive").

The transactions contemplated by the APA were approved by the affirmative vote of a majority of the voting power of issued and outstanding shares of the Company's common stock on April 27, 2018.

The Company's operations sold under the APA have been reclassified to discontinued operations in the second quarter of 2018, when the shareholders of the Company approved the sale. The AST was completed on May 7, 2018.

Basis of Presentation

The condensed consolidated financial statements contained in this report are unaudited. In the opinion of management, the condensed consolidated financial statements include all adjustments, which are of a normal recurring nature, necessary to present fairly the Company's financial position as of September 30, 2018 and results of operations and cash flows for the three and nine months ended September 30, 2018 and 2017. While management believes that the disclosures presented are adequate to make the information not misleading, these unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and the notes thereto in the Company's latest year-end financial statements, which are included in the Company's Annual Report on Form 10-K for the year ended December 31, 2017 (the "2017 Annual Report"). The results of the Company's operations for any interim period are not necessarily indicative of the results of operations for any other interim period or for the full year.

Principles of Consolidation

The accompanying condensed consolidated financial statements include the financial statements of the Company and its wholly-owned subsidiary, AquaMed Technologies, Inc. All significant inter-company transactions and accounts have been eliminated in consolidation.

Reclassifications

Certain amounts in prior periods have been reclassified to conform to the current year presentation. Such reclassifications did not have a material effect on the Company's financial condition or results of operations as previously reported.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

Discontinued Operations

In addition to the aforementioned AST with Celularity, effective August 31, 2017 the Company entered into an Asset Purchase Agreement ("the Argentum Purchase Agreement") with Argentum Medical, LLC. ("Argentum") whereby the Company agreed to sell to Argentum all of the Company's rights, including (i) all distribution rights, exclusivity rights, intellectual property rights and marketing rights to the TheraBond product line and (ii) the unsold inventory of TheraBond products and work in process previously purchased by the Company in existence as of the closing, which occurred upon execution and delivery of the Argentum Purchase Agreement. In consideration for the sale of the TheraBond product line and the unsold TheraBond inventory to Argentum by the Company, Argentum agreed to pay (i) $3.6 million for the TheraBond product line and certain other agreements between the parties and (ii) up to $0.1 million for the unsold TheraBond inventory upon the Company's completion of its obligations to deliver all remaining and qualifying unsold TheraBond inventory, as specified in the Argentum Purchase Agreement. Of the $3.6 million of consideration, $0.3 million was initially deposited in an indemnity escrow account under standard terms and conditions. This amount was classified under current assets of discontinued operations on the Company's balance sheet as of December 31, 2017. As of September 30, 2018, the full $0.3 million escrow has been received. Summarized operating results of discontinued operations for the three and nine months ended September 30, 2018 and 2017 are presented in the following table (in thousands):

| | Three Months Ended September 30, | | Nine Months Ended September 30, | |
|---|---|---|---|---|
| | 2018 | 2017 | 2018 | 2017 |
| Revenue, net of returns, allowances and discounts | $ — | $ 4,748 | $ 6,681 | $ 14,009 |
| Cost of revenues | (1) | 1,252 | 1,790 | 3,827 |
| Gross profit | 1 | 3,496 | 4,891 | 10,182 |
| Selling, general and administrative | (203) | 5,781 | 11,282 | 18,812 |
| Other (income)/expense | — | (66) | — | (66) |
| Loss on extinguishment of debt | — | 32 | — | 32 |
| Interest expense | — | 577 | 612 | 1,746 |
| Warrant modification expense | — | — | — | 803 |
| Income/(loss) from discontinued operations, net of tax | 204 | (2,828) | (7,003) | (11,145) |

Non-cash amortization expense of $0 and $1.1 million is included in selling, general and administrative expense for the three months ended September 30, 2018 and 2017, respectively. Non-cash amortization expense of $1.4 million and $3.5 million is included in selling, general and administrative expense for the nine months ended September 30, 2018 and 2017, respectively.

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ALLIQUA BIOMEDICAL, INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

During the three and nine months ended September 30, 2018, the Company recorded a net gain of approximately $5.5 million (net of state income tax of $0.488 million) on the sale of the assets related to the purchase agreement with Celularity, as shown in the following table (in thousands):

| | | |
|---|---|---|
| Proceeds from sale | | |
| Total Consideration | | 29,000 |
| Less: Net book value of assets sold to Celularity | | |
| Inventory, net | (1,578) | |
| Intangibles, net | (20,557) | |
| Goodwill | (1,659) | |
| Fixed Assets, net | (904) | |
| Other current assets | 15 | |
| Total net book value of assets | | (24,683) |
| Add: Net book value of liabilities extinguished due to sale | | |
| Milestone payment | 1,000 | |
| Other liabilities | 717 | |
| Total net book value of liabilities | | 1,717 |
| Less: State tax expense | | (488) |
| Net gain on sale of assets | | $ 5,546 |

Summarized assets and liabilities of discontinued operations are presented in the following table (in thousands):

| | September 30, 2018 | December 31, 2017 |
|---|---|---|
| Accounts receivable, net | $ 445 | $ 3,161 |
| Inventory, net | — | 1,458 |
| Prepaid expenses and other current assets | — | 443 |
| Total current assets | 445 | 5,062 |
| Fixed assets, net | — | 1,041 |
| Intangible assets, net | — | 22,069 |
| Goodwill, net | — | 1,659 |
| Total assets of discontinued operations | 445 | 29,831 |
| Accounts payable | 2,322 | 957 |
| Accrued expenses and other current liabilities | 29 | 3,557 |
| Senior secured term loan, net | — | 10,929 |
| Total current liabilities | $ 2,351 | $ 15,443 |
| Other long-term liabilities | — | 245 |
| Total liabilities of discontinued operations | $ 2,351 | $ 15,688 |

Significant Accounting Policies and Estimates

The Company's significant accounting policies are disclosed in Note 2 — Summary of Significant Accounting Policies in the 2017 Annual Report. Since the date of the 2017 Annual Report, there have been no material changes to the Company's significant accounting policies. The preparation of the condensed consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts

reported in the condensed consolidated financial statements and accompanying notes. These estimates and assumptions include valuing equity securities and derivative financial instruments issued in financing transactions, allowance for doubtful accounts, inventory reserves, deferred taxes and related valuation allowances. Actual results could differ from the estimates.

Recent Accounting Principles

In August 2018, the FASB issued ASU 2018-13, "Fair Value Measurement (Topic 820): Disclosure Framework — Changes to the Disclosure Requirements for Fair Value Measurement". The amendments in this update is to improve the effectiveness of disclosures in the notes to the financial statements by facilitating clear communication of the information required by GAAP that is most important to users of each entity's financial statements. The amendments in this Update apply to all entities that are required, under existing GAAP, to make disclosures about recurring or nonrecurring fair value measurements. The amendments in this update are effective for all entities for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. The Company does not expect that this guidance will have a material impact on its consolidated financial statements.

In July 2018, the FASB issued ASU 2018-11, "Leases (Topic 842): Target Improvements". The amendments in this Update also clarify which Topic (Topic 842 or Topic 606) applies for the combined component. Specifically, if the non-lease component or components associated with the lease component are the predominant component of the combined component, an entity should account for the combined component in accordance with Topic 606. Otherwise, the entity should account for the combined component as an operating lease in accordance with Topic 842. An entity that elects the lessor practical expedient also should provide certain disclosures. The Company is currently evaluating the adoption of this guidance and does not expect that this guidance will have a material impact on its consolidated financial statements. The Company has not adopted this Standard and will do so when specified by the FASB.

In July 2018, the FASB issued ASU 2018-10, "Codification Improvements to Topic 842, Leases". The amendments in this Update affect narrow aspects of the guidance issued in the amendments in Update 2016-02 as described in the table below. The amendments in this Update related to transition do not include amendments from proposed Accounting Standards Update, Leases (Topic 842): Targeted Improvements, specific to a new and optional transition method to adopt the new lease requirements in Update 2016-02. That additional transition method will be issued as part of a forthcoming and separate Update that will result in additional amendments to transition paragraphs included in this Update to conform with the additional transition method. The Company is currently evaluating the adoption of this guidance and does not expect that this guidance will have a material impact on its consolidated financial statements. The Company has not adopted this Standard and will do so when specified by the FASB.

In June 2018, the FASB issued ASU 2018-07, "Compensation — Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting". The amendments in this update is to maintain or improve the usefulness of the information provided to the users of financial statements while reducing cost and complexity in financial reporting. The areas for simplification in this Update involve several aspects of the accounting for nonemployee share-based payment transactions resulting from expanding the scope of Topic 718, to include share-based payment transactions for acquiring goods and services from nonemployees. Some of the areas for simplification apply only to nonpublic entities. The amendments in this update are effective for all entities for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. The Company does not expect that this guidance will have a material impact on its consolidated financial statements.

In February 2018, the FASB issued ASU 2018-02, "Income Statement — Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income". The amendments in this Update allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act. Consequently, the amendments eliminate the stranded tax effects resulting from the Tax Cuts and Jobs Act

and will improve the usefulness of information reported to financial statement users. However, because the amendments only relate to the reclassification of the income tax effects of the Tax Cuts and Jobs Act, the underlying guidance that requires that the effect of a change in tax laws or rates be included in income from continuing operations is not affected. The amendments in this Update also require certain disclosures about stranded tax effects. The amendments in this update are effective for all entities for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. The Company does not expect that this guidance will have a material impact on its consolidated financial statements.

2. Going Concern

The Company's financial statements are prepared using accounting principles generally accepted in the United States of America applicable to a going concern that contemplates the realization of assets and liquidation of liabilities in the normal course of business.

The Company has experienced recurring losses since its inception. For the nine months ended September 30, 2018, the Company incurred a net loss of $7.1 million, utilized $7.6 million in cash from operations and had an accumulated deficit of $157.1 million. Prior to closing of the APA on May 7, 2018, these factors raised substantial doubt as to the Company's ability to continue as a going concern. However, upon closing the APA, the Company received gross proceeds of $29.0 million and part of the proceeds, $14.8 million, were utilized to satisfy its obligations under the Credit Agreement and Guaranty (the "CAG") with Perceptive. As of September 30, 2018, the Company had a cash balance of approximately $11.1 million.

Given the Company's current cash position and reduced cash burn, the Company believes substantial doubt has been mitigated and it has sufficient resources to support its planned operations for a year from the date these financial statements are issued.

3. Revenue Recognition

On January 1, 2018, the Company adopted Accounting Standards Codification ("ASC") Topic 606, "Revenue from Contracts with Customers" ("ASC 606"). The core principle of ASC 606 requires that an entity recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. ASC 606 defines a five-step process to achieve this core principle and, in doing so, it is possible more judgment and estimates may be required within the revenue recognition process than required under existing accounting principles generally accepted in the United States of America ("U.S. GAAP") including identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation.

The Company adopted ASC 606 for all applicable contracts using the modified retrospective method, which would have required a cumulative-effect adjustment, if any, as of the date of adoption. The adoption of ASC 606 did not have a material impact on the Company's condensed consolidated financial statements as of the date of adoption. As a result, a cumulative-effect adjustment was not required.

The Company recognizes revenue predominately from one type of revenue, contract manufacturing and recognizes an immaterial amount from the sale of products. Revenue from both contract manufacturing and products is recognized at the point where the customer obtains control of the goods and the Company satisfies its performance obligation, which generally is at the time it ships the product to the customer. To achieve this core principle, the Company applies the following five steps:

Step 1 — Identify the Contract with the Customer — A contract exists when (a) the parties to the contract have approved th contract and are committed to perform their respective obligations, (b) the entity can identify each party's rights regarding the goods or services to be transferred, (c) the entity can

identify the payment terms for the goods or services to be transferred, (d) the contract has commercial substance and it is probable that the entity will collect substantially all of the consideration to which it will be entitled in exchange for the goods or services that will be transferred to the customer.

Step 2 — Identify Performance Obligations in the Contract — Upon execution of a contract, the Company identifies as performance obligations each promise to transfer to the customer either (a) goods or services that are distinct or (b) a series of distinct goods or services that are substantially the same and have the same pattern of transfer to the customer. To the extent a contract includes multiple promised goods or services, the Company must apply judgement to determine whether the goods or services are capable of being distinct within the context of the contract. If these criteria are not met, the goods or services are accounted for as a combined performance obligation.

Step 3 — Determine the Transaction Price — The transaction price is determined based on the consideration to which the Company will be entitled in exchange for transferring products or services to the customer. Generally, all contracts include fixed consideration. If a contract did include variable consideration, the Company would determine the amount of variable consideration that should be included in the transaction price based on expected value method. Variable consideration would be included in the transaction price, if in the Company's judgement, it is probable that a significant future reversal of cumulative revenue under the contract would not occur.

Step 4 — Allocate the Transaction Price — After the transaction price has been determined, the next step is to allocate the transaction price to each performance obligation in the contract. If the contract only has one performance obligation, the entire transaction price will be applied to that obligation. If the contract has multiple performance obligations, the transaction price is allocated to the performance obligations based on the relative standalone selling price (SSP) at contract inception.

Step 5 — Satisfaction of the Performance Obligations (and Recognize Revenue) — When an asset is transferred, and the customer obtains control of the asset (or the services are rendered), the Company recognizes revenue. At contract inception, the Company determines if each performance obligation is satisfied at a point in time or over time. Revenue from both product sales and contract manufacturing is recognized at the point where the customer obtains control of the goods and the Company satisfies its performance obligation, which generally is at the time it ships the product to the customer.

Disaggregation of Revenue

The Company recognizes revenue predominately from contract manufacturing and recognizes an immaterial amount from products. Revenue from both products and contract manufacturing is recognized at the point where the customer obtains control of the goods and the Company satisfies its performance obligation, which generally is at the time it ships the product to the customer.

As of September 30, 2018, or December 31, 2017, the Company did not have any contract assets or contract liabilities from contracts with customers. During the three and nine months ended September 30, 2018 and 2017, there was no revenue recognized from performance obligations satisfied (or partially satisfied) in previous periods. As of September 30, 2018, there were no remaining performance obligations that the Company had not satisfied.

4. Net Loss Per Common Share

Basic loss per share data for each period presented is computed using the weighted-average number of shares of common stock outstanding during each such period. Diluted loss per share data is computed using the weighted-average number of common and dilutive common-equivalent shares outstanding during each period. Dilutive common-equivalent shares consist of: (a) shares that would be issued upon the exercise of stock options and warrants, computed using the treasury stock method; and (b) shares of non-vested restricted stock.

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The following securities are excluded from the calculation of weighted average dilutive common shares because their inclusion would have been anti-dilutive:

| | As of September 30, | |
|---|---|---|
| | 2018 | 2017 |
| Stock options | 343,573 | 879,182 |
| Warrants | 399,621 | 514,561 |
| Non-vested restricted stock | 20,000 | 194,674 |
| Total | 763,194 | 1,588,417 |

5. Inventory

Inventory consists of the following (in thousands):

| | September 30, 2018 | December 31, 2017 |
|---|---|---|
| Raw materials | $ 130 | $ 98 |
| Work in process | 53 | — |
| Finished goods | — | — |
| Less: Inventory reserve for excess and slow moving inventory | — | (5) |
| Total | $ 183 | $ 93 |

6. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consist of the following (in thousands):

| | September 30, 2018 | December 31, 2017 |
|---|---|---|
| Salaries, benefits and incentive compensation | $ 108 | $ 509 |
| Professional fees | 123 | 176 |
| Other | 25 | 27 |
| Total accrued expenses and other current liabilities | $ 256 | $ 712 |

7. Debt

Senior Secured Term Loan Facility

On May 29, 2015, the Company entered into the CAG with Perceptive. The CAG provided a senior secured term loan in a single borrowing to the Company in the principal amount of $15.5 million.

On March 13, 2018, the Company, AquaMed Technologies, Inc., a wholly owned subsidiary of the Company, and Perceptive entered into an Amendment Agreement, pursuant to which the parties agreed to certain amendments and modifications to the terms of the CAG. The Amendment Agreement provided for, an additional bridge term loan to the Company in the aggregate principal amount of $2.0 million pursuant to a Bridge Loan Note (“BLN”). Under the Amendment Agreement, the Company agreed to pay an upfront fee of $0.25 million and all fees, costs and expenses payable pursuant to the CAG (including reasonable attorney’s fees of Perceptive). The BLN bore interest at a rate per annum equal to the sum of (i) the greater of (x) LIBOR and (y) 1%, plus (ii) an applicable margin of 9.75%. The BLN matured on the earlier of (i) May 7, 2018 and (ii) the closing date in connection with the APA.

On May 7, 2018, the Company paid approximately $14.8 million in full satisfaction of all debt obligations due Perceptive.

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8. Commitments and Contingencies

License Agreement with Noble Fiber Technologies, LLC

On July 15, 2011, the Company entered into a license agreement with Noble Fiber Technologies, LLC, whereby the Company has the exclusive right and license to manufacture and distribute “SilverSeal Hydrogel Wound Dressings” and “SilverSeal Hydrocolloid Wound Dressings”. The license is granted for ten years with an option to be extended for consecutive renewal periods of two years after the initial term. Royalties are to be paid equal to 9.75% of net sales of licensed products. Total royalties, for the three and nine months ended September 30, 2018 and 2017 were nominal.

Litigation, Claims and Assessments

From time to time, the Company may become involved in lawsuits, investigations and claims that arise in the ordinary course of business. The Company believes it has meritorious defenses against all pending claims and intends to vigorously pursue them. While it is not possible to predict or determine the outcomes of any pending actions, the Company believes the amount of liability, if any, with respect to such actions, would not materially affect its financial position, results of operations or cash flows.

On February 22, 2018, a putative stockholder class action complaint was filed in the United States District Court for the District of Delaware against the Company and each member of the Board, captioned Ronald Cresta, Individually and on Behalf of All Others Similarly Situated v. Alliqua BioMedical Inc., David Johnson, Joseph M. Leone, Gary Restani, Jeffrey Sklar and Mark Wagner. The complaint alleges, among other things, that the Company and the Board violated federal securities laws and regulations by soliciting stockholder votes in connection with the AST through a proxy statement that omits material facts necessary to make the statements therein not false or misleading. The complaint seeks, among other things, to enjoin the Company and the Board from conducting the stockholder vote on the AST unless and until the allegedly omitted material information is disclosed to the Company’s stockholders, damages allegedly suffered by the plaintiffs as a result of the asserted omissions, as well as related attorneys’ fees and expenses.

On April 4, 2018, the court approved the parties’ stipulation and proposed order to withdraw the motion for preliminary injunction and dismiss the action and the case was closed. The court retained jurisdiction of the action solely for determining any potential fee application if the parties are unable to reach agreement and a fee application becomes necessary.

9. Stockholders’ Equity

Stock-Based Compensation

On May 7, 2018, in connection with the closing of the sale under the APA of substantially all of the Company’s assets to Cellularity, which triggered certain change in control provisions of the Company’s equity plans, all unvested and outstanding options and restricted stock awards under the 2011 Plan and 2014 Plan became vested and exercisable.

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A summary of the stock option activity for the nine months ended September 30, 2018 is presented below (in thousands, except years and per option data):

| | Number of Options | Weighted Average Exercise Price per Option | Weighted Average Remaining Life in Years | Intrinsic Value |
|---|---|---|---|---|
| Outstanding, December 31, 2017 | 810 | $ 52.90 | | |
| Granted | — | — | | |
| Exercised | — | — | | |
| Forfeited | (466) | 34.68 | | |
| Outstanding, September 30, 2018 | 344 | $ 46.54 | 4.8 | $ — |
| Exerciseable, September 30, 2018 | 344 | $ 46.54 | 4.8 | $ — |

As a result, a summary of the Company's outstanding and exercisable options as of September 30, 2018 was as follows (in thousands, except per share data):

| | Options Outstanding | | Options Exercisable | | |
|---|---|---|---|---|---|
| Range of Exercise Price | Weighted Average Exercise Price | Outstanding Number of Options | Weighted Average Exercise Price | Weighted Average Remaining Life in Years | Exercisable Number of Options |
| $2.00 – $4.00 | $ 3.63 | 54 | 3.63 | 8.4 | 54 |
| $4.10 – $9.90 | 8.72 | 23 | 8.72 | 7.6 | 23 |
| $10.00 – $19.90 | 10.77 | 11 | 10.77 | 5.8 | 11 |
| $20.00 – $39.90 | 33.47 | 40 | 33.47 | 4.6 | 40 |
| $40.00 – $49.90 | 44.71 | 27 | 44.71 | 4.0 | 27 |
| $50.00 – $59.90 | 53.87 | 26 | 53.87 | 1.5 | 26 |
| $60.00 – $69.90 | 66.23 | 135 | 66.23 | 4.2 | 135 |
| $70.00 – $79.90 | 79.40 | 1 | 79.40 | 5.6 | 1 |
| $80.00 – $89.90 | 87.50 | 11 | 87.50 | 2.9 | 11 |
| $90.00 – $99.90 | 90.00 | 11 | 90.00 | 3.0 | 11 |
| $100.00 – $266.90 | 109.40 | 5 | 109.40 | 1.6 | 5 |
| | 46.54 | 344 | 46.54 | 4.8 | 344 |

For the three months ended September 30, 2018 and 2017, the Company recognized $0.023 million and $0.7 million of stock-based compensation expense, of which, $0.009 million and ($0.001) million is included in cost of revenues and $0.014 million and $0.7 million is included in selling, general and administrative expenses in the condensed consolidated statements of operations, respectively. For the nine months ended September 30, 2018 and 2017, the Company recognized $1.0 million and $1.6 million of stock-based compensation expense, of which, $0.030 million and $0.025 million is included in cost of revenues and $0.97 million and $1.6 million is included in selling, general

and administrative expenses in the condensed consolidated statements of operations, respectively. As of September 30, 2018, there was no unrecognized stock-based compensation expense remaining.

Reverse Stock Split

The Company effected a 1-for-10 reverse stock split of its outstanding common stock on October 5, 2017. The accompanying consolidated financial statements and accompanying notes to the consolidated financial statements give retroactive effect to the reverse stock split for all periods presented. The shares of common stock retained a par value of $0.001 per share.

10. Related Party

In November 2015, the Company entered into a manufacturing supply agreement with a company where a Company director was then a member of the Board of Directors. During the three months ended September 30, 2018 and 2017, the Company incurred costs of approximately $0 and $0.028 million, respectively, from this vendor. During the nine months ended September 30, 2018 and 2017, the Company incurred costs of approximately $0.26 million and $0.3 million, respectively. Approximately $0 and $0.039 million is included in accounts payable related to this related party as of September 30, 2018 and December 31, 2017, respectively.

11. Fair Value Measurement

Fair value is defined as the price that would be received upon selling an asset or the price paid to transfer a liability on the measurement date. It focuses on the exit price in the principal or most advantageous market for the asset or liability in an orderly transaction between willing market participants. A three-tier fair value hierarchy is established as a basis for considering such assumptions and for inputs used in the valuation methodologies in measuring fair value. This hierarchy requires entities to maximize the use of observable inputs and minimize the use of unobservable inputs. The three levels of inputs used to measure fair values are as follows:

Level 1:

Observable prices in active markets for identical assets and liabilities.

Level 2:

Observable inputs other than quoted prices in active markets for identical assets and liabilities.

Level 3:

Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets and liabilities.

Warrant Liabilities

On September 30, 2018, the Company recomputed the fair value of its warrant liability of outstanding warrants to purchase an aggregate of 210,000 shares of common stock as $186,000 using the Binomial option pricing model (Level 3 inputs) using the following assumptions: expected volatility of 80.17% risk-free rate of 2.88%, expected term of 3.33 years, and expected dividends of 0.00%. The Company recorded a loss on the change in fair value of these warrant liabilities of $22,000 and $56,000 during the three and nine months ended September 30, 2018, respectively. During the three and nine months ended September 30, 2017, the Company recorded a gain on the change in fair value of its warrant liabilities of $35,000 and $403,000, respectively.

Warrants that contain exercise reset provisions and contingent consideration liabilities are Level 3 derivative liabilities measured at fair value on a recurring basis using pricing models for which at least one significant assumption is unobservable as defined in ASC 820. The fair value of contingent consideration liabilities that are classified as Level 3 were estimated using a discounted cash flow technique with significant inputs that are not observable in the market and thus represents a Level 3 fair value measurement as defined in ASC 820. The significant inputs in the Level 3 measurement not supported by market activity include the probability assessments of expected future cash flows related to the acquisitions, appropriately discounted considering the uncertainties associated with the obligation, and as calculated in

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accordance with the terms of the acquisition agreements. The development and determination of the unobservable inputs for Level 3 fair value measurements and the fair value calculations are the responsibility of the Company's Chief Financial Officer and are approved by the Chief Executive Officer.

The following table sets forth a summary of the changes in the fair value of Level 3 warrant liabilities that are measured at fair value on a recurring basis (in thousands):

| | Nine Months Ended September 30, | |
|---|---|---|
| | 2018 | 2017 |
| Warrant Liabilities | | |
| Beginning balance as of January 1, | $ 130 | $ 20 |
| Change in fair value of warrant liability | 56 | (403) |
| Warrant modification expense | — | 803 |
| Ending balance as of September 30, | $ 186 | $ 420 |

| | Nine Months Ended September 30, | |
|---|---|---|
| | 2018 | 2017 |
| Contingent Consideration | | |
| Beginning balance as of January 1, | $ — | $ 1,816 |
| Payments of contingent consideration | — | (1,851) |
| Change in fair value of contingent consideration | — | 35 |
| Ending balance as of September 30, | $ — | $ — |

Assets and liabilities measured at fair value on a recurring basis are as follows (in thousands):

| | September 30, 2018 | | |
|---|---|---|---|
| | Level 1 | Level 2 | Level 3 |
| Liabilities: | | | |
| Warrant liabilities | $ — | $ — | $ 186 |
| Total liabilities | $ — | $ — | $ 186 |

| | December 31, 2017 | | |
|---|---|---|---|
| | Level 1 | Level 2 | Level 3 |
| Liabilities: | | | |
| Warrant liabilities | $ — | $ — | $ 130 |
| Total liabilities | $ — | $ — | $ 130 |

12. Income Taxes

In accordance with ASC 740-270, Income Taxes — Interim Reporting, the Company is required at the end of each interim period to determine the best estimate of its annual effective tax rate and apply that rate to year-to-date ordinary income or loss. The resulting tax expense (or benefit) is adjusted for the tax effect of specific events, if any, required to be

discretely recognized in the interim period as they occur. For the three months ended September 30, 2018 and 2017, the Company recorded a tax benefit of $0.026 million and immaterial tax expense, respectively. For the nine months ended September 30, 2018 and 2017, the Company recorded a tax expense of $0.488 million and immaterial tax expense, respectively. The gain on sale of assets to Celularity in the period ended June 30, 2018 resulted in current state tax expense, primarily due to limitations on the use of net operating loss carryforwards in certain state jurisdictions. The Company

has not recorded net deferred tax assets as of September 30, 2018 or December 31, 2017 because it maintained a full valuation allowance against all material deferred tax assets, and management has determined that it is more likely than not that the Company will be unable to realize those future benefits. The Company's effective tax rate differs from the statutory rates of 21% and 34% as of September 30, 2018 and 2017, respectively, due to losses for which no future benefit is expected. As of September 30, 2018 and December 31, 2017, the Company had no uncertain tax positions recorded in its consolidated balance sheets.

The United States enacted the Tax Cuts and Jobs Act ("Act") on December 22, 2017, most provisions of which took effect in years beginning after December 31, 2017. The Act made substantial changes to U.S. taxation of corporations, including a reduction in the U.S. federal corporate income tax rate from 34% to 21% and changes to limitations on the deductibility of executive compensation. The effect on deferred tax assets and liabilities of a change in law or tax rates is recognized in income in the period that includes the enactment date.

After the enactment of the Act, the SEC issued Staff Accounting Bulletin No. 118 ("SAB 118") to address the application of U.S. GAAP in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Act. In our financial statements for the period ended December 31, 2017, we calculated an estimate of the impact of the Act related to the remeasurement of our net U.S. deferred tax asset due to the change in U.S. federal corporate income tax rate. The provisional amount recorded was deferred tax expense of $14.6 million, but which was fully and equally offset by a deferred tax benefit related to a corresponding reduction in our valuation allowance. In addition, due to changes in executive compensation rules pursuant to the Act, the Company determined that approximately $1.3 million of deferred tax asset for stock compensation may not be realizable. The Company had previously recorded a valuation allowance against the deferred tax asset so this adjustment had no impact on the financial statements for the period ended December 31, 2017. During the quarter ended September 30, 2018, the Company finalized its U.S. federal 2017 income tax return, which resulted in an immaterial change in the net deferred tax asset, before valuation allowance, as of the enactment date. The Company has not adjusted the provisional estimates recorded during period ended December 31, 2017 under SAB 118 and will complete the accounting for the income tax effects of the Act prior to the end of the one-year measurement period.

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ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the condensed consolidated financial statements and related notes above.

Forward-Looking Statements

This Quarterly Report on Form 10-Q contains "forward-looking statements," which include information relating to future events, future financial performance, strategies, expectations, competitive environment and regulation. Words such as "may," "should," "could," "would," "predict," "potential," "continue," "expect," "anticipate," "future," "intend," "plan "estimate," and similar expressions, as well as statements in future tense, identify forward-looking statements. Forward-looking statements should not be read as a guarantee of future performance or results and may not be accurate indications of when such performance or results will actually be achieved. Forward-looking statements are based on information we have when those statements are made or our management's good faith belief as of that time with respect to future events and are subject to risks and uncertainties that could cause actual performance or results to differ materially from those expressed in or suggested by the forward-looking statements. Important factors that could cause such differences include, but are not limited to:

- the occurrence of any event, change or other circumstances that could give rise to the termination of the merger agreement with Adynxx, Inc.;
- our stockholders failing to approve the merger with Adynxx, Inc.;
- an increase in the amount of costs, fees, expenses and other charges related to the merger agreement with Adynxx, Inc.;
- risks arising from the diversion of management's attention from our ongoing business operations;
- risks associated with our ability to identify and realize business opportunities following the merger with Adynxx, Inc.;
- our ability to continue as a going concern;
- inadequate capital;
- the uncertainty regarding the adequacy of our liquidity to pursue our complete business objectives, including a return of capital to shareholders and execution of a definitive business restructure;
- our ability to comply with current good manufacturing practices ("cGMPs");
- loss or retirement of key executives;
-

our plans to make significant additional outlays of working capital before we expect to generate significant revenues and the uncertainty regarding when we will begin to generate significant revenues, if we are able to do so;

- adverse economic conditions and/or intense competition;
- loss of a key customer or supplier;
- entry of new competitors;
- adverse federal, state and local government regulation;
- technological obsolescence of our manufacturing process and equipment;
- technical problems with our research and products;
- risks of mergers and acquisitions including the time and cost of implementing transactions and the potential failure to achieve expected gains, revenue growth or expense savings;
- price increases for supplies and components; and

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- the inability to carry out our business plans.

For a discussion of these and other risks that relate to our business and investing in shares of our common stock, you should carefully review the risks and uncertainties described under the heading "Part II — Item 1A. Risk Factors" and elsewhere in this Quarterly Report on Form 10-Q. The forward-looking statements contained in this Quarterly Report on Form 10-Q are expressly qualified in their entirety by this cautionary statement. We do not undertake any obligation to publicly update any forward-looking statement to reflect events or circumstances after the date on which any such statement is made or to reflect the occurrence of unanticipated events.

Overview

We manufacture a high-water content, electron beam cross-linked, aqueous polymer hydrogels, or gels, used for wound care, medical diagnostics, transdermal drug delivery and cosmetics. We believe that we are one of the leading manufacturers of high-performance gels in the United States. We specialize in custom gels by capitalizing on proprietary manufacturing technologies. We have historically served as a contract manufacturer, supplying our gels to third parties who incorporate them into their own products. Our contract manufacturing business provides custom hydrogels to the OEM market.

Recent Events

On October 11, 2018, the Company, Embark Merger Sub Inc., a Delaware corporation and a wholly-owned subsidiary of the Company ("Merger Sub"), and Adynxx, Inc., a privately-held Delaware corporation ("Adynxx"), entered into an Agreement and Plan of Merger and Reorganization (the "Merger Agreement"), pursuant to which, among other things, subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, Merger Sub will merge with and into Adynxx, with Adynxx becoming a wholly-owned subsidiary of the Company and the surviving corporation of the merger (the "Merger"). Subject to the terms and conditions of the Merger Agreement, at the effective time of the Merger (the "Effective Time"), (a) each outstanding share of Adynxx common stock, on an as-converted basis taking into consideration all outstanding common stock, preferred stock, restricted stock and all other securities convertible or exercisable for Adynxx common stock, will be converted into the right to receive the number of shares of Alliqua's common stock (the "Company Common Stock") equal to the exchange ratio described below; (b) each outstanding Adynxx stock option that has not previously been exercised prior to the Effective Time will be assumed by the Company; and (c) each outstanding warrant to acquire Adynxx capital stock that has not previously been exercised prior to the Effective Time will be assumed by the Company.

Under the exchange ratio formula in the Merger Agreement, as of immediately after the Merger, but excluding the effect of certain financings (as further described in the Merger Agreement), the former Adynxx securityholders are expected to own approximately 86% of the aggregate number of shares of the Company Common Stock issued and outstanding following the consummation of the Merger (the "Post-Closing Shares"), and the stockholders of the Company as of immediately prior to the Merger are expected to own approximately 14% of the aggregate number of Post-Closing Shares. This exchange ratio will be fixed immediately prior to the Effective Time to reflect the Company's and Adynxx's equity capitalization as of immediately prior to such time. In addition, to the extent Adynxx consummates a Permitted Financing, as specifically defined in the Merger Agreement, in excess of $10.0 million dollars prior to the Effective Time, the exchange ratio may be further adjusted in a manner that would reduce the percentage of the aggregate number of Post-Closing Shares held by stockholders of the Company as of immediately prior to the Merger.

Immediately following the Merger, the name of the Company will be changed from "Alliqua BioMedical, Inc." to "Adynxx, Inc." At the Effective Time, the Merger Agreement contemplates that the Board of Directors of the Company will consist of such directors selected by Adynxx, with Alliqua having the right to designate one member. The executive officers of the Company immediately after the Effective Time will be designated by Adynxx; the merger will be a change of control and accounted for as a reverse business combination whereby Adynxx will be deemed the accounting acquiror.

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The Merger Agreement contains customary representations, warranties and covenants made by the Company and Adynxx, including covenants relating to obtaining the requisite approvals of the stockholders of the Company and Adynxx, indemnification of directors and officers, and the Company's and Adynxx's conduct of their respective businesses between the date of signing the Merger Agreement and the closing of the Merger. Consummation of the Merger is subject to certain closing conditions, including, among other things, approval by the stockholders of the Company and Adynxx. The Merger Agreement contains certain termination rights for both the Company and Adynxx, and further provides that, upon termination of the Merger Agreement under specified circumstances, the Company or Adynxx, as applicable, may be required to pay the other party a termination fee of $0.249 million.

The Merger Agreement contemplates that the Company will also seek approval from its stockholders to effect a reverse stock split, if applicable, with the split ratio to be mutually agreed to by the Company and Adynxx within the range approved by the Company's stockholders immediately prior to the Effective Time. In addition, the Merger Agreement requires Alliqua to use commercially reasonable efforts to consummate a spin-off of its hydrogel contract manufacturing business prior to the closing of the Merger.

The Company's operations contemplated under the Merger Agreement are classified as Held for Use.

Completion of the Asset Sale Transaction with Celularity

On May 7, 2018, we completed the previously announced sale of substantially all of our assets (the "AST") to Celularity, Inc. ("Celularity"), including certain assets comprising its MIST, Biovance and Interfyl product lines (the "Purchased Assets") pursuant to the terms of the Asset Purchase Agreement (the "APA"), dated January 5, 2018 with Celularity. As consideration for the Purchased Assets, Celularity paid a purchase price of $29.0 million in cash. No debt or significant liabilities were assumed by Celularity.

Under the terms of the APA, we retained certain specified assets, including, among other things, cash, accounts receivable and our hydrogel contract manufacturing business, including our SilverSeal and Hydress product lines.

In connection with the completion of the AST, we terminated our Credit Agreement and Guaranty (the "Credit Agreement"), dated as of May 29, 2015, as amended, by and among us, AquaMed Technologies, Inc., a wholly owned subsidiary of us ("Guarantor"), and Perceptive Credit Holdings LP ("Perceptive"). Additionally, we terminated the related Pledge and Security Agreement, dated as of May 29, 2015, by and among us, Guarantor and Perceptive. The Credit Agreement provided for a senior secured term loan in a single borrowing to us in the initial principal amount of approximately $15.5 million, of which approximately $12.0 million remained outstanding on the termination date. The full unpaid principal amount of the term loan and associated fees were paid off.

Liquidity and Capital Resources

The AST was completed on May 7, 2018. As consideration for the Purchased Assets, Celularity paid consideration to us of $29.0 million in cash. No debt or significant liabilities were assumed by Celularity in the AST. A portion of the proceeds, approximately $14.8 million, was used to extinguish our debt obligations and associated costs to Perceptive under the Credit Agreement. As of September 30, 2018, we had cash and cash equivalents totaling approximately $11.1 million compared to $2.2 million at December 31, 2017.

Net cash used in operating activities was $7.6 million and $9.8 million for the nine months ended September 30, 2018 and 2017, respectively.

Net cash provided in investing activities was $29.4 million and $2.9 million for the nine months ended September 30, 2018, and 2017, respectively. Cash provided by investing activities during the nine months ended September 30, 2018 was primarily due to the consideration received from Celularity in connection with the AST. Cash provided by investing activities during the nine months ended September 30, 2017 included $3.4 million received from the sale of the rights to the TheraBond product from Argentum, offset by $0.35 million provided to Soluble Systems, LLC as a bridge loan and $0.126 million in purchases of improvements and equipment.

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Net cash used in financing activities for the nine months ended September 30, 2018 consisted of $14.8 million in the payment of obligations owed to Perceptive under the Credit Agreement, offset by $1.7 million received from proceeds of a Bridge Loan Note. Net cash provided by financing activities for the nine months ended September 30, 2017 consisted of $5.9 million of net proceeds received from the issuance of our common stock offset by $0.7 million utilized to pay the cash portion of the contingent consideration related to the Celleration acquisition.

At September 30, 2018, current assets totaled $12.2 million and current liabilities totaled $3.1 million, as compared to current assets totaling $7.5 million and current liabilities totaling $17.0 million at December 31, 2017. As a result, we had working capital of $9.1 million at September 30, 2018 compared to working capital deficit of $9.5 million at December 31, 2017.

Given our current cash position and reduced cash burn, we believe substantial doubt has been mitigated and we have sufficient resources to support our planned operations for a year from the date these financial statements are issued.

Results of Operations

Three Months Ended September 30, 2018 Compared to the Three Months Ended September 30, 2017

Our MIST, Biovance and Interfyl product lines sold under the APA have been reclassified to discontinued operations.

Revenues, net. For the three months ended September 30, 2018 revenues decreased by $0.2 million, or 30%, to $0.3 million from $0.5 million for the three months ended September 30, 2017. The decrease in our overall revenue was due to a decrease in orders from contract manufacturing customers.

Gross profit. Our gross loss was $0.013 million for the three months ended September 30, 2018 compared to gross profit of $0.1 million for the three months ended September 30, 2017. The declined results for the three months ended September 30, 2018, as compared to the three months ended September 30, 2017 was primarily due to a decrease in the volume of orders fulfilled for our contract manufacturing customers, thus a lack of sales volume to adequately absorb all of the fixed overhead costs. Gross margin was approximately a negative 4% for the three months ended September 30, 2018. Gross margin was approximately 20% for the three months ended September 30, 2017.

The components of cost of revenues are as follows for the three months ended September 30, 2018 and 2017 (in thousands):

| | Three Months Ended September 30, | |
|---|---|---|
| | 2018 | 2017 |
| Cost of revenues | | |
| Materials and finished products | $ 91 | $ (40) |
| Stock-based compensation | 10 | (1) |
| Compensation and benefits | 94 | 99 |
| Depreciation and amortization | 73 | 74 |
| Equipment, production and other expenses | 93 | 268 |
| Total cost of revenues | $ 361 | $ 400 |

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Selling, general and administrative expenses. The following table highlights selling, general and administrative expenses by type for the three months ended September 30, 2018 and 2017 (in thousands):

| | Three Months Ended September 30, | |
|---|---|---|
| | 2018 | 2017 |
| Selling, general and administrative expenses | | |
| Compensation and benefits | $ 162 | $ 492 |
| Stock-based compensation | 13 | 206 |
| Depreciation and amortization | 16 | 7 |
| Other expenses and professional fees | 554 | 817 |
| Total selling, general and administrative expenses | $ 745 | $ 1,522 |

Selling, general and administrative expenses decreased by $0.8 million to $0.7 million for the three months ended September 30, 2018, as compared to $1.5 million for the three months ended September 30, 2017. The decrease in selling, general and administrative expenses is attributable to our organizational restructuring post the completion of the AST and continued focus on managing operating expenditures.

Compensation and benefits decreased by $0.3 million to $0.2 million for the three months ended September 30, 2018, as compared to $0.5 million for the three months ended September 30, 2017. The decrease in compensation and benefits was primarily due to the decrease in the average number of full-time employees in 2018 compared to 2017, due to the completion of the AST.

Stock-based compensation decreased by $0.2 million, to $0.013 million for the three months ended September 30, 2018, as compared to $0.2 million for the three months ended September 30, 2017. The decrease in stock-based compensation is primarily due to the accelerated vesting of employee stock options and restricted stock awards resulting from the completion of the AST on May 7, 2018.

Other expenses and professional fees decreased by $0.2 million to $0.6 million for the three months ended September 30, 2018 from $0.8 million for the three months ended September 30, 2017. Other selling, general and administrative expenses consist of costs associated with our selling efforts and general management, including information technology, travel, training and recruiting. The decrease is due to lower legal and consulting fees.

Business development costs. During the three months ended September 30, 2018, we incurred $0.2 million in costs related to business development opportunities. These costs were mainly due to professional fees, including accounting, legal and consulting fees; in the past these were in other expenses and professional fees, however because they are not of a normal course of business, these have been carved out. During the three months ended September 30, 2017 we did not incur any business development costs.

Nine Months Ended September 30, 2018 Compared to the Nine Months Ended September 30, 2017

Our operations sold under the AST have been reclassified to discontinued operations.

Revenues, net. For the nine months ended September 30, 2018 revenues increased by $0.4 million, or 30%, to $1.8 million from $1.4 million for the nine months ended September 30, 2017. The increase in our overall revenue was due to an increase in orders fulfilled for our contract manufacturing customers.

Gross profit. Our gross profit was $0.4 million for the nine months ended September 30, 2018 compared to gross profit of $0.019 million for the nine months ended September 30, 2017. The improved results for the nine months ended September 30, 2018, as compared to the nine months ended September 30, 2017 was primarily due to the greater volume of contract manufacturing sales and a stricter emphasis on operating efficiency. Gross margin was approximately 22% for the nine months ended September 30, 2018. Gross margin was approximately 1% for the nine months ended September 30, 2017.

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The components of cost of revenues are as follows for the nine months ended September 30, 2018 and 2017 (in thousands):

| | Nine Months Ended September 30, | |
|---|---|---|
| | 2018 | 2017 |
| Cost of revenues | | |
| Materials and finished products | $ 519 | $ 277 |
| Stock-based compensation | 33 | 25 |
| Compensation and benefits | 299 | 384 |
| Depreciation and amortization | 217 | 217 |
| Equipment, production and other expenses | 303 | 432 |
| Total cost of revenues | $ 1,371 | $ 1,335 |

Selling, general and administrative expenses. The following table highlights selling, general and administrative expenses by type for the nine months ended September 30, 2018 and 2017 (in thousands):

| | Nine Months Ended September 30, | |
|---|---|---|
| | 2018 | 2017 |
| Selling, general and administrative expenses | | |
| Compensation and benefits | $ 1,039 | $ 1,513 |
| Stock-based compensation | 288 | 86 |
| Depreciation and amortization | 36 | 19 |
| Other expenses and professional fees | 2,529 | 2,439 |
| Total selling, general and administrative expenses | $ 3,892 | $ 4,057 |

Selling, general and administrative expenses decreased by $0.2 million to $3.9 million for the nine months ended September 30, 2018, as compared to $4.1 million for the nine months ended September 30, 2017. The decrease in selling, general and administrative expenses is directly attributable to organizational restructure post the completion of the AST.

Compensation and benefits decreased by $0.5 million to $1.0 million for the nine months ended September 30, 2018, as compared to $1.5 million for the nine months ended September 30, 2017. The decrease in compensation and benefits was primarily due to the decrease in the average number of full-time employees in 2018 compared to 2017, due to the completion of the AST.

Stock-based compensation increased by $0.2 million, to $0.3 million for the nine months ended September 30, 2018, as compared to a $0.1 million to stock-based compensation for the nine months ended September 30, 2017. The increase in stock-based compensation is primarily due to the accelerated vesting of employee stock options and restricted stock awards resulting from the completion of the AST on May 7, 2018.

Other expenses and professional fees increased by $0.1 million to $2.5 million for the nine months ended September 30, 2018 from $2.4 million for the nine months ended September 30, 2017. Other selling, general and administrative expenses consist of costs associated with our selling efforts and general management, including information technology, travel, training and recruiting. The increase was due to higher legal expenses.

Business development costs. During the nine months ended September 30, 2018, we incurred $0.4 million in costs related to business development opportunities. These costs were mainly due to professional fees, including accounting, legal and consulting fees; in the past these were in other expenses and professional fees, however because they are not of a normal course of business, these have been carved out. During the nine months ended September 30,

2017 we incurred $0.6 million in costs related to business development opportunities.

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Off Balance Sheet Arrangements

As of September 30, 2018, we had no off-balance sheet arrangements in the nature of guarantee contracts, retained or contingent interests in assets transferred to unconsolidated entities (or similar arrangements serving as credit, liquidity or market risk support to unconsolidated entities for any such assets), or obligations (including contingent obligations) arising out of variable interests in unconsolidated entities providing financing, liquidity, market risk or credit risk support to us, or that engage in leasing, hedging or research and development services with us.

Critical Accounting Policies

There have been no significant changes to our critical accounting policies and estimates from the information provided in Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” included in the Annual Report on Form 10-K for the year ended December 31, 2017.

Recent Accounting Pronouncements

Recently issued accounting pronouncements are addressed in Note 1 in the Notes to Condensed Consolidated Financial Statements.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not required.

ITEM 4. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures.

As of September 30, 2018, we conducted an evaluation of the effectiveness of our “disclosure controls and procedures” (“Disclosure Controls”), as defined by Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”). The Disclosure Controls evaluation was done under the supervision and with the participation of management, including our chief executive officer and chief financial officer. There are inherent limitations to the effectiveness of any system of disclosure controls and procedures. Accordingly, even effective disclosure controls and procedures can only provide reasonable assurance of achieving their control objectives. Based upon this evaluation, our chief executive officer and chief financial officer have concluded that our Disclosure Controls and Procedures were effective at the reasonable assurance level as of September 30, 2018.

Changes in Internal Control over Financial Reporting

There have been no changes in our internal control over financial reporting during the fiscal quarter ended September 30, 2018 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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PART II — OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

From time to time, the Company may become involved in lawsuits, investigations and claims that arise in the ordinary course of business. The Company believes it has meritorious defenses against all pending claims and intends to vigorously pursue them. While it is not possible to predict or determine the outcomes of any pending actions, the Company believes the amount of liability, if any, with respect to such actions, would not materially affect its financial position, results of operations or cash flows.

On February 22, 2018, a putative stockholder class action complaint was filed in the United States District Court for the District of Delaware against the Company and each member of the Board, captioned Ronald Cresta, Individually and on Behalf of All Others Similarly Situated vs. Alliqua BioMedical Inc., David Johnson, Joseph M. Leone, Gary Restani, Jeffrey Sklar and Mark Wagner. The complaint alleged, among other things, that the Company and the Board violated federal securities laws and regulations by soliciting stockholder votes in connection with the Asset Sale Transaction through a proxy statement that omits material facts necessary to make the statements therein not false or misleading. The complaint sought, among other things, to enjoin the Company and the Board from conducting the stockholder vote on the Asset Sale Transaction unless and until the allegedly omitted material information was disclosed to the Company's stockholders, damages allegedly suffered by the plaintiffs as a result of the asserted omissions, as well as related attorneys' fees and expenses.

On April 4, 2018, the court approved the parties' stipulation and proposed order to withdraw the motion for preliminary injunction and dismiss the action and the case was closed. The court retained jurisdiction of the action solely for determining any potential fee application if the parties are unable to reach agreement and a fee application becomes necessary.

ITEM 1A. RISK FACTORS

During the three months ended September 30, 2018, there were no material changes to the risk factors previously discussed in Part I, Item 1A "Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2017 and Form 10-Q for the quarter ended June 30, 2018, except that the risk factors related to the failure of the consummation of the AST are no longer applicable and as set forth below.

The issuance of shares of Company Common Stock to Adynxx stockholders in the merger will substantially dilute the voting power of current Company stockholders. Having a minority share position may reduce the influence that current stockholders have on the management of the Company.

Pursuant to the terms of the Merger Agreement, at the Effective Time of the merger, the former Adynxx security holders are expected to own approximately 86% of the aggregate number of Post-Closing Shares of the Company, and the stockholders of the Company as of immediately prior to the Merger are expected to own approximately 14% of the aggregate number of Post-Closing Shares of the Company, subject to certain adjustments as set forth in the Merger Agreement. Accordingly, the issuance of the shares of Company common stock to Adynxx equity holders in the Merger will significantly reduce the ownership stake and relative voting power of each share of Company common stock held by current Company stockholders. Consequently, following the merger, the ability of the Company's current stockholders to influence the management of the Company will be substantially reduced.

There is no assurance when or if the Merger will be completed. Any delay in completing the Merger may substantially reduce the benefits that the Company and Adynxx expect to obtain from the Merger.

Completion of the merger is subject to the satisfaction or waiver of a number of conditions as set forth in the Merger Agreement. There can be no assurance that the Company and Adynxx will be able to satisfy the closing conditions or that closing conditions beyond their control will be satisfied or waived. If the Merger and the integration of the companies' respective businesses are not completed within the expected timeframe, such delay may materially and adversely affect the synergies and other benefits that the Company and Adynxx expect to achieve as a result of the Merger and could result in additional transaction costs or other effects associated with uncertainty about the Merger.

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The Company and Adynxx can agree at any time to terminate the Merger Agreement, even if Adynxx stockholders have already adopted the Merger Agreement and thereby approved the Merger and the other transactions contemplated by the Merger Agreement. The Company and Adynxx can also terminate the Merger Agreement under other specified circumstances.

The issuance of the Company's common stock in connection with the merger could decrease the market price of the Company's common stock.

In connection with the Merger and as part of the merger consideration, the Company expects to issue shares of its common stock to Adynxx equity holders. The anticipated issuance of the Company's common stock in the Merger may result in fluctuations in the market price of the Company common stock, including a stock price decrease.

Failure to complete the merger could negatively affect the value of the Company's common stock and the future business and financial results of the Company.

If the merger is not completed, the ongoing businesses of the Company could be adversely affected and the Company will be subject to a variety of risks associated with the failure to complete the mergers, including without limitation the following:

- diversion of management focus and resources from operational matters and other strategic opportunities while working to implement the merger;

- reputational harm due to the adverse perception of any failure to successfully complete the merger; and

- having to pay certain costs relating to the merger, such as legal, accounting, financial advisory, filing and printing fees.

If the Merger is not completed, these risks could materially affect the market price of the Company's common stock and the Company's business and financial results and may result in the cessation of the Company's operations.

Adynxx is a clinical development stage pharmaceutical company and has never been profitable. Adynxx expects to incur additional losses in the future and may never be profitable.

Adynxx is a clinical development stage pharmaceutical company. Adynxx has not commercialized any product candidates or recognized any revenues from product sales. All of Adynxx's product candidates are still in the preclinical or clinical development stage, and none has been approved for marketing or is being marketed or commercialized. Adynxx's product candidates will require significant additional development, clinical studies, regulatory clearances and additional investment before they can be commercialized. Adynxx cannot be certain when or if any of its product candidates will obtain the required regulatory approval.

Adynxx has never been profitable or generated positive cash flow from operation. Adynxx may incur significant additional losses as it continues to focus its resources on prioritizing, selecting and advancing its product candidates. Adynxx's ability to generate revenue and achieve profitability depends mainly upon its ability, alone or with others, to successfully develop its product candidates, obtain the required regulatory approvals in various territories and commercialize its product candidates. Adynxx may be unable to achieve any or all of these goals with regard to its product candidates. As a result, Adynxx may never be profitable or achieve significant and/or sustained revenues.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

(a) Unregistered Sales of Equity Securities

None

(b) Issuer Purchases of Equity Securities

None

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ITEM 3. DEFAULTS UPON SENIOR SECURITIES

Not applicable.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

Not applicable.

ITEM 6. EXHIBITS

See “Index to Exhibits” for a description of our exhibits.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

ALLIQUA BIOMEDICAL, INC.

By:
/s/ David Johnson

Date: October 26, 2018

Name: David Johnson
Title: Chief Executive Officer
(Principal Executive Officer)

By:
/s/ Joseph Warusz

Name: Joseph Warusz
Title: Chief Financial Officer
(Principal Financial Officer)

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Index to Exhibits

| Exhibit No. | Description |
|---|---|
| 3.1 | Certificate of Incorporation of Alliqua BioMedical, Inc. (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on June 11, 2014). |
| 3.2 | Bylaws of Alliqua BioMedical, Inc. (incorporated by reference to Exhibit 3.2 to the Current Report on Form 8-K filed on June 11, 2014). |
| 3.3 | Certificate of Amendment to Certificate of Incorporation of Alliqua BioMedical, Inc. (incorporated by reference to Exhibit 3.3 to the Current Report on Form 8-K filed on June 11, 2014). |
| 3.4 | Certificate of Amendment to Certificate of Incorporation of Alliqua BioMedical, Inc. (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K filed on May 6, 2016). |
| 3.5 | Certificate of Amendment of Certificate of Incorporation of Alliqua BioMedical, Inc. dated October 5, 2017 (incorporated by reference in Exhibit 3.1 to the Current Report on Form 8-K filed on October 5, 2017). |
| 31.1* | Certification of Chief Executive Officer Pursuant to Section 302 of Sarbanes-Oxley Act of 2002. |
| 31.2* | Certification of Chief Financial Officer Pursuant to Section 302 of Sarbanes-Oxley Act of 2002. |
| 32.1* | Certification of Chief Executive Officer Pursuant to Section 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. |
| 32.2* | Certification of Chief Financial Officer Pursuant to Section 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. |
| 101* | The following materials from the Company's Quarterly Report on Form 10-Q for the fiscal quarter September 30, 2018, formatted in XBRL (eXtensible Business Reporting Language), (i) Consolidated Balance Sheets, (ii) Consolidated Statements of Operations, (iii) Consolidated Statements of Stockholders' Equity, (iv) Consolidated Statements of Cash Flows, and (v) Notes to the Consolidated Financial Statements. |

*
Filed herewith.

**
Certain exhibits and schedules have been omitted and the Company agrees to furnish supplementary to the Securities and Exchange Commission a copy of any omitted exhibits upon request.

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Annex H

October 5, 2018

Board of Directors
Alliqua BioMedical, Inc.
2150 Cabot Blvd West, Suite B
Langhorne, Pennsylvania 19047

Ladies and Gentlemen:

You have requested our opinion as to the fairness, from a financial point of view, to Alliqua BioMedical, Inc. ("Alliqua") of the Exchange Ratio (as defined below) in the proposed Agreement and Plan of Merger and Reorganization (the "Merger Agreement") to be entered into by and among Alliqua, Merger Sub, Inc. ("Merger Sub") and Adynxx, Inc. (the "Company"). Capitalized terms used herein have the respective meanings ascribed thereto in the October 3, 2018 draft of the Merger Agreement provided to us by Alliqua (the "Draft Merger Agreement").

As more specifically set forth in the Merger Agreement, and subject to the terms, conditions and adjustments set forth therein, the Merger Agreement provides for the acquisition of the Company by Alliqua through the merger of Merger Sub with and into the Company with the Company as the surviving entity thereof (the "Merger"). By virtue of the Merger, each share of Company Capital Stock issued and outstanding immediately prior to, and contingent upon the occurrence of, the Effective Time (excluding shares of Company Capital Stock held in the treasury of the Company and shares of Company Capital Stock owned by Alliqua or by any direct or indirect wholly owned subsidiary of the Company or Alliqua (which will be cancelled in the Merger) and any Dissenting Shares) will be converted into such number of shares of validly issued, fully paid and nonassessable shares of common stock of Alliqua, $0.001 par value per share ("Alliqua Common Stock") equal to the Exchange Ratio. As a result of the Merger, the former holders of Company Capital Stock will own 86.25% of the outstanding equity of Alliqua immediately following the Effective Time and the holders of the outstanding equity of Alliqua immediately prior to the Merger will own 13.75% of the outstanding equity of Alliqua immediately following the Effective Time.

The shares of Alliqua Common Stock to be issued in the Merger will be issued in a transaction exempt from registration under the Securities Act by reason of Section 4(a)(2) thereof and/or Regulation D thereunder and will be subject to restrictions on resale arising pursuant to applicable securities laws. In the Merger Agreement, Alliqua has agreed to cooperate in a timely manner with the holders of such shares to remove any restrictive legends or similar transfer instructions with respect to such shares. For purposes of this opinion, we have, with your approval and without any independent verification, assumed that no liquidity discount should be applied to the shares of Alliqua Common Stock to be issued in the Merger as a result of such restrictions.

The Merger Agreement provides that Alliqua will use commercially reasonable efforts to effect the Spin-Off prior to the Effective Time. For purposes of our opinion, we have assumed, with your approval, that the Spin-Off will not occur prior to the Effective Time.

In addition, the Merger Agreement contemplates that Alliqua will pay a Cash Dividend to holders of Alliqua capital stock prior to the Effective Time. For purposes of our opinion, we have assumed, with your approval, that the amount of the Cash Dividend payable to holders of Alliqua Common Stock will be $1.40 per share.

In connection with our review of the proposed Merger, and in arriving at our opinion, we have: (i) reviewed the Draft Merger Agreement; (ii) reviewed certain information, including financial forecasts, relating to the business, earnings, cash flow, assets, liabilities and prospects of Alliqua and the Company that were furnished to us by management of Alliqua and the Company, respectively; (iii) conducted discussions with members of senior management and representatives of Alliqua and the Company concerning the matters described in clause (ii); (iv) reviewed publicly available information relating to the respective businesses of Alliqua and the Company; (v) reviewed the pro forma ownership structure of the combined entity resulting from the Merger; (vi) discussed the past and current operations and financial condition and the prospects of Alliqua and the Company with members of senior management of Alliqua

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and of the Company, respectively; (vii) reviewed the financial terms, to the extent publicly available, of certain acquisition and financing transactions that we deemed relevant; and (viii) performed such other analyses and considered such other factors as we deemed appropriate for the purpose of rendering our opinion.

We have assumed and relied upon, without verifying independently, the accuracy and completeness of all information that was publicly available or was furnished, or otherwise made available, to us or discussed with or reviewed by or for us for purposes of preparing this opinion. We have further assumed that the financial information provided has been prepared by the respective managements of Alliqua and the Company on a reasonable basis in accordance with industry practice, and that the managements of Alliqua and the Company are not aware of any information or facts that would make any information provided to us incomplete or misleading. Without limiting the generality of the foregoing, for the purpose of this opinion, we have assumed that the respective managements of Alliqua and the Company prepared reasonably the financial forecasts, estimates and other forward-looking information reviewed by us, based on assumptions reflecting their best currently available estimates and judgments as to the expected future results of operations and financial condition of Alliqua and the Company, respectively. We express no opinion as to any such financial forecasts, estimates or forward-looking information or the assumptions on which they were based. In connection with our opinion, we have assumed and relied upon, without independent verification, the accuracy and completeness of all of the financial, legal, regulatory, tax, accounting and other information provided to, discussed with or reviewed by us. Our opinion does not address any legal, regulatory, tax or accounting issues.

In arriving at our opinion, we have assumed that the executed Merger Agreement will be in all material respects identical to the Draft Merger Agreement reviewed by us. We have relied upon and assumed, without independent verification, that (i) the representations and warranties of all parties set forth in the Merger Agreement and all related documents and instruments that are referred to therein are true and correct, (ii) each party to the Merger Agreement will fully and timely perform all of the covenants and agreements required to be performed by such party, (iii) the Merger will be consummated pursuant to the terms of the Merger Agreement without amendments thereto, and (iv) all conditions to the consummation of the Merger will be satisfied without waiver by any party of any conditions or obligations thereunder. Additionally, we have assumed that all the necessary regulatory approvals and consents required for the Merger, including the approval of the stockholders of Alliqua, will be obtained in a manner that will not adversely affect Alliqua.

In arriving at our opinion, we have not performed any appraisals or valuations of any specific assets or liabilities (fixed, contingent or other) of Alliqua or the Company, and have not been furnished or provided with any such appraisals or valuations. Without limiting the generality of the foregoing, we have undertaken no independent analysis of any pending or threatened litigation, regulatory action, possible unasserted claims or other contingent liabilities, to which Alliqua, the Company or any of their respective affiliates is a party or may be subject, and at your direction and with your consent, our opinion makes no assumption concerning, and therefore does not consider, the possible assertion of claims, outcomes or damages arising out of any such matters.

This opinion is necessarily based upon the information available to us and facts and circumstances as they exist and are subject to evaluation on the date hereof; events occurring after the date hereof could materially affect the assumptions used in preparing this opinion. We are not expressing any opinion herein as to the value of the shares of Alliqua Common Stock to be issued in the Merger or the prices at which shares of Alliqua Common Stock may trade following announcement of the Merger or at any future time. We have not undertaken to reaffirm or revise this opinion or otherwise comment upon any events occurring after the date hereof and do not have any obligation to update, revise or reaffirm this opinion.

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We have been engaged by Alliqua to act as its financial advisor in connection with the proposed Merger. We received a $50,000 retainer from Alliqua at the time of our engagement and we will receive a separate opinion fee in the amount of $250,000 for the provision of this opinion, which fee is not contingent on the consummation of the Merger. An additional transaction fee is contingent upon the successful consummation of the Merger. The Company has also agreed to indemnify us against certain liabilities and reimburse us for certain expenses in connection with our services. In the ordinary course of business, we and our affiliates may acquire, hold or sell, for our and our affiliates' own accounts and for the accounts of customers, equity, debt and other securities and financial instruments (including bank loans and other obligations) of Alliqua and the other parties to the Merger, and, accordingly, may at any time hold a long or a short position in such securities. In February 2017, we acted as a financial advisor to Alliqua in connection with a private placement of Alliqua Common Stock for which we received a financial advisory fee of approximately $160,000. In April 2017, we acted as the sole book-running manager of a public offering by Alliqua of Alliqua Common Stock for which we received fees of approximately $210,000. In March 2018, we were engaged by Alliqua in connection with a proposed offering that was never consummated and received reimbursement of $50,000 of legal fees in connection therewith. Except as described above, we have not had a material relationship with, nor otherwise received fees from, Alliqua, the Company or any other parties to the Merger during the two years preceding the date hereof. In the future, we may provide financial advisory and investment banking services to Alliqua, the Company or their respective affiliates for which we would expect to receive compensation.

Consistent with applicable legal and regulatory requirements, H.C. Wainwright & Co., LLC has adopted policies and procedures to establish and maintain the independence of our research departments and personnel. As a result, our research analysts may hold views, make statements or investment recommendations and/or publish research reports with respect to Alliqua, the Company and/or the Merger that differ from the views of our investment banking personnel.

This opinion has been prepared for the information of the Board of Directors of Alliqua for its use in connection with its consideration of the Merger and is not intended to be and does not constitute a recommendation to any stockholder of the Alliqua as to how such stockholder should vote on any matter relating to the Merger or any other matter. Except with respect to the inclusion of this opinion in the proxy statement relating to the Merger in accordance with our engagement letter with Alliqua, this opinion shall not be disclosed, referred to or published (in whole or in part), nor shall any public references to us be made, without our prior written approval. This opinion has been approved for issuance by the H.C. Wainwright & Co., LLC Fairness Opinion Committee.

This opinion addresses only the fairness, from a financial point of view, to Alliqua of the proposed Exchange Ratio and does not address the relative merits of the Merger or any alternatives to the Merger, Alliqua's underlying decision to proceed with or effect the Merger, or any other aspect of the Merger. This opinion does not address the fairness of the Merger to the holders of any class of securities, creditors or other constituencies of Alliqua. This opinion is not a valuation of Alliqua or its assets or any class of its securities. We are not experts in, nor do we express an opinion on, legal, tax, accounting or regulatory issues. We do not express an opinion about the fairness of the amount or nature of any compensation payable or to be paid to any of the officers, directors or employees of Alliqua, whether or not relative to the Merger.

Based upon and subject to the foregoing, it is our opinion that, as of the date hereof, the Exchange Ratio is fair from a financial point of view to Alliqua.

Sincerely,

/s/ H.C. Wainwright & Co., LLC

H.C. Wainwright & Co., LLC

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Annex I

VOTING AGREEMENT

This VOTING AGREEMENT (this "Agreement") is entered into as of October 11, 2018, between Alliqua Biomedical Inc., a Delaware corporation ("Parent") and the undersigned (the "Stockholder").

WHEREAS, as of the date hereof, the Stockholder is the sole record and beneficial owner of and has the sole power to vote (or to direct the voting of) the number of shares of common stock, par value $0.001 per share (the "Common Shares") of Parent, set forth opposite the Stockholder's name on Schedule I hereto (such Common Shares together with any other shares of Parent ("Shares") the voting power of which is acquired by such Stockholder during the period from the date hereof through the date on which this Agreement is terminated in accordance with its terms (such period, the "Voting Period"), are collectively referred to herein as the "Subject Shares");

WHEREAS, Adynxx, Inc. ("Company"), Parent, Embark Merger Sub Inc., a Delaware corporation and a wholly-owned subsidiary of Parent ("Merger Sub") are concurrently entering into an agreement and plan of merger, dated as of the date hereof (as amended from time to time, the "Merger Agreement"), pursuant to which Merger Sub shall be merged with and into the Company, with the Company continuing as the surviving corporation thereafter (the "Merger");

WHEREAS, the adoption of the Merger Agreement requires the affirmative vote of the holders of a majority in voting power of the outstanding shares of Parent Common Stock outstanding on the applicable record date; and

WHEREAS, as an inducement to Parent's willingness to enter into the Merger Agreement and consummate the transactions contemplated thereby, transactions from which the Stockholder believes it will derive substantial benefits through its ownership interest in the Company, the Stockholder is entering into this Agreement.

NOW, THEREFORE, in consideration of the foregoing and the respective representations, warranties, covenants and agreements set forth herein, the parties agree as follows:

ARTICLE I

DEFINITIONS

SECTION 1.1 Capitalized Terms. For purposes of this Agreement, capitalized terms used and not defined herein shall have the respective meanings ascribed to them in the Merger Agreement.

ARTICLE II

VOTING AGREEMENT AND IRREVOCABLE PROXY

SECTION 2.1 Agreement to Vote. The Stockholder hereby agrees that, during the Voting Period, and at any duly called meeting of the stockholders of Parent (or any adjournment or postponement thereof), or in any other circumstances (including action by written consent of stockholders in lieu of a meeting) upon which a vote, adoption or other approval or consent with respect to the adoption of the Merger Agreement or the approval of the Merger and any of the transactions contemplated thereby is sought, the Stockholder shall, if a meeting is held, appear at the meeting, in person or by proxy, and shall provide a written consent or vote (or cause to be voted), in person or by proxy, all its Subject Shares, in each case (i) in favor of (A) any proposal to adopt and approve or reapprove the Merger Agreement and the other transactions contemplated thereby and (B) waiving any notice that may have been or may be required relating to the Merger or any of the other transactions contemplated by the Merger Agreement, and (ii) against (X) any Acquisition Proposal and any action in furtherance of any such Acquisition Proposal and (Y) any action, proposal, transaction or agreement that, to the knowledge of the Stockholder, would reasonably be expected to result in a material breach of any covenant, representation or warranty or any other obligation or agreement of the Stockholder under this Agreement. As used herein, the term "Expiration Time" shall mean the earliest occurrence of (A) the Effective Time, (B) the date and time of the valid termination of the Merger Agreement in accordance with its terms, and the term "Voting Period" shall mean such period of time between the date hereof and the Expiration Time.

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SECTION 2.2 Grant of Irrevocable Proxy. The Stockholder hereby appoints Parent and any designee of Parent, and each of them individually, as the Stockholder's proxy, with full power of substitution and resubstitution, to vote, including by executing written consents, during the Voting Period with respect to any and all of the Subject Shares on the matters and in the manner specified in Section 2.1. The Stockholder shall take all further action or execute such other instruments as may be necessary to effectuate the intent of any such proxy. The Stockholder affirms that the irrevocable proxy given by it hereby with respect to the Merger Agreement and the transactions contemplated thereby is given to Parent by the Stockholder to secure the performance of the obligations of the Stockholder under this Agreement. It is agreed that Parent (and its officers on behalf of Parent) will use the irrevocable proxy that is granted by the Stockholder hereby only in accordance with applicable Legal Requirements and that, to the extent Parent (and its officers on behalf of Parent) uses such irrevocable proxy, it will only vote (or sign written consents in respect of) the Subject Shares subject to such irrevocable proxy with respect to the matters specified in, and in accordance with the provisions of, Section 2.1.

SECTION 2.3 Nature of Irrevocable Proxy. The proxy granted pursuant to Section 2.2 to Parent by the Stockholder shall be irrevocable during the term of this Agreement, shall be deemed to be coupled with an interest sufficient in law to support an irrevocable proxy and shall revoke any and all prior proxies or powers of attorney granted by the Stockholder and no subsequent proxy or power of attorney shall be given or written consent executed (and if given or executed, shall not be effective) by the Stockholder with respect thereto. The proxy that may be granted hereunder shall terminate upon the termination of this Agreement, but shall survive the death or incapacity of the Stockholder and any obligation of the Stockholder under this Agreement shall be binding upon the heirs, personal representatives and successors of the Stockholder.

ARTICLE III

COVENANTS

SECTION 3.1 Subject Shares.

(a) The Stockholder agrees that (i) from the date hereof until the Effective Time, it shall not, and shall not commit or agree to, without Parent's prior written consent, directly or indirectly, whether by merger, consolidation or otherwise, offer for sale, sell (including short sales), transfer, tender, pledge, encumber, assign or otherwise dispose of (including by gift or by operation of law) (collectively, a "Transfer"), or enter into any contract, option, derivative, hedging or other agreement or arrangement or understanding (including any profit-sharing arrangement) with respect to, or consent to or permit, a Transfer of, any or all of the Subject Shares or any interest therein; and (ii) during the Voting Period, it shall not, and shall not commit or agree to, without Parent's prior written consent, (A) grant any proxies or powers of attorney with respect to any or all of the Subject Shares or agree to vote (or sign written consents in respect of) the Subject Shares on any matter or divest itself of any voting rights in the Subject Shares, or (B) take any action that would have the effect of preventing or disabling the Stockholder from performing its obligations under this Agreement. Notwithstanding the foregoing, the Stockholder may (1) make transfers or dispositions of the Subject Shares to any member of the immediate family of the Stockholders or to any trust for the direct or indirect benefit of the Stockholder or the immediate family of the Stockholder, (2) make transfers or dispositions of the Subject Shares by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the Stockholder, (3) make transfers of the Subject Shares to stockholders, direct or indirect affiliates (within the meaning set forth in Rule 405 under the Securities Act of 1933, as amended), current or former partners (general or limited), members or managers of the Stockholder, as applicable, or to the estates of any such stockholders, affiliates, partners, members or managers, or to another corporation, partnership, limited liability company or other business entity that controls, is controlled by or is under common control with the Stockholder, (4) make transfers that occur by operation of law pursuant to a qualified domestic relations order or in connection with a divorce settlement, (5) make transfers or dispositions not involving a change in beneficial ownership and (6) if the Stockholder is a trust, make transfers or dispositions to any beneficiary of the Stockholder or the estate of any such beneficiary. The Stockholder agrees that any Transfer of Subject Shares not permitted hereby shall be null and void and

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that any such prohibited Transfer shall be enjoined. If any voluntary or involuntary transfer of any Subject Shares covered hereby shall occur (including, but not limited to, a sale by the Stockholder's trustee in bankruptcy, or a sale to a purchaser at any creditor's or court sale), the transferee (which term, as used herein, shall include any and all transferees and subsequent transferees of the initial transferee) shall take and hold such Subject Shares subject to all of the restrictions, liabilities and rights under this Agreement, which shall continue in full force and effect.

(b) In the event of a stock dividend or distribution, or any change in the Subject Shares by reason of any stock dividend or distribution, split-up, recapitalization, combination, conversion, exchange of shares or the like, the term "Subject Shares" shall be deemed to refer to and include the Subject Shares as well as all such stock dividends and distributions and any securities into which or for which any or all of the Subject Shares may be changed or exchanged or which are received in such transaction. The Stockholder further agrees that, in the event Stockholder purchases or otherwise acquires beneficial or record ownership of or an interest in, or acquires the right to vote or share in the voting of, any additional Shares, in each case after the execution of this Agreement, the Stockholder shall deliver promptly to Parent written notice of such event, which notice shall state the number of additional Shares so acquired. The Stockholder agrees that any such additional Shares shall be subject to the terms of this Agreement, including all covenants, agreements, obligations, representations and warranties set forth herein as if those additional shares were owned by the Stockholder on the date of this Agreement.

SECTION 3.2 Stockholder's Capacity. All agreements and understandings made herein shall be made solely in the Stockholder's capacity as a holder of the Subject Shares and not in any other capacity.

SECTION 3.3 Other Offers. Except to the extent Parent is permitted to take such action pursuant to the Merger Agreement, neither the Stockholder (in the Stockholder's capacity as such), shall, nor shall the Stockholder authorize or permit any of its Representatives to, take any of the following actions: (i) solicit, initiate, knowingly encourage or knowingly facilitate an Acquisition Proposal, (ii) furnish any non-public information regarding Parent to any Person in connection with or in response to an Acquisition Proposal, (iii) engage in, enter into, continue or otherwise participate in any discussions or negotiations with any Person with respect to, or otherwise knowingly cooperate in any way with any person (or any representative thereof) with respect to, any Acquisition Proposal, (iv) approve, endorse or recommend or propose to approve, endorse or recommend, any Acquisition Proposal or (v) enter into any letter of intent or similar document or any Contract contemplating, approving, endorsing or recommending or proposing to approve, endorse or recommend, any Acquisition Transaction or accepting any Acquisition Proposal; provided, however, that none of the foregoing restrictions shall apply to the Stockholder's and its Representatives' interactions with Parent, Merger Sub and their respective subsidiaries and representatives. Without limiting the foregoing, it is understood that any violation of the foregoing restrictions by any Representatives of the Stockholder shall be deemed to be a breach of this Section 3.3 by the Stockholder. The Stockholder shall, and shall use reasonable best efforts to cause its Representatives to, immediately cease any and all existing discussions or negotiations with any Persons conducted heretofore with respect to any Acquisition Proposal.

SECTION 3.4 Communications. During the Voting Period, the Stockholder shall not, and shall use its reasonable best efforts to cause its Representatives, if any, not to, directly or indirectly, make any press release, public announcement or other public communication that criticizes or disparages this Agreement or the Merger Agreement or any of the transactions contemplated hereby and thereby, without the prior written consent of Parent, provided that the foregoing shall not limit or affect any actions taken by the Stockholder (or any affiliated officer or director of Stockholder) that would be permitted to be taken by Stockholder pursuant to the Merger Agreement. The Stockholder hereby (i) consents to and authorizes the publication and disclosure by Parent, Merger Sub and the Company (including in any publicly filed documents relating to the Merger or any transaction contemplated by the Merger Agreement) of: (a) the Stockholder's identity; (b) the Stockholder's beneficial ownership of the Subject Shares; and (c) the nature of the Stockholder's commitments, arrangements and understandings under this Agreement, and any other information that Parent, Merger Sub or the Company determines to be necessary in any SEC disclosure

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document in connection with the Merger or any transactions contemplated by the Merger Agreement and (ii) agrees as promptly as practicable to notify Parent, Merger Sub and the Company of any required corrections with respect to any written information supplied by the Stockholder specifically for use in any such disclosure document.

SECTION 3.5 Voting Trusts. The Stockholder agrees that it will not, nor will it permit any entity under its control to, deposit any of its Subject Shares in a voting trust or subject any of its Subject Shares to any arrangement with respect to the voting of such Subject Shares other than as provided herein.

SECTION 3.6 Waiver of Appraisal Rights. The Stockholder hereby irrevocably and unconditionally waives, and agrees not to assert, exercise or perfect (or attempt to exercise, assert or perfect) any rights of appraisal or rights to dissent from the Merger or quasi-appraisal rights that it may at any time have under applicable Legal Requirements, including Section 262 of the DGCL. The Stockholder agrees not to commence, join in, facilitate, assist or encourage, and agrees to take all actions necessary to opt out of any class in any class action with respect to, any claim, derivative or otherwise, against Parent, the Company or any of their respective successors, directors or officers, (a) challenging the validity, binding nature or enforceability of, or seeking to enjoin the operation of, this Agreement or the Merger Agreement, or (b) alleging a breach of any fiduciary duty of any Person in connection with the evaluation, negotiation, entry into or consummation of the Merger Agreement.

ARTICLE IV

REPRESENTATIONS AND WARRANTIES OF STOCKHOLDER

The Stockholder hereby represents and warrants to Parent as follows:

SECTION 4.1 Due Authorization, etc. The Stockholder is a natural person, corporation, limited partnership or limited liability company. If Stockholder is a corporation, limited partnership or limited liability company, Stockholder is an entity duly organized, validly existing and in good standing under the laws of the jurisdiction in which it is incorporated, organized or constituted. The Stockholder has all necessary power and authority to execute and deliver this Agreement and to consummate the transactions contemplated hereby. The execution and delivery of this Agreement and the consummation of the transactions contemplated hereby by the Stockholder have been duly authorized by all necessary action on the part of the Stockholder and no other proceedings on the part of the Stockholder are necessary to authorize this Agreement, or to consummate the transactions contemplated hereby. This Agreement has been duly executed and delivered by the Stockholder and (assuming the due authorization, execution and delivery by Parent) constitutes a valid and binding obligation of the Stockholder, enforceable against the Stockholder in accordance with its terms, except to the extent enforcement is limited by bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar Legal Requirements of general applicability relating to or affecting creditors' rights and by general equitable principles.

SECTION 4.2 Ownership of Shares. Schedule I hereto sets forth opposite the Stockholder's name the Shares over which the Stockholder has sole record and beneficial ownership as of the date hereof. As of the date hereof, the Stockholder is the lawful owner of the Shares denoted as being owned by the Stockholder on Schedule I hereto, has the sole power to vote or cause to be voted such Shares and has the sole power to dispose of or cause to be disposed such Shares (other than, if Stockholder is a partnership or a limited liability company, the rights and interest of persons and entities that own partnership interests or units in Stockholder under the partnership agreement or operating agreement governing Stockholder and applicable partnership or limited liability company law, or if Stockholder is a married individual and resides in a state with community property laws, the community property interest of his or her spouse to the extent applicable under such community property laws, which spouse hereby consents to this Agreement by executing the spousal consent attached hereto). The Stockholder has, and will at all times up until the Expiration Time have, good and valid title to the Shares denoted as being owned by the Stockholder on Schedule I hereto, free and clear of any and all pledges, mortgages, liens, charges, proxies, voting agreements, encumbrances, adverse claims, options, security interests and demands of any nature or kind whatsoever, other than (i) those created by this Agreement, or (ii) those existing under applicable securities laws.

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SECTION 4.3 No Conflicts. (a) No filing with any Governmental Body, and no authorization, consent or approval of any other person is necessary for the execution of this Agreement by the Stockholder and (b) none of the execution and delivery of this Agreement by the Stockholder, the consummation by the Stockholder of the transactions contemplated hereby or compliance by the Stockholder with any of the provisions hereof shall (i) conflict with or result in any breach of the organizational documents of the Stockholder, (ii) result in, or give rise to, a violation or breach of or a default under any of the terms of any material contract, understanding, agreement or other instrument or obligation to which the Stockholder is a party or by which the Stockholder or any of the Subject Shares or its assets may be bound or (iii) violate any applicable order, writ, injunction, decree, judgment, statute, rule or regulation, except for any of the foregoing as would not reasonably be expected to impair the Stockholder's ability to perform its obligations under this Agreement.

SECTION 4.4 Finder's Fees. No investment banker, broker, finder or other intermediary is entitled to a fee or commission from Parent, Merger Sub or the Company in respect of this Agreement based upon any Contract made by or on behalf of the Stockholder, solely in the Stockholder's capacity as a stockholder of Parent.

SECTION 4.5 No Litigation. As of the date of this Agreement, there is no Legal Proceeding pending or, to the knowledge of the Stockholder, threatened against the Stockholder that would reasonably be expected to impair the ability of the Stockholder to perform its obligations hereunder or consummate the transactions contemplated hereby.

ARTICLE V

TERMINATION

SECTION 5.1 Termination. This Agreement shall automatically terminate, and neither Parent nor the Stockholder shall have any rights or obligations hereunder and this Agreement shall become null and void and have no effect upon the earliest to occur of: (a) the Effective Time; and (b) the valid termination of the Merger Agreement in accordance with its terms. The parties acknowledge that upon termination of this Agreement as permitted under and in accordance with the terms of this Article VI, no party to this Agreement shall have the right to recover any claim with respect to any losses suffered by such party in connection with such termination, except that, subject to Section 6.11, the termination of this Agreement shall not relieve either party to this Agreement from liability for such party's intentional breach of any terms of this Agreement. Notwithstanding anything to the contrary herein, the provisions of this Article V and Article VI shall survive the termination of this Agreement.

ARTICLE VI

MISCELLANEOUS

SECTION 6.1 Further Actions. Subject to the terms and conditions set forth in this Agreement, the Stockholder agrees to take any all actions and to do all things reasonably necessary to effectuate this Agreement.

SECTION 6.2 Fees and Expenses. Except as otherwise specifically provided herein, each party shall bear its own expenses in connection with this Agreement and the transactions contemplated hereby.

SECTION 6.3 Amendments, Waivers, etc. This Agreement may not be amended except by an instrument in writing signed by the parties hereto and specifically referencing this Agreement. The failure of any party to assert any rights or remedies shall not constitute a waiver of such rights or remedies.

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SECTION 6.4 Notices. Any notice, request, instruction or other document required to be given hereunder shall be sufficient if in writing, and sent by confirmed electronic mail transmission of a "portable document format" (".pdf") attachment (provided that any notice received by electronic mail transmission or otherwise at the addressee's location on any business day after 5:00 p.m. (addressee's local time) shall be deemed to have been received at 9:00 a.m. (addressee's local time) on the next business day), by reliable overnight delivery service (with proof of service), or hand delivery, addressed as follows:

If to Parent, to

Alliqua BioMedical, Inc.
2150 Cabot Blvd., West, Suite B
Langhorne, PA 19047
Attn: David Johnson
E-Mail: djohnson@alliqua.com

with a copy to (which shall not constitute notice):

Haynes and Boone, LLP
30 Rockefeller Plaza
26th Floor
New York, NY 10112
Attn.: Rick A. Werner
Greg Kramer
E-Mail: rick.werner@haynesboone.com
greg.kramer@haynesboone.com

If to the Stockholder, to the address or electronic mail address set forth on the signature pages hereto, or to such other person or address as any party shall specify by written notice so given.

SECTION 6.5 Headings. Headings of the Articles and Sections of this Agreement are for convenience of the parties only, and shall be given no substantive or interpretive effect whatsoever.

SECTION 6.6 Severability. The provisions of this Agreement shall be deemed severable and the invalidity or unenforceability of any provision shall not affect the validity or enforceability of the other provisions hereof. If any provision of this Agreement, or the application of such provision to any person or any circumstance, is invalid or unenforceable (a) a suitable and equitable provision shall be substituted therefor in order to carry out, so far as may be valid and enforceable, the intent and purpose of such invalid or unenforceable provision and (b) the remainder of this Agreement and the application of such provision to other persons or circumstances shall not be affected by such invalidity or unenforceability, nor shall such invalidity or unenforceability affect the validity or enforceability of such provision, or the application of such provision, in any other jurisdiction.

SECTION 6.7 Entire Agreement; Assignment. This Agreement constitutes the entire agreement, and supersedes all other prior agreements and understandings, both written and oral, between the parties, or any of them, with respect to the subject matter hereof. Neither this Agreement nor any of the rights, interests or obligations hereunder shall be assigned by any of the parties hereto (whether by operation of law or otherwise) without the prior written consent of the other parties, except that without consent Parent may assign all or any of its rights and obligations hereunder to any of its Affiliates that assume the rights and obligations of Parent under the Merger Agreement. Subject to the preceding two sentences, this Agreement will be binding upon, inure to the benefit of and be enforceable by the parties hereto and their respective successors and permitted assigns. Notwithstanding anything to the contrary set forth herein, the Stockholder agrees that this Agreement and the obligations hereunder shall be binding upon any Person to which record or beneficial ownership of the Stockholder's Subject Shares shall pass, whether by operation or law or otherwise, including the Stockholder's heirs, guardians, administrators or successors and assigns, and the Stockholder agrees to take all actions necessary to effect the foregoing.

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SECTION 6.8 Governing Law. THIS AGREEMENT AND ALL QUESTIONS RELATING TO THE INTERPRETATION OR ENFORCEMENT OF THIS AGREEMENT SHALL BE DEEMED TO BE MADE IN AND IN ALL RESPECTS SHALL BE INTERPRETED, CONSTRUED AND GOVERNED BY AND IN ACCORDANCE WITH THE LAW OF THE STATE OF DELAWARE WITHOUT REGARD TO THE CONFLICTS OF LAW PRINCIPLES THEREOF TO THE EXTENT THAT SUCH PRINCIPLES WOULD DIRECT A MATTER TO ANOTHER JURISDICTION.

SECTION 6.9 Specific Performance. The Stockholder acknowledges that any breach of this Agreement would give rise to irreparable harm for which monetary damages would not be an adequate remedy and each of the Company and Parent shall be entitled to a decree of specific performance and to temporary, preliminary and permanent injunctive relief to prevent breaches or threatened breaches of any of the provisions of this Agreement, without the necessity of proving the inadequacy of monetary damages as a remedy, which shall be the sole and exclusive remedy for any such breach.

SECTION 6.10 Submission to Jurisdiction. The parties hereby irrevocably submit to the exclusive personal jurisdiction of the Court of Chancery of the State of Delaware, or, if the Chancery Court declines jurisdiction, the United States District Court for the District of Delaware or the courts of the State of Delaware solely in respect of the interpretation and enforcement of the provisions of this Agreement and hereby waive, and agree not to assert, as a defense in any action, suit or proceeding for the interpretation or enforcement hereof, that it is not subject thereto or that such action, suit or proceeding may not be brought or is not maintainable in said courts or that the venue thereof may not be appropriate or that this Agreement may not be enforced in or by such courts, and the parties hereto irrevocably agree that all claims relating to such action, suit or proceeding shall be heard and determined in such courts. The parties hereby consent to and grant any such court jurisdiction over the person of such parties and, to the extent permitted by law, over the subject matter of such dispute and agree that mailing of process or other papers in connection with any such action or proceeding in the manner provided in Section 7.4 or in such other manner as may be permitted by Legal Requirements shall be valid and sufficient service thereof.

SECTION 6.11 Waiver of Jury Trial. EACH PARTY ACKNOWLEDGES AND AGREES THAT ANY CONTROVERSY WHICH MAY ARISE UNDER THIS AGREEMENT IS LIKELY TO INVOLVE COMPLICATED AND DIFFICULT ISSUES, AND THEREFORE EACH SUCH PARTY HEREBY IRREVOCABLY AND UNCONDITIONALLY WAIVES ANY RIGHT SUCH PARTY MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LITIGATION DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED BY THIS AGREEMENT. EACH PARTY CERTIFIES AND ACKNOWLEDGES THAT (i) NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER, (ii) EACH PARTY UNDERSTANDS AND HAS CONSIDERED THE IMPLICATIONS OF THIS WAIVER, (iii) EACH PARTY MAKES THIS WAIVER VOLUNTARILY, AND (iv) EACH PARTY HAS BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 7.13.

SECTION 6.12 Counterparts. This Agreement may be executed in two or more counterparts (including by facsimile transmission or other means of electronic transmission, such as by electronic mail in “pdf” form), each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument, and shall become effective when one or more counterparts have been signed by each of the parties and delivered (by facsimile or otherwise) to the other parties.

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IN WITNESS WHEREOF, Parent and the Stockholder have caused this Agreement to be duly executed as of the day and year first above written.

ALLIQUA BIOMEDICAL, INC.
By:

Name:
Title:

[STOCKHOLDER]
By:

Name:
Title:
Address:
Electronic Mail Address:

[Signature Page to Voting Agreement]

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SPOUSAL CONSENT

I _____, spouse of _____, having the legal capacity, power and authority to do so, hereby confirm that I have read and approve the foregoing the Voting Agreement (the "Agreement"). In consideration of the terms and conditions as set forth in the Agreement, I hereby appoint my spouse as my attorney in fact with respect to the exercise of any rights and obligations under the Agreement, and agree to be bound by the provisions of the Agreement insofar as I may have any rights or obligations in the Agreement under the community property laws of the State of California or similar laws relating to marital or community property in effect in the state of our residence as of the date of the Agreement.

Name:
Date:

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Schedule I

Ownership of Common Shares

| Name and Address of Stockholder | Number of Common Shares |
|---|---|
| [•] | [•] |

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Annex J

VOTING AGREEMENT

This VOTING AGREEMENT (this "Agreement") is entered into as of October 11, 2018, between Adynxx, Inc., a Delaware corporation ("Company"), and the undersigned (the "Stockholder").

WHEREAS, as of the date hereof, the Stockholder is the sole record and beneficial owner of and has the sole power to vote (or to direct the voting of) the number of shares of Company Common Stock, par value $0.001 per share (the "Common Shares") and, if applicable, the number of shares of Company Preferred Stock, par value $0.001 per share (the "Preferred Shares") of Company, set forth opposite the Stockholder's name on Schedule I hereto (such Common Shares and Preferred Shares, together with any other shares of the Company ("Shares") the voting power of which is acquired by such Stockholder during the period from the date hereof through the date on which this Agreement is terminated in accordance with its terms (such period, the "Voting Period"), are collectively referred to herein as the "Subject Shares");

WHEREAS, the Company, Parent, Embark Merger Sub Inc., a Delaware corporation and a wholly-owned subsidiary of Parent ("Merger Sub") are concurrently entering into an agreement and plan of merger, dated as of the date hereof (as amended from time to time, the "Merger Agreement"), pursuant to which Merger Sub shall be merged with and into the Company, with the Company continuing as the surviving corporation thereafter (the "Merger");

WHEREAS, the adoption of the Merger Agreement requires the written consent or affirmative vote of the holders of a (i) majority in voting power of all Company Capital Stock voting together on an as converted to Common Share basis and (ii) a majority of the voting power of all Company Preferred Stock voting together on an as converted to Common Shares basis, entitled to vote thereon; and

WHEREAS, as an inducement to Company's willingness to enter into the Merger Agreement and consummate the transactions contemplated thereby, transactions from which the Stockholder believes it will derive substantial benefits through its ownership interest in the Company, the Stockholder is entering into this Agreement.

NOW, THEREFORE, in consideration of the foregoing and the respective representations, warranties, covenants and agreements set forth herein, the parties agree as follows:

ARTICLE I

DEFINITIONS

Section 1.1 Capitalized Terms. For purposes of this Agreement, capitalized terms used and not defined herein shall have the respective meanings ascribed to them in the Merger Agreement.

ARTICLE II

VOTING AGREEMENT AND IRREVOCABLE PROXY

Section 2.1 Agreement to Vote.

(a) The Stockholder hereby agrees that, immediately following the earlier to occur of (i) confirmation by the SEC that it has no further comments on the Proxy Statement or (ii) expiration of the 10-day waiting period contemplated by Rule 14a-6(a) promulgated under the Exchange Act, the Stockholder shall execute and deliver, or cause to be executed and delivered, to Company, a written consent in the form of Exhibit A hereto (a "Written Consent"). The Written Consent shall be coupled with an interest and shall be irrevocable. As used herein, the term "Expiration Time" shall mean the earliest occurrence of (A) the Effective Time and (B) the date and time of the valid termination of the Merger Agreement in accordance with its terms, and the term "Voting Period" shall mean such period of time between the date hereof and the Expiration Time.

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(b) The Stockholder hereby agrees that, during the Voting Period, and at any duly called meeting of the stockholders of the Company (or any adjournment or postponement thereof), or in any other circumstances (including action by written consent of stockholders in lieu of a meeting) upon which a vote, adoption or other approval or consent with respect to the adoption of the Merger Agreement or the approval of the Merger and any of the transactions contemplated thereby is sought, the Stockholder shall, if a meeting is held, appear at the meeting, in person or by proxy, and shall provide a written consent or vote (or cause to be voted), in person or by proxy, all its Subject Shares, in each case (i) in favor of (A) any proposal to adopt and approve or reapprove the Merger Agreement and the other transactions contemplated thereby and (B) waiving any notice that may have been or may be required relating to the Merger or any of the other transactions contemplated by the Merger Agreement, and (ii) against (X) any Acquisition Proposalor (Y) any action, proposal, transaction or agreement that, to the knowledge of the Stockholder, would reasonably be expected to result in a material breach of any covenant, representation or warranty or any other obligation or agreement of the Stockholder under this Agreement.

Section 2.2 Grant of Irrevocable Proxy. The Stockholder hereby appoints Company and any designee of Company, and each of them individually, as the Stockholder's proxy, with full power of substitution and resubstitution, to vote, including by executing written consents, during the Voting Period with respect to any and all of the Subject Shares on the matters and in the manner specified in Section 2.1; provided, however, that the Stockholders' grant of the proxy contemplated by this Section 2.2 shall be effective with respect to Section 2.1(a) if, and only if, the Stockholder does not deliver the Written Consent immediately following the earlier to occur of (i) confirmation by the SEC that it has no further comments on the Proxy Statement or (ii) expiration of the 10-day waiting period contemplated by Rule 14a-6(a) promulgated under the Exchange Act. The Stockholder shall take all further action or execute such other instruments as may be necessary to effectuate the intent of any such proxy. The Stockholder affirms that the irrevocable proxy given by it hereby with respect to the Merger Agreement and the transactions contemplated thereby is given to Company by the Stockholder to secure the performance of the obligations of the Stockholder under this Agreement. It is agreed that Company (and its officers on behalf of Company) will use the irrevocable proxy that is granted by the Stockholder hereby only in accordance with applicable Legal Requirements and that, to the extent Company (and its officers on behalf of Company) uses such irrevocable proxy, it will only vote (or sign written consents in respect of) the Subject Shares subject to such irrevocable proxy with respect to the matters specified in, and in accordance with the provisions of, Section 2.1.

Section 2.3 Nature of Irrevocable Proxy. The proxy granted pursuant to Section 2.2 to Company by the Stockholder shall be irrevocable during the term of this Agreement, shall be deemed to be coupled with an interest sufficient in law to support an irrevocable proxy and shall revoke any and all prior proxies or powers of attorney granted by the Stockholder and no subsequent proxy or power of attorney shall be given or written consent executed (and if given or executed, shall not be effective) by the Stockholder with respect thereto. The proxy that may be granted hereunder shall terminate upon the termination of this Agreement, but shall survive the death or incapacity of the Stockholder and any obligation of the Stockholder under this Agreement shall be binding upon the heirs, personal representatives and successors of the Stockholder.

ARTICLE III

COVENANTS

Section 3.1 Subject Shares.

(a) The Stockholder agrees that (i) from the date hereof until the Effective Time, it shall not, and shall not commit or agree to, without Company's prior written consent, directly or indirectly, whether by merger, consolidation or otherwise, offer for sale, sell (including short sales), transfer, tender, pledge, encumber, assign or otherwise dispose of (including by gift or by operation of law) (collectively, a "Transfer"), or enter into any contract, option, derivative, hedging or other agreement or arrangement or understanding (including any profit-sharing arrangement) with respect to, or consent to or permit, a Transfer of, any or all of the Subject Shares or any interest therein; and (ii) during the Voting Period, it shall not, and shall not commit or agree to, without Company's prior written consent, (A) grant any proxies or powers of attorney

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with respect to any or all of the Subject Shares or agree to vote (or sign written consents in respect of) the Subject Shares on any matter or divest itself of any voting rights in the Subject Shares, or (B) take any action that would have the effect of preventing or disabling the Stockholder from performing its obligations under this Agreement. Notwithstanding the foregoing, the Stockholder may (1) make transfers or dispositions of the Subject Shares to any member of the immediate family of the Stockholders or to any trust for the direct or indirect benefit of the Stockholder or the immediate family of the Stockholder, (2) make transfers or dispositions of the Subject Shares by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the Stockholder, (3) make transfers of the Subject Shares to stockholders, direct or indirect affiliates (within the meaning set forth in Rule 405 under the Securities Act of 1933, as amended), current or former partners (general or limited), members or managers of the Stockholder, as applicable, or to the estates of any such stockholders, affiliates, partners, members or managers, or to another corporation, partnership, limited liability company or other business entity that controls, is controlled by or is under common control with the Stockholder, (4) make transfers that occur by operation of law pursuant to a qualified domestic relations order or in connection with a divorce settlement, (5) make transfers or dispositions not involving a change in beneficial ownership and (6) if the Stockholder is a trust, make transfers or dispositions to any beneficiary of the Stockholder or the estate of any such beneficiary. The Stockholder agrees that any Transfer of Subject Shares not permitted hereby shall be null and void and that any such prohibited Transfer shall be enjoined. If any voluntary or involuntary transfer of any Subject Shares covered hereby shall occur (including, but not limited to, a sale by the Stockholder's trustee in bankruptcy, or a sale to a purchaser at any creditor's or court sale), the transferee (which term, as used herein, shall include any and all transferees and subsequent transferees of the initial transferee) shall take and hold such Subject Shares subject to all of the restrictions, liabilities and rights under this Agreement, which shall continue in full force and effect.

(b) In the event of a stock dividend or distribution, or any change in the Subject Shares by reason of any stock dividend or distribution, split-up, recapitalization, combination, conversion, exchange of shares or the like, the term "Subject Shares" shall be deemed to refer to and include the Subject Shares as well as all such stock dividends and distributions and any securities into which or for which any or all of the Subject Shares may be changed or exchanged or which are received in such transaction. The Stockholder further agrees that, in the event Stockholder purchases or otherwise acquires beneficial or record ownership of or an interest in, or acquires the right to vote or share in the voting of, any additional Shares, in each case after the execution of this Agreement, the Stockholder shall deliver promptly to Company written notice of such event, which notice shall state the number of additional Shares so acquired. The Stockholder agrees that any such additional Shares shall be subject to the terms of this Agreement, including all covenants, agreements, obligations, representations and warranties set forth herein as if those additional shares were owned by the Stockholder on the date of this Agreement.

Section 3.2 Stockholder's Capacity. All agreements and understandings made herein shall be made solely in the Stockholder's capacity as a holder of the Subject Shares and not in any other capacity.

Section 3.3 Other Offers. Except to the extent the Company is permitted to take such action pursuant to the Merger Agreement, neither the Stockholder (in the Stockholder's capacity as such), shall, nor shall the Stockholder authorize or permit any of its Representatives to, take any of the following actions: (i) solicit, initiate, knowingly encourage or knowingly facilitate an Acquisition Proposal, (ii) furnish any non-public information regarding the Company to any Person in connection with or in response to an Acquisition Proposal, (iii) engage in, enter into, continue or otherwise participate in any discussions or negotiations with any Person with respect to, or otherwise knowingly cooperate in any way with any person (or any representative thereof) with respect to, any Acquisition Proposal, (iv) approve, endorse or recommend or propose to approve, endorse or recommend, any Acquisition Proposal or (v) enter into any letter of intent or similar document or any Contract contemplating, approving, endorsing or recommending or proposing to approve, endorse or recommend, any Acquisition Transaction or accepting any Acquisition Proposal; provided, however, that none of the foregoing restrictions shall apply to the Stockholder's and its Representatives' interactions with Company and its respective subsidiaries and representatives. Without limiting the foregoing, it is understood that any violation of the foregoing restrictions by any

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Representatives of the Stockholder shall be deemed to be a breach of this Section 3.3 by the Stockholder. The Stockholder shall, and shall use reasonable best efforts to cause its Representatives to, immediately cease any and all existing discussions or negotiations with any Persons conducted heretofore with respect to any Acquisition Proposal.

Section 3.4 Voting Trusts. The Stockholder agrees that it will not, nor will it permit any entity under its control to, deposit any of its Subject Shares in a voting trust or subject any of its Subject Shares to any arrangement with respect to the voting of such Subject Shares other than as provided herein.

Section 3.5 Waiver of Appraisal Rights. The Stockholder hereby irrevocably and unconditionally waives, and agrees not to assert, exercise or perfect (or attempt to exercise, assert or perfect) any rights of appraisal or rights to dissent from the Merger or quasi-appraisal rights that it may at any time have under applicable Legal Requirements, including Section 262 of the DGCL.

ARTICLE IV

REPRESENTATIONS AND WARRANTIES OF STOCKHOLDER

The Stockholder hereby represents and warrants to Company as follows:

Section 4.1 Due Authorization, etc. The Stockholder is a natural person, corporation, limited partnership or limited liability company. If the Stockholder is a corporation, limited partnership or limited liability company, Stockholder is an entity duly organized, validly existing and in good standing under the laws of the jurisdiction in which it is incorporated, organized or constituted. The Stockholder has all necessary power and authority to execute and deliver this Agreement and to consummate the transactions contemplated hereby. The execution and delivery of this Agreement and the consummation of the transactions contemplated hereby by the Stockholder have been duly authorized by all necessary action on the part of the Stockholder and no other proceedings on the part of the Stockholder are necessary to authorize this Agreement, or to consummate the transactions contemplated hereby. This Agreement has been duly executed and delivered by the Stockholder and (assuming the due authorization, execution and delivery by Company) constitutes a valid and binding obligation of the Stockholder, enforceable against the Stockholder in accordance with its terms, except to the extent enforcement is limited by bankruptcy, insolvency, fraudulent transfer, reorganization, moratorium and similar Legal Requirements of general applicability relating to or affecting creditors' rights and by general equitable principles.

Section 4.2 Ownership of Shares. Schedule I hereto sets forth opposite the Stockholder's name the Shares over which the Stockholder has sole record and beneficial ownership as of the date hereof. As of the date hereof, the Stockholder is the lawful owner of the Shares denoted as being owned by the Stockholder on Schedule I hereto, has the sole power to vote or cause to be voted such Shares and has the sole power to dispose of or cause to be disposed such Shares (other than, if Stockholder is a partnership or a limited liability company, the rights and interest of persons and entities that own partnership interests or units in Stockholder under the partnership agreement or operating agreement governing Stockholder and applicable partnership or limited liability company law, or if Stockholder is a married individual and resides in a state with community property laws, the community property interest of his or her spouse to the extent applicable under such community property laws, which spouse hereby consents to this Agreement by executing the spousal consent attached hereto). The Stockholder has, and will at all times up until the Expiration Time have, good and valid title to the Shares denoted as being owned by the Stockholder on Schedule I hereto, free and clear of any and all pledges, mortgages, liens, charges, proxies, voting agreements, encumbrances, adverse claims, options, security interests and demands of any nature or kind whatsoever, other than (i) those created by this Agreement, or (ii) those existing under applicable securities laws.

Section 4.3 No Conflicts. (a) No filing with any Governmental Body, and no authorization, consent or approval of any other person is necessary for the execution of this Agreement by the Stockholder and (b) none of the execution and delivery of this Agreement by the Stockholder, the consummation by the Stockholder of the transactions contemplated hereby or compliance by the Stockholder with any of the provisions hereof shall (i) conflict with or result in any breach of the organizational documents of the Stockholder, (ii) result in, or give rise to, a violation or breach of or a default under any of the terms of any

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material contract, understanding, agreement or other instrument or obligation to which the Stockholder is a party or by which the Stockholder or any of the Subject Shares or its assets may be bound or (iii) violate any applicable order, writ, injunction, decree, judgment, statute, rule or regulation, except for any of the foregoing as would not reasonably be expected to impair the Stockholder's ability to perform its obligations under this Agreement.

Section 4.4 Finder's Fees. No investment banker, broker, finder or other intermediary is entitled to a fee or commission from Parent, Merger Sub or the Company in respect of this Agreement based upon any Contract made by or on behalf of the Stockholder, solely in the Stockholder's capacity as a stockholder of the Company.

Section 4.5 No Litigation. As of the date of this Agreement, there is no Legal Proceeding pending or, to the knowledge of the Stockholder, threatened against the Stockholder that would reasonably be expected to impair the ability of the Stockholder to perform its obligations hereunder or consummate the transactions contemplated hereby.

ARTICLE V

TERMINATION

Section 5.1 Termination. This Agreement shall automatically terminate, and neither Company nor the Stockholder shall have any rights or obligations hereunder and this Agreement shall become null and void and have no effect upon the earliest to occur of: (a) the Effective Time; and (b) the valid termination of the Merger Agreement in accordance with its terms. The parties acknowledge that upon termination of this Agreement as permitted under and in accordance with the terms of this Article VI, no party to this Agreement shall have the right to recover any claim with respect to any losses suffered by such party in connection with such termination, except that, subject to Section 6.11, the termination of this Agreement shall not relieve either party to this Agreement from liability for such party's intentional breach of any terms of this Agreement. Notwithstanding anything to the contrary herein, the provisions of this Article V and Article VI shall survive the termination of this Agreement.

ARTICLE VI

MISCELLANEOUS

Section 6.1 Further Actions. Subject to the terms and conditions set forth in this Agreement, the Stockholder agrees to take any all actions and to do all things reasonably necessary to effectuate this Agreement.

Section 6.2 Fees and Expenses. Except as otherwise specifically provided herein, each party shall bear its own expenses in connection with this Agreement and the transactions contemplated hereby.

Section 6.3 Amendments, Waivers, etc. This Agreement may not be amended except by an instrument in writing signed by the parties hereto and specifically referencing this Agreement. The failure of any party to assert any rights or remedies shall not constitute a waiver of such rights or remedies.

Section 6.4 Notices. Any notice, request, instruction or other document required to be given hereunder shall be sufficient if in writing, and sent by electronic mail transmission of a "portable document format" (".pdf") attachment (provided that any notice received by electronic mail transmission or otherwise at the addressee's location on any business day after 5:00 p.m. (addressee's local time) shall be deemed to have been received at 9:00 a.m. (addressee's local time) on the next business day), by reliable overnight delivery service (with proof of service), or hand delivery, addressed as follows:

If to Company, to

Adynxx, Inc.
100 Pine Street, Suite 500
San Francisco, CA 94111
Attention: Rick Orr
Email: rorr@adynxx.com

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with a copy to (which shall not constitute notice):
Cooley LLP
3175 Hanover Street
Palo Alto, CA 94304
Attention:
Laura Medina
John McKenna

Email:
lmedina@cooley.com
jmckenna@cooley.com

If to the Stockholder, to the address or electronic mail address set forth on the signature pages hereto.
or to such other person or address as any party shall specify by written notice so given.

Section 6.5 Headings. Headings of the Articles and Sections of this Agreement are for convenience of the parties only, and shall be given no substantive or interpretive effect whatsoever.

Section 6.6 Severability. The provisions of this Agreement shall be deemed severable and the invalidity or unenforceability of any provision shall not affect the validity or enforceability of the other provisions hereof. If any provision of this Agreement, or the application of such provision to any person or any circumstance, is invalid or unenforceable (a) a suitable and equitable provision shall be substituted therefor in order to carry out, so far as may be valid and enforceable, the intent and purpose of such invalid or unenforceable provision and (b) the remainder of this Agreement and the application of such provision to other persons or circumstances shall not be affected by such invalidity or unenforceability, nor shall such invalidity or unenforceability affect the validity or enforceability of such provision, or the application of such provision, in any other jurisdiction.

Section 6.7 Entire Agreement; Assignment. This Agreement constitutes the entire agreement, and supersedes all other prior agreements and understandings, both written and oral, between the parties, or any of them, with respect to the subject matter hereof. Neither this Agreement nor any of the rights, interests or obligations hereunder shall be assigned by any of the parties hereto (whether by operation of law or otherwise) without the prior written consent of the other parties, except that without consent Company may assign all or any of its rights and obligations hereunder to any of its Affiliates that assume the rights and obligations of Company under the Merger Agreement. Subject to the preceding two sentences, this Agreement will be binding upon, inure to the benefit of and be enforceable by the parties hereto and their respective successors and permitted assigns. Notwithstanding anything to the contrary set forth herein, the Stockholder agrees that this Agreement and the obligations hereunder shall be binding upon any Person to which record or beneficial ownership of the Stockholder's Subject Shares shall pass, whether by operation or law or otherwise, including the Stockholder's heirs, guardians, administrators or successors and assigns, and the Stockholder agrees to take all actions necessary to effect the foregoing.

Section 6.8 Governing Law. THIS AGREEMENT AND ALL QUESTIONS RELATING TO THE INTERPRETATION OR ENFORCEMENT OF THIS AGREEMENT SHALL BE DEEMED TO BE MADE IN AND IN ALL RESPECTS SHALL BE INTERPRETED, CONSTRUED AND GOVERNED BY AND IN ACCORDANCE WITH THE LAW OF THE STATE OF DELAWARE WITHOUT REGARD TO THE CONFLICTS OF LAW PRINCIPLES THEREOF TO THE EXTENT THAT SUCH PRINCIPLES WOULD DIRECT A MATTER TO ANOTHER JURISDICTION.

Section 6.9 Specific Performance. The Stockholder acknowledges that any breach of this Agreement would give rise to irreparable harm for which monetary damages would not be an adequate remedy and each of the Company and Parent shall be entitled to a decree of specific performance and to temporary, preliminary and permanent injunctive relief to prevent breaches or threatened breaches of any of the provisions of this Agreement, without the necessity of proving the inadequacy of monetary damages as a remedy, which shall be the sole and exclusive remedy for any such breach.

Section 6.10 Submission to Jurisdiction. The parties hereby irrevocably submit to the exclusive personal jurisdiction of the Court of Chancery of the State of Delaware, or, if the Chancery Court declines jurisdiction, the

United States District Court for the District of Delaware or the courts of the State of Delaware solely in respect of the interpretation and enforcement of the provisions of this Agreement and

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hereby waive, and agree not to assert, as a defense in any action, suit or proceeding for the interpretation or enforcement hereof, that it is not subject thereto or that such action, suit or proceeding may not be brought or is not maintainable in said courts or that the venue thereof may not be appropriate or that this Agreement may not be enforced in or by such courts, and the parties hereto irrevocably agree that all claims relating to such action, suit or proceeding shall be heard and determined in such courts. The parties hereby consent to and grant any such court jurisdiction over the person of such parties and, to the extent permitted by law, over the subject matter of such dispute and agree that mailing of process or other papers in connection with any such action or proceeding in the manner provided in Section 7.4 or in such other manner as may be permitted by Legal Requirements shall be valid and sufficient service thereof.

Section 6.11 Waiver of Jury Trial. EACH PARTY ACKNOWLEDGES AND AGREES THAT ANY CONTROVERSY WHICH MAY ARISE UNDER THIS AGREEMENT IS LIKELY TO INVOLVE COMPLICATED AND DIFFICULT ISSUES, AND THEREFORE EACH SUCH PARTY HEREBY IRREVOCABLY AND UNCONDITIONALLY WAIVES ANY RIGHT SUCH PARTY MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LITIGATION DIRECTLY OR INDIRECTLY ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED BY THIS AGREEMENT. EACH PARTY CERTIFIES AND ACKNOWLEDGES THAT (i) NO REPRESENTATIVE, AGENT OR ATTORNEY OF ANY OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF LITIGATION, SEEK TO ENFORCE THE FOREGOING WAIVER, (ii) EACH PARTY UNDERSTANDS AND HAS CONSIDERED THE IMPLICATIONS OF THIS WAIVER, (iii) EACH PARTY MAKES THIS WAIVER VOLUNTARILY, AND (iv) EACH PARTY HAS BEEN INDUCED TO ENTER INTO THIS AGREEMENT BY, AMONG OTHER THINGS, THE MUTUAL WAIVERS AND CERTIFICATIONS IN THIS SECTION 7.13.

Section 6.12 Counterparts. This Agreement may be executed in two or more counterparts (including by facsimile transmission or other means of electronic transmission, such as by electronic mail in “pdf” form), each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument, and shall become effective when one or more counterparts have been signed by each of the parties and delivered (by facsimile or otherwise) to the other parties.

IN WITNESS WHEREOF, Company and the Stockholder have caused this Agreement to be duly executed as of the day and year first above written.

ADYNXX, INC.

By:

Name:
Title:

[STOCKHOLDER]

By:

Name:
Title:
Address:

Electronic Mail Address:

[Signature Page to Voting Agreement]

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SPOUSAL CONSENT

I _____, spouse of _____, having the legal capacity, power and authority to do so, hereby confirm that I have read and approve the foregoing the Voting Agreement (the "Agreement"). In consideration of the terms and conditions as set forth in the Agreement, I hereby appoint my spouse as my attorney in fact with respect to the exercise of any rights and obligations under the Agreement, and agree to be bound by the provisions of the Agreement insofar as I may have any rights or obligations in the Agreement under the community property laws of the State of California or similar laws relating to marital or community property in effect in the state of our residence as of the date of the Agreement.

Name:
Date:

[Signature Page to Voting Agreement]

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Exhibit A
Written Consent
See attached.
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ACTION BY WRITTEN CONSENT
OF THE STOCKHOLDERS
OF ADYNXX, INC.

Each of the undersigned stockholders of Adynxx, Inc., a Delaware corporation (the "Company"), constituting the holders of at least: a majority of the shares of the Company's outstanding shares of Common Stock and Preferred Stock, voting together as a single class on an as-converted basis; the holders of a majority of the shares of the Company's Series A Preferred Stock and Series B Preferred Stock, voting together as a separate class on an as-converted basis; the holders of a majority of Key Holder Shares (as defined in the Voting Agreement); the holders of a majority of Key Holder Stock (as defined in the Co-Sale Agreement); and TPG Biotechnology Partners IV, L.P., acting pursuant to Section 228(a) of the General Corporation Law of the State of Delaware (the "DGCL") hereby irrevocably consents with respect to all shares of the Company's capital stock owned by such stockholder to the adoption of the following resolutions and to the taking of the actions referred to in such resolutions in lieu of a meeting:

Adoption of Merger of the Company and the Agreement and Plan of Merger

Whereas, the Company's Board of Directors (the "Board") has considered the proposed merger and other transactions described in an Agreement and Plan of Merger and Reorganization by and among the Company, Alliqua BioMedical, Inc., a Delaware corporation ("Alliqua"), and Embark Merger Sub Inc., a Delaware corporation and wholly-owned subsidiary of Alliqua ("Merger Sub") in the form presented to the Board and attached hereto as Exhibit A (the "Merger Agreement") (capitalized terms used but not otherwise defined herein shall have the meanings ascribed thereto in the Merger Agreement);

Whereas, pursuant to the Merger Agreement, Merger Sub shall merge with and into the Company (the "Merger"), the separate corporate existence of Merger Sub shall cease and the Company shall continue as the surviving corporation and shall become a wholly-owned subsidiary of Alliqua;

Whereas, the Board, by unanimous vote of all directors, has (i) reviewed and declared that the Merger Agreement, the Merger and the transactions and agreements contemplated thereby are advisable and fair, and in the best interests of the Company and its stockholders, (ii) authorized, approved and adopted the Merger Agreement and authorized, approved and adopted the Merger and the transactions and agreements contemplated thereby, and (iii) has directed that the Merger Agreement, and the other agreements, certificates and documents contemplated thereby be executed and delivered and submitted to the stockholders of the Company for their approval and adoption;

Whereas, pursuant to Section 144 of the DGCL, no contract or transaction between the Company and one or more of its directors or officers or any other corporation, partnership, association or other organization in which one or more of the directors or officers of the Company is a director or officer of, or has a financial interest in (any such party is referred to herein individually as an "Interested Party," or collectively as the "Interested Parties," and any such contract or transaction is referred to herein as an "Interested Party Transaction"), shall be void or voidable solely for that reason, or solely because the director or officer is present at or participates in the meeting of the Board which authorized the Interested Party Transaction or solely because the vote of any such director is counted for such purpose, if: (i) the material facts as to the relationship or interest and as to the contract are disclosed or are known to the Board, and the Board in good faith authorizes the contract or transaction by affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum, (ii) the material facts as to the relationship or interest and as to the contract are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders, or (iii) the contract or transaction is fair as to the Company as of the time it is authorized, approved or ratified by the Board or the stockholders;

Whereas, it is hereby disclosed or made known to the stockholders of the Company that Dennis Podlesak, Eckard Weber, M.D., Stan Abel, Rick Orr and Julien Mamet, Ph.D. or their affiliates will receive consideration in connection with the Merger and each is a director of the Company such that each may be considered an Interested Party with respect to the Merger and the Merger may be an Interested Party Transaction; and

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Whereas, after careful consideration, the Board has further determined that it is in the best interests of the Company and the stockholders of the Company (a) for the Company to enter into all agreements and other documents contemplated by the Merger Agreement to which the Company is a party, including, but not limited to, the Voting Agreements with certain stockholders of the Company (all agreements and other documents contemplated by the Merger Agreement, the "Transaction Documents") and (b) to perform the transactions contemplated by the Transaction Documents.

Now, Therefore, Be it Resolved, that after careful consideration, the undersigned stockholders have determined that the terms and conditions of the Merger are just and equitable and fair as to the Company and that it is in the best interests of the Company and the stockholders of the Company to enter into the Merger subject to the terms agreed upon by the parties;

Resolved Further, that the undersigned stockholders hereby acknowledge that all material facts as to the directors' relationships or interests as to the Merger and the other transactions authorized and approved in the preceding resolutions have been disclosed and are known to the stockholders, and that the stockholders, by execution hereof, specifically approve such transactions pursuant to Section 144(a)(2) of the DGCL;

Resolved Further, that the Merger, the Certificate of Merger to be filed with the Secretary of State of the State of Delaware effecting the Merger, the Merger Agreement and the Transaction Documents, each subject to such changes and modifications as the Company may consider necessary or appropriate, and the transactions contemplated thereby, be, and each of them hereby is, authorized and approved in all respects, and the Merger Agreement is hereby adopted by the undersigned stockholders and that each of the undersigned Stockholders hereby votes all of the shares of capital stock of the Company held by such Stockholder and entitled to vote thereon in favor of the adoption and approval of the Merger Agreement, the Certificate of Merger, the Transaction Documents and the transactions contemplated thereby, including the Merger;

Resolved Further, that the allocation of the merger consideration pursuant to and in accordance with the terms of the Merger Agreement and the Transaction Documents is approved and adopted in all respects;

Resolved Further, that the indemnification obligations set forth in Section 5.06 of the Merger Agreement are approved and adopted in all respects;

Resolved Further, that with respect to the Merger and the other transactions contemplated by the Merger Agreement and Transaction Documents, all notice requirements set forth in the Company's Restated Certificate or Bylaws be, and they hereby are, waived; and

Resolved Further, that the Company is hereby authorized to execute and deliver all such instruments, notices and certificates, to make all such payments, to make all such filings pursuant to state laws or otherwise (and any such filings heretofore made are hereby ratified), and to do all such other acts and things as are necessary or desirable in order to carry out the intent and purposes of the foregoing resolutions.

Waiver of Appraisal Rights

Whereas, a stockholder of the Company who does not vote in favor of the Merger (a "Dissenting Stockholder") may, under certain circumstances by following procedures prescribed by Section 262 of the DGCL, exercise appraisal rights under the DGCL to receive cash in an amount equal to the "fair value" of such stockholder's shares of the Company's stock as to which such stockholder has exercised such appraisal rights (such "fair value" will exclude any element of value arising from the accomplishment or expectation of the Merger);

Whereas, the undersigned stockholders determined, in connection with the Merger, that the fair value and (if applicable) fair market value of the Company's stock for the purpose of stockholders' exercise of appraisal rights under Delaware is the applicable consideration (calculated in accordance with the Merger Agreement) for such stock; and

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Whereas, a Dissenting Stockholder must follow the appropriate procedures under the DGCL, or suffer the termination or waiver of such appraisal rights.

Now, Therefore, Be it Resolved, approval of the Merger given by each shareholder is irrevocable and such stockholder is aware of its rights to demand appraisal for its shares under Section 262 of the DGCL, a copy of which is attached hereto as Exhibit B, and that such stockholder has received and read a copy of Section 262 of the DGCL;

Resolved Further, that each undersigned stockholder, with respect only to himself, herself or itself, and any shares held by him, her or it in such capacity, hereby unconditionally waives (and to the extent not able to be waived, does hereby agree not to exercise or assert) any and all (i) rights under Section 262 of the DGCL and under other applicable law or regulation granting such stockholder the right to have such stockholder's shares of Company capital stock appraised in connection with the Merger or (ii) right to otherwise dissent from the Merger and the transactions contemplated by the Merger Agreement; and

Resolved Further, by each shareholder approving of the Merger, it is not entitled to appraisal rights with respect to its shares in connection with the Merger and thereby waives any rights to receive payment of the fair value of its capital stock under the DGCL.

Additional Stockholders' Rights

Whereas, Article IV, Section 3 of the Amended and Restated Certificate of Incorporation of the Company (the "Restated Certificate") provides for a liquidation preference to be paid to the holders of the Preferred Stock of the Company (the "Preferred Stock") in the event of a Liquidation Event (as defined in the Restated Certificate) (the "Liquidation Preference").

Now, Therefore, Be it Resolved, that each of the undersigned stockholders hereby acknowledge that the Merger is not a Liquidation Event: and

Resolved Further, each of the undersigned stockholders hereby acknowledge that the Merger, not being a Liquidation Event, shall not trigger any payment pursuant to the Liquidation Preferences with respect to any of the outstanding shares of Preferred Stock.

Termination of Amended and Restated Investors' Rights Agreement

Whereas, the Company and certain of its stockholders entered into that certain Amended and Restated Investors' Rights Agreement, dated as of October 19, 2016 (the "IRA").

Now, Therefore, Be it Resolved, that undersigned stockholders of the Company that are party to the IRA hereby agree that the IRA shall be terminated effective as of, and conditioned upon, the closing of the Merger, and that no party shall have any further rights or obligations under the IRA following the Merger.

Termination of Amended and Restated Right of First Refusal and Co-Sale Agreement

Whereas, the Company and certain of its stockholders entered into that certain Amended and Restated Right of First Refusal and Co-Sale Agreement, dated as of October 19, 2016 (the "Co-Sale Agreement").

Now, Therefore, Be it Resolved, that the undersigned stockholders of the Company that are party to the Co-Sale Agreement hereby agree that the Co-Sale Agreement shall be terminated effective as of, and conditioned upon, the closing of the Merger, and that no party shall have any further rights or obligations under the Co-Sale Agreement following the Merger.

Termination of Amended and Restated Voting Agreement

Whereas, the Company and certain of its stockholders entered into that certain Amended and Restated Voting Agreement, dated as of October 19, 2016 (the "Voting Agreement").

Now, Therefore, Be it Resolved, that the undersigned stockholders of the Company that are party to the Voting Agreement hereby agree that the Voting Agreement shall be terminated effective as of, and conditioned upon, the closing of the Merger, and that no party shall have any further rights or obligations under the Voting Agreement following the Merger.

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General Authorizing Resolution

Resolved, that any officer of the Company be, and each of them hereby is, authorized, empowered and directed, for and on behalf of the Company, to take any and all actions, to negotiate for and enter into agreements and amendments to agreements, including, without limitation, the Merger Agreement, to perform all such acts and things, to execute, file, deliver or record in the name and on behalf of the Company, all such certificates, instruments, agreements or other documents, and to make all such payments as they, in their judgment, or in the judgment of any one or more of them, may deem necessary, advisable or appropriate in order to carry out the purpose and intent of, or consummate the transactions contemplated by, the foregoing resolutions and/or all of the transactions contemplated therein or thereby, the authorization therefor to be conclusively evidenced by the taking of such action or the execution and delivery of such certificates, instruments, agreements or documents;

Resolved Further, that each of the undersigned Stockholders hereby waives any and all irregularities of notice, with respect to the time and place of meeting, and consents to the transaction of all business represented by this written consent;

Resolved Further, that all prior acts consistent with the purposes of the above resolutions, done on behalf of the Company by its officers, are ratified and approved as the proper acts and deeds of the Company; and

Resolved Further, that the action taken by this Action by Written Consent shall have the same force and effect as if taken at a special meeting of the holders of the issued and outstanding shares of capital stock of the Company entitled to vote thereon duly called and constituted pursuant to the Company's Bylaws and the laws of the State of Delaware. By executing this Action by Written Consent, each stockholder is giving written consent with respect to all shares of the Company's capital stock held by such stockholder in favor of the above resolutions.

[Signature page follows]

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This Action may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. Counterparts may be delivered via facsimile, electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, Uniform Electronic Transactions Act or other applicable law) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes.

In Witness Whereof, the undersigned have executed this Action by Written Consent of the Stockholders as of the date written below.

Date: _____

Stockholder (if an entity):

Name of Stockholder:

By:

Name:

Title:

Stockholder (if an individual):

Name of Stockholder:

Signature:

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Exhibit B

Section 262 of the DGCL

§ 262 Appraisal rights

(a) Any stockholder of a corporation of this State who holds shares of stock on the date of the making of a demand pursuant to subsection (d) of this section with respect to such shares, who continuously holds such shares through the effective date of the merger or consolidation, who has otherwise complied with subsection (d) of this section and who has neither voted in favor of the merger or consolidation nor consented thereto in writing pursuant to § 228 of this title shall be entitled to an appraisal by the Court of Chancery of the fair value of the stockholder's shares of stock under the circumstances described in subsections (b) and (c) of this section. As used in this section, the word "stockholder" means a holder of record of stock in a corporation; the words "stock" and "share" mean and include what is ordinarily meant by those words; and the words "depository receipt" mean a receipt or other instrument issued by a depository representing an interest in 1 or more shares, or fractions thereof, solely of stock of a corporation, which stock is deposited with the depository.

(b) Appraisal rights shall be available for the shares of any class or series of stock of a constituent corporation in a merger or consolidation to be effected pursuant to § 251 (other than a merger effected pursuant to § 251(g) of this title ), § 252, § 254, § 255, § 256, § 257, § 258, § 263 or § 264 of this title:

(1) Provided, however, that, except as expressly provided in § 363(b) of this title, no appraisal rights under this section shall be available for the shares of any class or series of stock, which stock, or depository receipts in respect thereof, at the record date fixed to determine the stockholders entitled to receive notice of the meeting of stockholders to act upon the agreement of merger or consolidation (or, in the case of a merger pursuant to § 251(h), as of immediately prior to the execution of the agreement of merger), were either: (i) listed on a national securities exchange or (ii) held of record by more than 2,000 holders; and further provided that no appraisal rights shall be available for any shares of stock of the constituent corporation surviving a merger if the merger did not require for its approval the vote of the stockholders of the surviving corporation as provided in § 251(f) of this title.

(2) Notwithstanding paragraph (b)(1) of this section, appraisal rights under this section shall be available for the shares of any class or series of stock of a constituent corporation if the holders thereof are required by the terms of an agreement of merger or consolidation pursuant to §§ 251, 252, 254, 255, 256, 257, 258, 263 and 264 of this title to accept for such stock anything except:

a. Shares of stock of the corporation surviving or resulting from such merger or consolidation, or depository receipts in respect thereof;

b. Shares of stock of any other corporation, or depository receipts in respect thereof, which shares of stock (or depository receipts in respect thereof) or depository receipts at the effective date of the merger or consolidation will be either listed on a national securities exchange or held of record by more than 2,000 holders;

c. Cash in lieu of fractional shares or fractional depository receipts described in the foregoing paragraphs (b)(2)a. and b. of this section; or

d. Any combination of the shares of stock, depository receipts and cash in lieu of fractional shares or fractional depository receipts described in the foregoing paragraphs (b)(2)a., b. and c. of this section.

(3) In the event all of the stock of a subsidiary Delaware corporation party to a merger effected under § 253 or § 267 of this title is not owned by the parent immediately prior to the merger, appraisal rights shall be available for the shares of the subsidiary Delaware corporation.

(4) In the event of an amendment to a corporation's certificate of incorporation contemplated by § 363(a) of this title, appraisal rights shall be available as contemplated by § 363(b) of this title, and the procedures of this section, including those set forth in subsections (d) and (e) of this section, shall apply as nearly as practicable, with the word "amendment" substituted for the words "merger or consolidation," and the word "corporation" substituted for the words "constituent corporation" and/or "surviving or resulting corporation."

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(c) Any corporation may provide in its certificate of incorporation that appraisal rights under this section shall be available for the shares of any class or series of its stock as a result of an amendment to its certificate of incorporation, any merger or consolidation in which the corporation is a constituent corporation or the sale of all or substantially all of the assets of the corporation. If the certificate of incorporation contains such a provision, the provisions of this section, including those set forth in subsections (d), (e), and (g) of this section, shall apply as nearly as is practicable.

(d) Appraisal rights shall be perfected as follows:

(1) If a proposed merger or consolidation for which appraisal rights are provided under this section is to be submitted for approval at a meeting of stockholders, the corporation, not less than 20 days prior to the meeting, shall notify each of its stockholders who was such on the record date for notice of such meeting (or such members who received notice in accordance with § 255(c) of this title) with respect to shares for which appraisal rights are available pursuant to subsection (b) or (c) of this section that appraisal rights are available for any or all of the shares of the constituent corporations, and shall include in such notice a copy of this section and, if 1 of the constituent corporations is a nonstock corporation, a copy of § 114 of this title. Each stockholder electing to demand the appraisal of such stockholder's shares shall deliver to the corporation, before the taking of the vote on the merger or consolidation, a written demand for appraisal of such stockholder's shares. Such demand will be sufficient if it reasonably informs the corporation of the identity of the stockholder and that the stockholder intends thereby to demand the appraisal of such stockholder's shares. A proxy or vote against the merger or consolidation shall not constitute such a demand. A stockholder electing to take such action must do so by a separate written demand as herein provided. Within 10 days after the effective date of such merger or consolidation, the surviving or resulting corporation shall notify each stockholder of each constituent corporation who has complied with this subsection and has not voted in favor of or consented to the merger or consolidation of the date that the merger or consolidation has become effective; or

(2) If the merger or consolidation was approved pursuant to § 228, § 251(h), § 253, or § 267 of this title, then either a constituent corporation before the effective date of the merger or consolidation or the surviving or resulting corporation within 10 days thereafter shall notify each of the holders of any class or series of stock of such constituent corporation who are entitled to appraisal rights of the approval of the merger or consolidation and that appraisal rights are available for any or all shares of such class or series of stock of such constituent corporation, and shall include in such notice a copy of this section and, if 1 of the constituent corporations is a nonstock corporation, a copy of § 114 of this title. Such notice may, and, if given on or after the effective date of the merger or consolidation, shall, also notify such stockholders of the effective date of the merger or consolidation. Any stockholder entitled to appraisal rights may, within 20 days after the date of mailing of such notice or, in the case of a merger approved pursuant to § 251(h) of this title, within the later of the consummation of the offer contemplated by § 251(h) of this title and 20 days after the date of mailing of such notice, demand in writing from the surviving or resulting corporation the appraisal of such holder's shares. Such demand will be sufficient if it reasonably informs the corporation of the identity of the stockholder and that the stockholder intends thereby to demand the appraisal of such holder's shares. If such notice did not notify stockholders of the effective date of the merger or consolidation, either (i) each such constituent corporation shall send a second notice before the effective date of the merger or consolidation notifying each of the holders of any class or series of stock of such constituent corporation that are entitled to appraisal rights of the effective date of the merger or consolidation or (ii) the surviving or resulting corporation shall send such a second notice to all such holders on or within 10 days after such effective date; provided, however, that if such second notice is sent more than 20 days following the sending of the first notice or, in the case of a merger approved pursuant to § 251(h) of this title, later than the later of the consummation of the offer contemplated by § 251(h) of this title and 20 days following the sending of the first notice, such second notice need only be sent to each stockholder who is entitled to appraisal rights and who has demanded appraisal of such holder's shares in accordance with this subsection. An affidavit of the secretary or assistant secretary or of the transfer agent of the corporation that is required to give either notice that such notice has been given shall, in the absence of fraud, be prima facie evidence of the facts stated therein. For purposes of determining the stockholders entitled to receive either notice, each constituent corporation may fix, in advance, a

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record date that shall be not more than 10 days prior to the date the notice is given, provided, that if the notice is given on or after the effective date of the merger or consolidation, the record date shall be such effective date. If no record date is fixed and the notice is given prior to the effective date, the record date shall be the close of business on the day next preceding the day on which the notice is given.

(e) Within 120 days after the effective date of the merger or consolidation, the surviving or resulting corporation or any stockholder who has complied with subsections (a) and (d) of this section hereof and who is otherwise entitled to appraisal rights, may commence an appraisal proceeding by filing a petition in the Court of Chancery demanding a determination of the value of the stock of all such stockholders. Notwithstanding the foregoing, at any time within 60 days after the effective date of the merger or consolidation, any stockholder who has not commenced an appraisal proceeding or joined that proceeding as a named party shall have the right to withdraw such stockholder's demand for appraisal and to accept the terms offered upon the merger or consolidation. Within 120 days after the effective date of the merger or consolidation, any stockholder who has complied with the requirements of subsections (a) and (d) of this section hereof, upon written request, shall be entitled to receive from the corporation surviving the merger or resulting from the consolidation a statement setting forth the aggregate number of shares not voted in favor of the merger or consolidation (or, in the case of a merger approved pursuant to § 251(h) of this title, the aggregate number of shares (other than any excluded stock (as defined in § 251(h)(6)d. of this title)) that were the subject of, and were not tendered into, and accepted for purchase or exchange in, the offer referred to in § 251(h)(2)), and, in either case, with respect to which demands for appraisal have been received and the aggregate number of holders of such shares. Such written statement shall be mailed to the stockholder within 10 days after such stockholder's written request for such a statement is received by the surviving or resulting corporation or within 10 days after expiration of the period for delivery of demands for appraisal under subsection (d) of this section hereof, whichever is later. Notwithstanding subsection (a) of this section, a person who is the beneficial owner of shares of such stock held either in a voting trust or by a nominee on behalf of such person may, in such person's own name, file a petition or request from the corporation the statement described in this subsection.

(f) Upon the filing of any such petition by a stockholder, service of a copy thereof shall be made upon the surviving or resulting corporation, which shall within 20 days after such service file in the office of the Register in Chancery in which the petition was filed a duly verified list containing the names and addresses of all stockholders who have demanded payment for their shares and with whom agreements as to the value of their shares have not been reached by the surviving or resulting corporation. If the petition shall be filed by the surviving or resulting corporation, the petition shall be accompanied by such a duly verified list. The Register in Chancery, if so ordered by the Court, shall give notice of the time and place fixed for the hearing of such petition by registered or certified mail to the surviving or resulting corporation and to the stockholders shown on the list at the addresses therein stated. Such notice shall also be given by 1 or more publications at least 1 week before the day of the hearing, in a newspaper of general circulation published in the City of Wilmington, Delaware or such publication as the Court deems advisable. The forms of the notices by mail and by publication shall be approved by the Court, and the costs thereof shall be borne by the surviving or resulting corporation.

(g) At the hearing on such petition, the Court shall determine the stockholders who have complied with this section and who have become entitled to appraisal rights. The Court may require the stockholders who have demanded an appraisal for their shares and who hold stock represented by certificates to submit their certificates of stock to the Register in Chancery for notation thereon of the pendency of the appraisal proceedings; and if any stockholder fails to comply with such direction, the Court may dismiss the proceedings as to such stockholder. If immediately before the merger or consolidation the shares of the class or series of stock of the constituent corporation as to which appraisal rights are available were listed on a national securities exchange, the Court shall dismiss the proceedings as to all holders of such shares who are otherwise entitled to appraisal rights unless (1) the total number of shares entitled to appraisal exceeds 1% of the outstanding shares of the class or series eligible for appraisal, (2) the value of the consideration provided in the merger or consolidation for such total number of shares exceeds $1 million, or (3) the merger was approved pursuant to § 253 or § 267 of this title.

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(h) After the Court determines the stockholders entitled to an appraisal, the appraisal proceeding shall be conducted in accordance with the rules of the Court of Chancery, including any rules specifically governing appraisal proceedings. Through such proceeding the Court shall determine the fair value of the shares exclusive of any element of value arising from the accomplishment or expectation of the merger or consolidation, together with interest, if any, to be paid upon the amount determined to be the fair value. In determining such fair value, the Court shall take into account all relevant factors. Unless the Court in its discretion determines otherwise for good cause shown, and except as provided in this subsection, interest from the effective date of the merger through the date of payment of the judgment shall be compounded quarterly and shall accrue at 5% over the Federal Reserve discount rate (including any surcharge) as established from time to time during the period between the effective date of the merger and the date of payment of the judgment. At any time before the entry of judgment in the proceedings, the surviving corporation may pay to each stockholder entitled to appraisal an amount in cash, in which case interest shall accrue thereafter as provided herein only upon the sum of (1) the difference, if any, between the amount so paid and the fair value of the shares as determined by the Court, and (2) interest theretofore accrued, unless paid at that time. Upon application by the surviving or resulting corporation or by any stockholder entitled to participate in the appraisal proceeding, the Court may, in its discretion, proceed to trial upon the appraisal prior to the final determination of the stockholders entitled to an appraisal. Any stockholder whose name appears on the list filed by the surviving or resulting corporation pursuant to subsection (f) of this section and who has submitted such stockholder's certificates of stock to the Register in Chancery, if such is required, may participate fully in all proceedings until it is finally determined that such stockholder is not entitled to appraisal rights under this section.

(i) The Court shall direct the payment of the fair value of the shares, together with interest, if any, by the surviving or resulting corporation to the stockholders entitled thereto. Payment shall be so made to each such stockholder, in the case of holders of uncertificated stock forthwith, and the case of holders of shares represented by certificates upon the surrender to the corporation of the certificates representing such stock. The Court's decree may be enforced as other decrees in the Court of Chancery may be enforced, whether such surviving or resulting corporation be a corporation of this State or of any state.

(j) The costs of the proceeding may be determined by the Court and taxed upon the parties as the Court deems equitable in the circumstances. Upon application of a stockholder, the Court may order all or a portion of the expenses incurred by any stockholder in connection with the appraisal proceeding, including, without limitation, reasonable attorney's fees and the fees and expenses of experts, to be charged pro rata against the value of all the shares entitled to an appraisal.

(k) From and after the effective date of the merger or consolidation, no stockholder who has demanded appraisal rights as provided in subsection (d) of this section shall be entitled to vote such stock for any purpose or to receive payment of dividends or other distributions on the stock (except dividends or other distributions payable to stockholders of record at a date which is prior to the effective date of the merger or consolidation); provided, however, that if no petition for an appraisal shall be filed within the time provided in subsection (e) of this section, or if such stockholder shall deliver to the surviving or resulting corporation a written withdrawal of such stockholder's demand for an appraisal and an acceptance of the merger or consolidation, either within 60 days after the effective date of the merger or consolidation as provided in subsection (e) of this section or thereafter with the written approval of the corporation, then the right of such stockholder to an appraisal shall cease. Notwithstanding the foregoing, no appraisal proceeding in the Court of Chancery shall be dismissed as to any stockholder without the approval of the Court, and such approval may be conditioned upon such terms as the Court deems just; provided, however that this provision shall not affect the right of any stockholder who has not commenced an appraisal proceeding or joined that proceeding as a named party to withdraw such stockholder's demand for appraisal and to accept the terms offered upon the merger or consolidation within 60 days after the effective date of the merger or consolidation, as set forth in subsection (e) of this section.

(l) The shares of the surviving or resulting corporation to which the shares of such objecting stockholders would have been converted had they assented to the merger or consolidation shall have the status of authorized and unissued shares of the surviving or resulting corporation.

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Schedule I

Ownership of Common Shares

| Name and Address of Stockholder | Number of Common Shares | Number of Preferred Shares |
|---|---|---|
| [•] | [•] | [•] |

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Annex K

Alliqua BioMedical, Inc.

Lock-Up Agreement

October 11, 2018

This Lock-Up Agreement (this "Agreement") is executed in connection with the Agreement and Plan of Merger (the "Merger Agreement") by and among Alliqua BioMedical, Inc. (the "Parent"), Embark Merger Sub Inc., ("Merger Sub"), and Adynxx, Inc. (the "Company"), dated as of October 11, 2018. Capitalized terms used herein but not defined shall have the meanings ascribed to such terms in the Merger Agreement.

In connection with, and as an inducement to, the parties entering into the Merger Agreement and for other good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the undersigned, by executing this Agreement, agrees that, without the prior written consent of the Parent and the Company, during the period commencing at the Effective Time and continuing until the end of the Lock-Up Period (as hereinafter defined), the undersigned will not: (1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, make any short sale or otherwise transfer or dispose of or lend, directly or indirectly, any shares of Common Stock of Parent (the "Parent Common Stock") or any securities convertible into, exercisable or exchangeable for or that represent the right to receive Parent Common Stock (including without limitation, Parent Common Stock which may be deemed to be beneficially owned by the undersigned in accordance with the rules and regulations of the Securities and Exchange Commission and securities which may be issued upon exercise of a stock option or warrant) whether now owned or hereafter acquired (the "Securities"); (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Securities, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Parent Common Stock or such other securities, in cash or otherwise; (3) make any demand for or exercise any right with respect to, the registration of any Parent Common Stock or any security convertible into or exercisable or exchangeable for Parent Common Stock; (4) except for the Voting Agreement, grant any proxies or powers of attorney with respect to any Securities, deposit any Securities into a voting trust or enter into a voting agreement or similar arrangement or commitment with respect to any Securities; or (5) publicly disclose the intention to do any of the foregoing (each of the foregoing restrictions, the "Lock-Up Restrictions").

Notwithstanding the terms of the foregoing paragraph, the Lock-Up Restrictions shall automatically terminate and cease to be effective on the date that is one-hundred and eighty (180) days after the Effective Time. The period during which the Lock-Up Restrictions apply to the Securities shall be deemed the "Lock-Up Period" with respect thereto.

The undersigned agrees that the Lock-Up Restrictions preclude the undersigned from engaging in any hedging or other transaction with respect to any then-subject Securities which is designed to or which reasonably could be expected to lead to or result in a sale or disposition of such Securities even if such Securities would be disposed of by someone other than the undersigned. Such prohibited hedging or other transactions would include without limitation any short sale or any purchase, sale or grant of any right (including without limitation any put or call option) with respect to such Securities or with respect to any security that includes, relates to, or derives any significant part of its value from such Securities.

Notwithstanding the foregoing, the undersigned may transfer any of the Securities (i) as a bona fide gift or gifts or charitable contribution(s), (ii) to any trust for the direct or indirect benefit of the undersigned or the immediate family of the undersigned, (iii) if the undersigned is a corporation, partnership, limited liability company, trust or other business entity (1) to another corporation, partnership, limited liability company, trust or other business entity that is a direct or indirect affiliate (as defined in Rule 405 promulgated under the Securities Act of 1933, as amended) of the undersigned or (2) as distributions of shares of Parent Common Stock or any security convertible into or exercisable for Parent Common Stock to limited partners, limited liability company members or stockholders of the undersigned or holders of similar equity interests in the undersigned, (iv) if the undersigned is a trust, to the beneficiary of such trust, (v) by testate succession or intestate succession, (vi) to any immediate family member, any investment fund,

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family partnership, family limited liability company or other entity controlled or managed by the undersigned, (vii) to a nominee or custodian of a person or entity to whom a disposition or transfer would be permissible under clauses (i) through (vi), (viii) to Parent in a transaction exempt from Section 16(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act") upon a vesting event of the Securities or upon the exercise of options or warrants to purchase Parent Common Stock on a "cashless" or "net exercise" basis or to cover tax withholding obligations of the undersigned in connection with such vesting or exercise (but for the avoidance of doubt, excluding all manners of exercise that would involve a sale in the open market of any securities relating to such options or warrants, whether to cover the applicable aggregate exercise price, withholding tax obligations or otherwise), (ix) to Parent in connection with the termination of employment or other termination of a service provider and pursuant to agreements in effect as of the Effective Time whereby Parent has the option to repurchase such shares or securities, (x) acquired by the undersigned in open market transactions after the Effective Time, (xi) pursuant to a bona fide third party tender offer, merger, consolidation or other similar transaction made to all holders of the Parent's capital stock involving a change of control of the Parent, provided that in the event that such tender offer, merger, consolidation or other such transaction is not completed, the Securities shall remain subject to the restrictions contained in this Agreement, or (xii) pursuant to an order of a court or regulatory agency; provided, in the case of clauses (i)-(vii), that (A) such transfer shall not involve a disposition for value and (B) the transferee agrees in writing with Parent to be bound by the terms of this Agreement; and provided, further, in the case of clauses (i)-(ix), no filing by any party under Section 16(a) of the Exchange Act shall be required or shall be made voluntarily in connection with such transfer. For purposes of this Agreement, "immediate family" shall mean any relationship by blood, marriage or adoption, not more remote than first cousin.

In addition, the foregoing restrictions shall not apply to (i) the exercise of stock options granted pursuant to equity incentive plans existing immediately following the Effective Time, including the "net" exercise of such options in accordance with their terms and the surrender of Parent Common Stock in lieu of payment in cash of the exercise price and any tax withholding obligations due as a result of such exercise (but for the avoidance of doubt, excluding all manners of exercise that would involve a sale in the open market of any securities relating to such options, whether to cover the applicable aggregate exercise price, withholding tax obligations or otherwise); provided that it shall apply to any of the Securities issued upon such exercise, (ii) conversion or exercise of warrants into Parent Common Stock or into any other security convertible into or exercisable for Parent Common Stock that are outstanding as of the Effective Time (but for the avoidance of doubt, excluding all manners of conversion or exercise that would involve a sale in the open market of any securities relating to such warrants, whether to cover the applicable aggregate exercise price, withholding tax obligations or otherwise); provided that it shall apply to any of the Securities issued upon such conversion or exercise; and provided, further that the recipient of Parent Common Stock agrees in writing with Parent to be bound by the terms of this Agreement, or (iii) the establishment of any contract, instruction or plan (a "Plan") that satisfies all of the requirements of Rule 10b5-1(c)(1)(i)(B) under the Exchange Act; provided that no sales of the Securities shall be made pursuant to such a Plan prior to the expiration of the Lock-Up Period, and such a Plan may only be established if no public announcement of the establishment or existence thereof and no filing with the Securities and Exchange Commission or other regulatory authority in respect thereof or transactions thereunder or contemplated thereby, by the undersigned, Parent or any other person, shall be required, and no such announcement or filing is made voluntarily, by the undersigned, Parent or any other person, prior to the expiration of the applicable Lock-Up Period. In furtherance of the foregoing, Parent and its transfer agent and registrar are hereby authorized to decline to make any transfer of shares of Parent Common Stock if such transfer would constitute a violation or breach of this Agreement.

The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this Agreement and that upon request, the undersigned will execute any additional documents reasonably necessary to ensure the validity or enforcement of this Agreement. All authority herein conferred or agreed to be conferred and any obligations of the undersigned shall be binding upon the successors, assigns, heirs or personal representatives of the undersigned.

The undersigned understands that the undersigned shall be released from all obligations under this Agreement if the Merger Agreement is terminated prior to the Effective Date pursuant to its terms, upon the date of such termination.

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The undersigned understands that Parent, the Merger Sub and the Company are entering into the Merger Agreement in reliance upon this Agreement.

This Agreement shall be governed by, and construed in accordance with, the laws of the State of Delaware.

This Agreement, and any certificates, documents, instruments and writings that are delivered pursuant hereto, constitutes the entire agreement and understanding of the Parent, the Company and the undersigned in respect of the subject matter hereof and supersedes all prior understandings, agreements or representations by or among the Parent, the Company and the undersigned, written or oral, to the extent they relate in any way to the subject matter hereof

Very truly yours,

Printed Name of Holder
By:

Signature

Printed Name of Person Signing
(and indicate capacity of person signing if
signing as custodian, trustee, or on behalf of an entity)

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Annex L

FORM OF REVERSE STOCK SPLIT CHARTER AMENDMENT

CERTIFICATE OF AMENDMENT
TO THE
CERTIFICATE OF INCORPORATION
OF
ALLIQUA BIOMEDICAL, INC.

Alliqua BioMedical, Inc. (the "Corporation"), a corporation organized and existing under the General Corporation Law of the State of Delaware (the "DGCL"), hereby certifies as follows:

FIRST: The Certificate of Incorporation of the Corporation was filed with the Secretary of State of the State of Delaware on April 15, 2014, as further amended by amendments filed on June 5, 2014, May 6, 2016, and October 5, 2017 (as amended to date, the "Certificate of Incorporation").

SECOND: Paragraph D of Article FOURTH of the Certificate of Incorporation is hereby deleted in its entirety, and the following paragraph D is submitted in its place:(1)

"D. Effective as of [ ] p.m., Eastern Time, on [ ], 2019 (the "Effective Time"), each [ ] shares of the common stock, par value $0.001 per share, issued and outstanding or held by the Corporation as treasury shares immediately prior to the Effective Time shall, automatically and without any action on the part of the Corporation or the respective holders thereof, be combined and reclassified into one validly issued, fully paid and nonassessable share of common stock, without increasing or decreasing the par value of each share of common stock, the exact ratio within such range to be determined by the board of directors of the Corporation prior to the Effective Time and publicly announced by the Corporation (the "Reverse Stock Split"); provided, however, that no fractional shares of common stock shall be issued as a result of the Reverse Stock Split and, in lieu thereof, any person who would otherwise be entitled to a fractional share of the Corporation's common stock as a result of the Reverse Stock Split shall be entitled to receive a cash payment (without interest) equal to such fractional part of a share of the Corporation's common stock multiplied by the average last reported sales price of the Corporation's common stock at 4:00 p.m., Eastern Time, end of regular trading hours on The Nasdaq Capital Market, during the ten (10) consecutive trading days ending on the last trading day prior to the effective date of the Corporation's merger with Adynxx, Inc."

THIRD: The foregoing amendment was duly adopted by the stockholders of the Corporation in accordance with Section 242 of the DGCL.

FOURTH: The terms and provisions of this Certificate of Amendment shall become effective upon the filing of this Certificate of Amendment with the Secretary of State of the State of Delaware.

[Signature page follows]

(1)
This amendment approves the reverse stock split of the Corporation's common stock, at a ratio in the range of 2 and 20-for-1. By approving this amendment, the stockholders of the Corporation would be deemed to approve any ratios within the range referred to above, as mutually agreed by the Corporation and Adynxx, Inc.

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IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment to be executed by its duly authorized officer this [ ] day of [ ], 2019.

ALLIQUA BIOMEDICAL, INC.

a Delaware corporation

By:

David I. Johnson
President and CEO

Signature Page to
Certificate of Amendment to
Certificate of Incorporation of Alliqua BioMedical, Inc.
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THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.KEEP THIS PORTION FOR YOUR RECORDSDETACH AND RETURN THIS PORTION ONLYTO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:Signature [PLEASE SIGN WITHIN BOX] Date Signature (Joint Owners) Date0 0 00 0 00 0 00000394360_1 R1.0.1.18ALLIQUA BIOMEDICAL, INC.ATTN: David Johnson2150 Cabot Blvd., WestSuite BLanghorne, PA 19047VOTE BY INTERNET - www.proxyvote.comUse the Internet to transmit your voting instructions and for electronic delivery ofinformation up until 11:59 P.M. Eastern Time the day before the cut-off date ormeeting date. Have your proxy card in hand when you access the web site andfollow the instructions to obtain your records and to create an electronic votinginstruction form.ELECTRONIC DELIVERY OF FUTURE PROXY MATERIALSIf you would like to reduce the costs incurred by our company in mailing proxymaterials, you can consent to receiving all future proxy statements, proxy cardsand annual reports electronically via e-mail or the Internet. To sign up forelectronic delivery, please follow the instructions above to vote using the Internetand, when prompted, indicate that you agree to receive or access proxy materialselectronically in future years.VOTE BY PHONE - 1-800-690-6903Use any touch-tone telephone to transmit your voting instructions up until 11:59P.M. Eastern Time the day before the cut-off date or meeting date. Have yourproxy card in hand when you call and then follow the instructions.VOTE BY MAILMark, sign and date your proxy card and return it in the postage-paid envelope we haveprovided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood,NY 11717.The Board of Directors recommends you vote FORproposals 1., 2. and 3. For Against Abstain1. A proposal to approve the Merger, the Merger Agreement, the issuance of the Company's common stock pursuant tothe Merger Agreement and transactions contemplated by the Merger, as well as the resulting "change of control"of the Company under Nasdaq rules (the "Merger Proposal");2. A proposal to amend the Company's amended and restated certificate of incorporation to effect a reverse stocksplit of the Company's common stock (the "Reverse Stock Split Proposal"); and3. A proposal to adjourn or postpone the Special Meeting, if necessary or appropriate, for the purpose ofsoliciting additional votes for the approval of the Merger Proposal and the Reverse Stock Split Proposal (the"Adjournment Proposal").NOTE: Such other business as may properly come before the Special Meeting.Please sign exactly as your name(s) appear(s) hereon. When signing asattorney, executor, administrator, or other fiduciary, please give fulltitle as such. Joint owners should each sign personally. All holders mustsign. If a corporation or partnership, please sign in full corporate orpartnership name by authorized officer.

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0000394360_2 R1.0.1.18Important Notice Regarding the Availability of Proxy Materials for the Special Meeting: The Notice & Proxy Statement is available atwww.proxyvote.comALLIQUA BIOMEDICAL, INC.Special Meeting of StockholdersMarch 8, 2019 9:00 AMThis proxy is solicited by the Board of DirectorsThe undersigned hereby appoints David Johnson, president and chief executive officer, as proxy, with the powerto appoint his substitute, and hereby authorizes him to represent and to vote, as designated on the reverse sideof this ballot, all of the shares of common stock of Alliqua BioMedical, Inc. that the stockholders are entitled tovote at the Special Meeting of Stockholders to be held at 9:00 AM, EDT on March 8, 2019 at 2150 Cabot Blvd.,West, Suite B, Langhorne, PA 19047, and any adjournment(s) or postponement(s) thereof. The undersignedhereby revokes any proxy or proxies previously given to represent or vote such common stock and herebyratifies and confirms all actions that said proxy, his substitutes, or any of them, may lawfully take in accordancethe terms hereof.THIS PROXY, WHEN PROPERLY EXECUTED, WILL BE VOTED IN THE MANNER DIRECTED HEREIN. IFNO SUCH DIRECTION IS MADE, THIS PROXY WILL BE VOTED "FOR" PROPOSALS 1-3, AND AS THEPROXIES (OR ANY OF THEM) DEEM ADVISABLE ON SUCH OTHER MATTERS AS MAY PROPERLYCOME BEFORE THE SPECIAL MEETING OF STOCKHOLDERS OR ANY ADJOURNMENT(S) ORPOSTPONEMENT(S) THEREOF.THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS A VOTE "FOR" PROPOSALS 1-3.Continued and to be signed on reverse side