

BIO-PATH HOLDINGS INC  
Form S-1  
December 27, 2018

As filed with the Securities and Exchange Commission on December 27, 2018

Registration No. 333-

**UNITED STATES**

**SECURITIES AND EXCHANGE COMMISSION**

**Washington, D.C. 20549**

**FORM S-1**

**REGISTRATION STATEMENT UNDER**

**THE SECURITIES ACT OF 1933**

**BIO-PATH HOLDINGS, INC.**

(Exact name of registrant as specified in its charter)

**Delaware**

(State or other jurisdiction of

incorporation or  
organization)

**2834**

(Primary Standard Industrial  
Classification Code Number)

**4710 Bellaire Boulevard, Suite 210**

**87-0652870**

(I.R.S. Employer

Identification  
Number)

**Bellaire, Texas 77401**

**(832) 742-1357**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Peter H. Nielsen**

**President and Chief Executive Officer**

**4710 Bellaire Boulevard, Suite 210**

**Bellaire, Texas 77401**

**(832) 742-1357**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

***Copies To:***

**William R. Rohrlich, II**

**Winstead PC**

**600 Travis Street  
Suite 5200**

**Houston, Texas 77002**

**Tel. (281) 681-5912**

**Fax (281) 681-5901**

**Rick A. Werner, Esq.**

**Jayun Koo, Esq.**

**Haynes and Boone, LLP  
30 Rockefeller Plaza, 26<sup>th</sup> Floor  
New York, New York 10112**

**Tel. (212) 659-7300**

**Fax (212) 884-8234**

Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box: x

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration

statement for the same offering. "

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. "

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. "

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth 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 x      Smaller reporting company x

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 7(a)(2)(B) of the Securities Act. "

**CALCULATION OF REGISTRATION FEE**

Title of each class of securities to be registered (1)	Proposed maximum aggregate offering price(2)(3)	Amount of registration fee
Common Stock, par value \$0.001 per share	\$ 5,750,000	\$ 697
Pre-funded warrants to purchase common stock and common stock issuable upon exercise thereof	\$ 5,750,000	\$ 697
Series B Warrants to purchase common stock and common stock issuable upon exercise thereof	—	—
Underwriter's warrants and common stock issuable upon exercise thereof (4)	\$ 431,250	\$ 53
Total Offering	\$ 11,931,250	\$ 1,447

Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), the shares being registered (1) hereunder include such indeterminate number of shares of common stock as may be issuable with respect to the shares being registered hereunder as a result of stock splits, stock dividends or similar transactions.

Estimated solely for the purpose of calculating the amount of the registration fee in accordance with Rule 457(o) (2) under the Securities Act. Includes the offering price of any additional securities that the underwriter has the option to purchase. See "Underwriting."

The proposed combined maximum aggregate offering price of the common stock and accompanying Series B Warrant proposed to be sold in the offering will be reduced on a dollar-for-dollar basis based on the combined aggregate offering price of any pre-funded warrants and accompanying Series B Warrant offered and sold in the (3) offering (plus the aggregate exercise price of the common stock issuable upon exercise of the pre-funded warrants), and as such the proposed combined aggregate maximum offering price of the common stock and pre-funded warrants being registered (including the common stock issuable upon exercise of the pre-funded warrants), if any, is \$5,000,000, excluding the underwriter's option to purchase additional securities.

Represents warrants to purchase a number of shares of common stock equal to 6% of the number of shares of (4) common stock sold in this offering (including the number of shares of common stock issuable upon exercise of the pre-funded warrants) at an exercise price equal to 125% of the offering price per share.

**The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with section 8(a) of the Securities Act of 1933, as amended, or until this registration statement shall become effective on such date as the Securities and Exchange Commission acting pursuant to said section 8(a), may determine.**



The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale of these securities is not permitted.

SUBJECT TO COMPLETION, DATED DECEMBER 27, 2018

## **PRELIMINARY PROSPECTUS**

### **UP TO   SHARES OF COMMON STOCK**

### **PRE-FUNDED WARRANTS TO PURCHASE UP TO   SHARES OF COMMON STOCK**

### **SHARES OF COMMON STOCK UNDERLYING THE PRE-FUNDED WARRANTS**

### **SERIES B WARRANTS TO PURCHASE UP TO   SHARES OF COMMON STOCK**

### **SHARES OF COMMON STOCK UNDERLYING THE SERIES B WARRANTS**

We are offering   shares of our common stock, par value \$0.001 per share, together with Series B Warrants to purchase an aggregate of   shares of our common stock (the “Series B Warrants”) at an offering price of \$   per share and one Series B Warrant. We are also offering pre-funded warrants to purchase an aggregate of   shares of our common stock (the “Pre-Funded Warrants”) and the shares of common stock issuable upon exercise of the Pre-Funded Warrants, in lieu of shares of common stock, to those investors whose purchase of shares of our common stock in this offering would result in the investor, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the investor, 9.99%) of our outstanding common stock immediately following the consummation of this offering. Each Pre-Funded Warrant will be exercisable for one share of our common stock. Each Pre-Funded Warrant is being sold together with a Series B Warrant to purchase   share of our common stock. Each Pre-Funded Warrant and the accompanying Series B Warrant is being offered at an offering price equal to the public offering price at which a share of common stock and accompanying Series B Warrant is being offered, minus \$0.01. The exercise price of the Pre-Funded Warrants will be \$0.01 per share, and the Pre-Funded Warrants will be immediately exercisable and may be exercised at any time until exercised in full. For each Pre-Funded Warrant we sell, the number of shares of common stock we are offering will be decreased on a one-for-one basis. Because we will issue a Series B Warrant for each share of our common stock and for each Pre-Funded Warrant sold in this offering, the number of Series B Warrants sold in this offering will not change as a result of a change in the mix of the shares of our common stock and Pre-Funded Warrants sold. The exercise price of the Series B Warrants will be \$   per share,

and the Series B Warrants will be exercisable immediately and will expire \_\_\_\_\_ years from the date of issuance. This offering also relates to the shares of common stock issuable upon exercise of any Pre-Funded Warrants and any Series B Warrants. The shares of common stock and Pre-Funded Warrants, and the accompanying Series B Warrants, can only be purchased together in this offering but will be issued separately and will be immediately separable upon issuance.

Our common stock is currently listed on the Nasdaq Capital Market under the symbol “BPTH.” On December 26, 2018, the last reported sales price per share of our common stock on the Nasdaq Capital Market was \$0.158. The actual public offering price per share of common stock and accompanying Series B Warrant and any Pre-Funded Warrant and accompanying Series B Warrant, as the case may be, will be determined between us and the underwriter at the time of pricing, and may be at a discount to the current market price. Therefore, the assumed public offering price used throughout this prospectus may not be indicative of the final offering price. There is no established public trading market for the Pre-Funded Warrants or the Series B Warrants, and we do not expect a market to develop. In addition, we do not intend to list the Pre-Funded Warrants or the Series B Warrants on the Nasdaq Capital Market, any other national securities exchange or any other nationally recognized trading system.

**Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described in the section titled “Risk Factors” on page 5 of this prospectus and under similar headings in the other documents that are incorporated by reference into this prospectus.**

	Per Share	Per Pre-Funded Warrant	Per Series B Warrant	Total
Public offering price	\$	\$	\$	\$
Underwriting discounts and commissions (7%) (1)	\$	\$	\$	\$
Proceeds, before expenses, to us (2)	\$	\$	\$	\$

In addition, we have agreed to pay the underwriter a management fee equal to 1% of the aggregate gross proceeds from this offering, to reimburse the underwriter for certain expenses and to issue the underwriter or their designees warrants to purchase a number of shares of common stock equal to 6% of the aggregate number of shares of (1) common stock sold in this offering (including the number of shares of common stock issuable upon exercise of the Pre-Funded Warrants), at an exercise price of \$ \_\_\_\_\_ per share, which represents 125% of the public offering price per share of common stock and accompanying Series B Warrant. See “Underwriting” on page 20 of this prospectus for more information.

(2) The amount of the offering proceeds to us presented in this table does not give effect to the exercise, if any, of the Pre-Funded Warrants or the Series B Warrants.

This offering is being underwritten on a firm commitment basis. We have granted the underwriter an option for a period of 30 days from the date of this prospectus to purchase up to an additional \_\_\_\_\_ shares of our common stock and/or Series B Warrants to purchase up to an aggregate of an additional \_\_\_\_\_ shares of common stock, in each case at the public offering price, less the underwriting discount and commissions. If the underwriter exercises this option in full, the total underwriting discounts and commissions payable by us will be \$ \_\_\_\_\_, and the total proceeds to us, before expenses, will be \$ \_\_\_\_\_.

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed on the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.**

Delivery of the shares of common stock, Pre-Funded Warrants and Series B Warrants offered hereby is expected to take place on \_\_\_\_\_, 2019, subject to satisfaction of certain conditions.

**H.C. Wainwright & Co.**

Prospectus dated \_\_\_\_\_, 2018

TABLE OF CONTENTS

<u>PROSPECTUS SUMMARY</u>	<u>1</u>
<u>RISK FACTORS</u>	<u>5</u>
<u>SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS</u>	<u>8</u>
<u>USE OF PROCEEDS</u>	<u>10</u>
<u>DILUTION</u>	<u>11</u>
<u>DESCRIPTION OF CAPITAL STOCK</u>	<u>13</u>
<u>DESCRIPTION OF SECURITIES WE ARE OFFERING</u>	<u>15</u>
<u>UNDERWRITING</u>	<u>20</u>
<u>LEGAL MATTERS</u>	<u>24</u>
<u>EXPERTS</u>	<u>24</u>
<u>WHERE YOU CAN FIND MORE INFORMATION</u>	<u>24</u>
<u>INFORMATION INCORPORATED BY REFERENCE</u>	<u>24</u>

## PROSPECTUS SUMMARY

*This summary highlights selected information contained elsewhere in this prospectus or in documents incorporated by reference. This summary does not contain all of the information that you should consider before making an investment decision. This prospectus includes or incorporates by reference information about this offering, our business and our financial and operating data. You should carefully read the entire prospectus, including under the sections titled “Risk Factors” included herein, and the documents incorporated by reference into this prospectus, before making an investment decision. Unless the context requires otherwise, references in this prospectus to “we,” “our,” “us,” “the Company” and “Bio-Path” refer to Bio-Path Holdings, Inc. and its wholly-owned subsidiary. Bio-Path Holdings, Inc.’s wholly-owned subsidiary, Bio-Path, Inc., is sometimes referred to herein as “Bio-Path Subsidiary.”*

### **Our Company**

We are a clinical and preclinical stage oncology focused RNAi nanoparticle drug development company utilizing a novel technology that achieves systemic delivery for target specific protein inhibition for any gene product that is over-expressed in disease. Our drug delivery and antisense technology, called DNAbilize®, is a platform that uses P-ethoxy, which is a deoxyribonucleic acid (DNA) backbone modification that is intended to protect the DNA from destruction by the body’s enzymes when circulating *in vivo*, incorporated inside of a neutral charged lipid bilayer. We believe this combination allows for high efficiency loading of antisense DNA into non-toxic, cell-membrane-like structures for delivery of the antisense drug substance into cells. *In vivo*, the DNAbilize® delivered antisense drug substances are systemically distributed throughout the body to allow for reduction or elimination of proteins in blood diseases and solid tumors. DNAbilize® is a registered trademark of the Company.

Using DNAbilize® as a platform for drug development and manufacturing, we currently have three antisense drug candidates in development to treat a total of five different cancer disease indications. Our lead drug candidate, prexigebersen (pronounced prex’ i je ber’ sen), is in the efficacy portion of a Phase 2 clinical trial for acute myeloid leukemia (“AML”) in combination with low-dose cytarabine (“LDAC”) and in combination with decitabine.

Our second drug candidate, Liposomal Bcl-2 (“BP1002”), targets the protein Bcl-2, which is responsible for driving cell survival in up to 60% of all cancers. We are currently preparing an Investigational New Drug (“IND”) application for BP1002 in addition to completing additional IND enabling studies. We intend to initiate a Phase 1 clinical trial of BP1002 in refractory or relapsed lymphoma patients once we receive approval from the U.S. Food and Drug Administration (“FDA”).

Our third drug candidate, Liposomal Stat3 (“BP1003”), targets the Stat3 protein and is currently in preclinical development in a pancreatic patient derived tumor model. Previous preclinical models have shown BP1003 to successfully penetrate pancreatic tumors and to significantly enhance the efficacy of standard frontline treatments. Our lead indication for BP1003 is pancreatic cancer due to the severity of this disease and the lack of effective, life-extending treatments. We intend to initiate IND enabling studies of BP1003 in 2019.

Our DNAbilize® technology-based products are available for out-licensing or partnering. We intend to apply our drug delivery technology template to new disease-causing protein targets as a means to develop new nanoparticle antisense RNAi drug candidates. A new product identification template was recently approved by us to define a process of scientific, preclinical, commercial and intellectual property evaluation of potential new drug candidates for inclusion into our drug product development pipeline. As we expand, we will look at indications where a systemic delivery is needed and antisense RNAi nanoparticles can be used to slow, reverse or cure a disease, either alone or in combination with another drug. On July 19, 2017, we announced that the United States Patent and Trademark Office (“USPTO”) issued a notice of allowance for claims related to DNAbilize®, including its use in the treatment of cancers, autoimmune diseases and infectious diseases.

We have certain intellectual property as the basis for our current drug products in clinical development, prexigebersen and BP1002. We are developing RNAi antisense nanoparticle drug candidates based on our own patented technology to treat cancer and autoimmune disorders where targeting a single protein may be advantageous and result in reduced patient adverse effects as compared to small molecule inhibitors with off-target and non-specific effects. We have composition of matter and method of use intellectual property for the design and manufacture of antisense RNAi nanoparticle drug products.

On April 3, 2018, we announced that interim data from Stage 1 of our Phase 2 study of prexigebersen in combination with LDAC (“BP1001-201”) for the treatment of AML demonstrated that the combination therapy continues to be well-tolerated and has shown to date in this study early anti-leukemic activity in nearly 50% of evaluable AML patients. Stage 1 of the open-label Phase 2 study evaluated the efficacy and safety of prexigebersen in conjunction with LDAC. The primary objective of the study is to determine whether the combination of prexigebersen and LDAC provides greater efficacy than what would be expected with LDAC alone in this de novo patient population. The study had a predetermined decision point at 19 evaluable patients in which the study would be terminated if less than five patients responded and the study would be expanded to 54 patients if five or more patients responded.

The interim analysis from Stage 1 was performed on 17 evaluable patients instead of 19, since criteria to move to the next steps in the study had been met. Of the 17 evaluable patients, 47% showed some form of response, including stable disease and 24% having a complete response, to the combination treatment. The average age of patients in the study was 73.5 years old.

On August 27, 2018, we announced that we commenced Stage 2 of the efficacy portion of the Phase 2 clinical trial for AML. Based on the recommendations of the principal investigators of the study, we amended the protocol to change the dosing schedule in Stage 2 to that used in the Phase 1b study in relapsed and refractory AML patients as announced in April 2018. In the Phase 1b study, a greater amount of prexigebersen was administered prior to LDAC treatment starting at day 10 versus LDAC treatment starting on day four as was the case in Stage 1 of the Phase 2 study. In addition, the investigators endorsed the inclusion of a combination prexigebersen and decitabine cohort based on relatively new and positive data with this compound. Finally, we are in the process of adding three new sites in Europe to enhance patient enrollment. We currently plan to perform an interim analysis of each cohort once approximately 19 evaluable patients are reached in each cohort.

## **Recent Developments**

At the 2018 Annual Meeting of Stockholders of the Company held on December 20, 2018, the Company's stockholders approved an amendment to the Company's Certificate of Incorporation (the "Certificate of Incorporation") to effect a reverse stock split of the Company's common stock, par value \$0.001 per share, at a ratio of up to 1-for 20, to be determined by the Company's board of directors, subject to the authority of the board of directors to abandon such reverse stock split in its discretion. As of the date of this prospectus, the board of directors has not determined a reverse stock split ratio or whether to effect a reverse stock split. Although we expect that a reverse stock split would result in an increase in the market price of our common stock, it may not result in a permanent increase in the market price of our common stock, which is dependent on many factors, including general economic, market and industry conditions and other factors detailed from time to time in the reports we file with the SEC.

As previously reported, on November 1, 2018, the Company received a letter from the Listing Qualifications Department of the Nasdaq Stock Market ("Nasdaq") indicating that, based upon the closing bid price of the Company's common stock for the last 30 consecutive business days, the Company did not meet the minimum bid price of \$1.00 per share required for continued listing on the Nasdaq Capital Market pursuant to Nasdaq Listing Rule 5550(a)(2) (the "Minimum Bid Price Rule"). In accordance with Nasdaq Listing Rule 5810(c)(3)(A), the Company has been provided an initial period of 180 calendar days, or until April 30, 2019, to regain compliance with the Minimum Bid Price Rule.

## **Corporate Information**

The Company was incorporated in May 2000 as a Utah corporation. In February 2008, Bio-Path Subsidiary completed a reverse merger with the Company, which at the time was traded over the counter and had no current operations. The prior name of Company, Ogden Golf Co. Corporation, was changed to Bio-Path Holdings, Inc. and the directors and officers of Bio-Path Subsidiary became the directors and officers of Bio-Path Holdings, Inc. On March 10, 2014, our common stock ceased trading on the OTCQX and commenced trading on the Nasdaq Capital Market under the ticker symbol "BPTH." Effective December 31, 2014, we changed our state of incorporation from Utah to Delaware through a statutory conversion pursuant to the Utah Revised Business Corporation Act and the Delaware General Corporation Law.

On February 8, 2018, we effected a reverse stock split of our outstanding shares of common stock at a ratio of 1-for-10, and our common stock began trading on the split-adjusted basis on the Nasdaq Capital Market at the commencement of trading on February 9, 2018. All common stock share and per share amounts in this prospectus have been adjusted to give effect to the 1-for-10 reverse stock split.

Our principal executive offices are located at 4710 Bellaire Boulevard, Suite 210, Bellaire, Texas 77401, and our telephone number is (832) 742-1357. Our Internet address is [www.biopathholdings.com](http://www.biopathholdings.com). None of the information on our website forms a part of, or incorporated by reference into, this prospectus.

**The Offering**

Common stock offered by us            shares.

We are also offering Pre-Funded Warrants, in lieu of shares of common stock, to those investors whose purchase of shares of our common stock in this offering would result in the investor, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the investor, 9.99%) of our outstanding common stock immediately following the consummation of this offering. Each Pre-Funded Warrant will be exercisable for one share of our common stock. Each Pre-Funded Warrant and the accompanying Series B Warrant is being offered at an offering price equal to the public offering price at which a share of common stock and accompanying Series B Warrant is being offered, minus \$0.01. The exercise price of the Pre-Funded Warrants will be \$0.01 per share, and the Pre-Funded Warrants will be immediately exercisable and may be exercised at any time until exercised in full. This offering also relates to the shares of common stock issuable upon exercise of any Pre-Funded Warrants sold in this offering. For each Pre-Funded Warrant we sell, the number of shares of common stock we are offering will be decreased on a one-for-one basis. Because we will issue a Series B Warrant for each share of our common stock and for each Pre-Funded Warrant to purchase one share of our common stock sold in this offering, the number of Series B Warrants sold in this offering will not change as a result of a change in the mix of the shares of our common stock and Pre-Funded Warrants sold. There is no established public trading market for the Pre-Funded Warrants, and we do not expect a market to develop. In addition, we do not intend to list the Pre-Funded Warrants on the Nasdaq Capital Market, any other national securities exchange or any other nationally recognized trading system.

Pre-Funded Warrants offered by us

Series B Warrants offered by us            shares of common stock. Each share of our common stock and each Pre-Funded Warrant are being sold together with a Series B Warrant to purchase            share of our common stock. The exercise price of the Series B Warrants will be \$            per share, and the Series B Warrants will be exercisable immediately and will expire            years from the date of issuance. This offering also relates to the shares of common stock issuable upon exercise of Series B Warrants. There is no established public trading market for the Series B Warrants and we do not expect a market to develop. In addition, we do not intend to list the Series B Warrants on the Nasdaq Capital Market, any other national securities exchange or any other nationally recognized trading system.

Option to purchase additional shares and/or Series B Warrants

The underwriter has a 30-day option to purchase up to an additional            shares of our common stock and/or Series B Warrants to purchase up to an additional            shares of our common stock from us at the public offering price less underwriting discounts and commissions.

Common stock to be outstanding            shares, or            shares of common stock if the underwriter exercises in full its option to purchase additional shares of common stock, in each case assuming no sale of Pre-Funded Warrants and assuming no exercise of any Series B Warrants issued in this offering.

immediately  
after this  
offering (1)

Use of  
proceeds

We currently expect to use the net proceeds from this offering for working capital and general corporate purposes. See "Use of Proceeds."

3

Risk factors      An investment in our company involves a high degree of risk. Please refer to the sections titled “Risk Factors,” “Special Note Regarding Forward-Looking Statements” and other information included or incorporated by reference in this prospectus for a discussion of factors you should carefully consider before investing our securities.

Nasdaq  
Capital  
Market  
Symbol      “BPTH”

(1) The number of shares of common stock to be outstanding after this offering is based on 13,309,833 shares of our common stock outstanding as of September 30, 2018, which excludes, as of such date:

996,333 shares of common stock reserved for issuance upon the exercise of outstanding options granted under our equity incentive plans with a weighted average exercise price of \$7.71 per share;

802,000 additional shares of common stock reserved for future issuance under our 2017 Stock Incentive Plan (our “2017 Stock Incentive Plan”);

3,674,016 shares of common stock that may be issued upon exercise of outstanding warrants with a weighted average exercise price of \$2.61 per share;

292,461 shares of common stock that were issued upon exercise in full of pre-funded warrants with an exercise price of \$0.01 per share on October 4, 2018;

      shares of common stock issuable upon exercise of the Pre-Funded Warrants to be issued to the investors in this offering with an exercise price of \$0.01 per share;

      shares of common stock issuable upon exercise of the Series B Warrants to be issued to the investors in this offering with an exercise price of \$        per share; and

      shares of common stock issuable upon exercise of the underwriter’s warrants (assuming full exercise of the underwriter’s option to purchase additional shares of common stock and/or Series B Warrants), with an exercise price of \$        to be issued to the underwriter in connection with this offering.

Unless otherwise indicated, all information contained in this prospectus assumes (i) no exercise by the underwriter of its option to purchase additional shares of common stock and/or Series B Warrants, (ii) no sale of any Pre-Funded

Warrants in this offering, which, if sold, would reduce the number of shares of common stock that we are offering on a one-for-one basis, and (iii) no exercise of the underwriter's warrants to be issued to the underwriter in connection with this offering.

## **RISK FACTORS**

*An investment in our company involves a high degree of risk. Before you make a decision to invest in our securities, you should consider carefully the risks described below, as well as the risks described in or incorporated by reference in this prospectus, including the risks and uncertainties discussed under the section titled “Risk Factors” in our most recent annual report on Form 10-K and any subsequent quarterly reports on Form 10-Q or current reports on Form 8-K, and all other documents incorporated by reference into this prospectus, as updated by our subsequent filings under the Securities Exchange Act of 1934, as amended (the “Exchange Act”).*

*Any of these risks could have a material adverse effect on our business, prospects, financial condition and results of operations. In any such case, the trading price of our securities could decline and you could lose all or part of your investment. Additional risks not presently known to us or that we currently deem immaterial may also adversely affect our business operations.*

### **Risks Related to this Offering**

***You will experience immediate and substantial dilution in the net tangible book value per share of the common stock you purchase.***

Since the effective price per share of our common stock being offered is substantially higher than the net tangible book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on the assumed combined public offering price of \$ per share of common stock and accompanying Series B Warrant being sold in this offering (the last reported sale price of our common stock on the Nasdaq Capital Market on , 2018) and our net tangible book value per share as of September 30, 2018, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of approximately \$ per share in the net tangible book value of the common stock. See the section titled “Dilution” in this prospectus for a more detailed discussion of the dilution you will incur if you purchase securities in this offering. The description in this paragraph assumes no sale of Pre-Funded Warrants, which, if sold, would reduce the number of shares of common stock that we are offering on a one-for-one basis until such warrants are exercised.

***There may be future sales of our securities or other dilution of our equity, which may adversely affect the market price of our common stock.***

With limited exceptions, we are generally not restricted from issuing additional common stock, including any securities that are convertible into or exchangeable for, or that represent the right to receive, common stock. The market price of our common stock could decline as a result of sales of common stock or securities that are convertible into or exchangeable for, or that represent the right to receive, common stock after this offering or the perception that such sales could occur.

***Our management has significant flexibility in using the net proceeds of this offering.***

We currently intend generally to use the net proceeds from this offering for working capital and general corporate purposes. Our management will have significant flexibility in applying the net proceeds of this offering. Management's failure to use these funds effectively would have an adverse effect on the value of our common stock and could make it more difficult and costly to raise funds in the future.

***Warrants are speculative in nature, and holders of the warrants offered and sold in this offering will have no rights as common stockholders until such holders exercise their warrants and acquire our common stock.***

There can be no assurance that the market price of our common stock will ever equal or exceed the exercise price of the warrants offered and sold in this offering. Consequently, there can be no assurance whether it will ever be profitable for holders to exercise their warrants. In addition, until holders of the warrants offered and sold in this offering acquire shares of our common stock upon exercise of their warrants, holders will have no rights with respect to the shares of our common stock issuable upon exercise of their warrants. Upon exercise of their warrants, the holders will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

***There is no public market for the Pre-Funded Warrants or Series B Warrants being offered in this offering.***

There is no established public trading market for the Pre-Funded Warrants or Series B Warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply to list the Pre-Funded Warrants or Series B Warrants on any securities exchange or nationally recognized trading system, including the Nasdaq Capital Market. Without an active market, the liquidity of the Pre-Funded Warrants will be limited.

***Our common stock may be delisted from the Nasdaq Capital Market which could negatively impact the price of our common stock, liquidity and our ability to access the capital markets.***

The listing standards of the Nasdaq Capital Market provide that a company, in order to qualify for continued listing, must maintain a minimum stock price of \$1.00 and satisfy standards relative to minimum stockholders' equity, minimum market value of publicly held shares and various additional requirements. If we fail to comply with all listing standards applicable to issuers listed on the Nasdaq Capital Market, our common stock may be delisted. If our common stock is delisted, it could reduce the price of our common stock and the levels of liquidity available to our stockholders. In addition, the delisting of our common stock could materially adversely affect our access to the capital markets and any limitation on liquidity or reduction in the price of our common stock could materially adversely affect our ability to raise capital. Delisting from the Nasdaq Capital Market could also result in other negative consequences, including the potential loss of confidence by suppliers, customers and employees, the loss of institutional investor interest and fewer business development opportunities.

As previously reported, on November 1, 2018, we received a letter from Nasdaq indicating that, based upon the closing bid price of our common stock for the last 30 consecutive business days, we did not meet the minimum bid price of \$1.00 per share required for continued listing on the Nasdaq Capital Market pursuant to the Minimum Bid Price Rule. We have been provided an initial period of 180 calendar days, or until April 30, 2019, to regain compliance with the Minimum Bid Price Rule. The letter also indicated that if at any time before April 30, 2019 the closing bid price for our common stock is at least \$1.00 for a minimum of ten consecutive business days, Nasdaq will provide written notification to the Company that it complies with the Minimum Bid Price Rule. If we do not regain compliance with the Minimum Bid Price Rule by April 30, 2019, we may be eligible for a second compliance period of 180 calendar days, provided that we meet the continued listing requirement for market value of publicly held shares and all other initial listing standards for the Nasdaq Capital Market, with the exception of the bid price requirement, and notify Nasdaq of our intention to cure the deficiency during such second compliance period, including by effecting a reverse stock split, if necessary. If we do not regain compliance with the Minimum Bid Price Rule by April 30, 2019 and are not eligible for a second compliance period at that time, Nasdaq will provide written notification to us that our common stock may be delisted. At that time, we may appeal Nasdaq's delisting determination to a Nasdaq hearings panel. If we timely appeal, our common stock would remain listed pending the panel's decision. There can be no assurance that, if we do appeal the delisting determination by Nasdaq to the panel, such appeal would be successful.

***Even if this offering is successful, we will need to raise additional capital in the future to continue operations, which may not be available on acceptable terms, if at all. Failure to obtain necessary capital when needed may force us to delay, limit or terminate our drug development efforts or other operations.***

As of September 30, 2018, we had an accumulated deficit of \$45.8 million. To date, we have not generated any revenue from the sale of our drug candidates and we do not expect to generate any revenue from sales of our drug candidates for the foreseeable future. We expect to continue to incur significant operating losses and we anticipate that our losses may increase substantially as we expand our drug development programs and commercialization efforts. As of September 30, 2018, we had cash and cash equivalents of \$2.3 million. We do not believe that our available cash at September 30, 2018 will be sufficient to fund our liquidity and capital expenditure requirements for the next 12 months. Even if this offering is successful, we must raise additional funds in order to continue operating our business.

We expect to finance our foreseeable cash requirements through cash on hand, debt financings and public or private equity offerings. Additionally, we may seek collaborations and license arrangements for our drug candidates. If additional capital is not available to us when needed or on acceptable terms, we may not be able to continue to operate in accordance with our business plan or we may need to discontinue our operations entirely. We estimate that we will receive net proceeds of approximately \$      million from the sale of the securities offered by us in this offering, based on the assumed public offering price of \$      per share (the last reported sale price of our common stock on the Nasdaq Capital Market on      , 2018) and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, and excluding the proceeds, if any, from the exercise of the Pre-Funded Warrants and Series B Warrants issued pursuant to this offering. In the event of a decrease in the net proceeds to us from this offering as a result of a decrease in the assumed public offering price or the number of shares offered by us, we may need to raise additional capital sooner than we anticipate. In addition, we cannot provide assurances that our plans will not change or that changed circumstances will not result in the depletion of our capital resources more rapidly than we currently anticipate.

Our ongoing future capital requirements will depend on numerous factors, including:

- the rate of progress, results and costs of completion of ongoing clinical trials of our drug candidates;
- the rate of progress, results and costs of completion of the ongoing preclinical trials of prexigebersen, BP1002 and BP1003;
- the size, scope, rate of progress, results and costs of completion of any potential future clinical trials and preclinical trials of our drug candidates that we may initiate;
- the costs to obtain adequate supply of the compounds necessary for our drug candidates;
- the costs of obtaining regulatory approval of our drug candidates;
  - the scope, prioritization and number of drug development programs we pursue;
- the costs for preparing, filing, prosecuting, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims;
- the extent to which we acquire or in-license other products and technologies and the costs to develop those products and technologies;
- the costs of future commercializing activities, including product sales, marketing, manufacturing and distribution, of any of our drug candidates or other products for which marketing approval has been obtained;
- our ability to establish strategic collaborations and licensing or other arrangements on terms favorable to us; and
- competing technological and market developments.

Any additional fundraising efforts may divert our management from their day to day activities, which may adversely affect our ability to develop and commercialize our drug candidates. Our ability to raise additional funds will depend, in part, on the success of our product development activities and other factors related to financial, economic and market conditions, many of which are beyond our control. There can be no assurance that we will be able to raise

additional capital when needed or on terms that are favorable to us, if at all. If adequate funds are not available on a timely basis, we may be forced to:

- delay, reduce the scope of or eliminate one or more of our drug development programs;

- relinquish, license or otherwise dispose of rights to technologies, drug candidates or products that we would otherwise seek to develop or commercialize ourselves at an earlier stage or on terms that are less favorable than might otherwise be available; or

- liquidate and dissolve the Company.

7

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference into this prospectus contain “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended (the “Securities Act”) and Section 21E of the Exchange Act. Forward-looking statements can be identified by words such as “anticipate,” “expect,” “intend,” “plan,” “believe,” “seek,” “estimate,” “project,” “goal,” “strategy,” “future,” “likely,” “may,” “should,” “will” and variations of these and similar references to future periods, although not all forward-looking statements contain these identifying words.

Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent risks, uncertainties, and changes in circumstances, including but not limited to risk factors incorporated by reference under “Item 1A. Risk Factors” to Part I of our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 and other factors described elsewhere in this prospectus or in our current and future filings with the Securities and Exchange Commission (the “SEC”). As a result, our actual results may differ materially from those expressed or forecasted in the forward-looking statements, and you should not rely on such forward-looking statements. You should carefully read this prospectus, together with the information incorporated by reference in this prospectus as described under the sections titled “Where You Can Find More Information,” completely and with the understanding that our actual future results may be materially different from what we expect. We can give no assurances that any of the events anticipated by the forward-looking statements will occur or, if any of them do, what impact they will have on our results of operations and financial condition. Forward-looking statements include, but are not limited to, statements about:

- our lack of significant revenue to date, our history of recurring operating losses and our expectation of future operating losses;

- our need for substantial additional capital and our need to delay, reduce or eliminate our drug development and commercialization efforts if we are unable to raise additional capital;

- substantial doubt regarding our ability to continue as a going concern;

- the highly-competitive nature of the pharmaceutical and biotechnology industry and our ability to compete effectively;

- the success of our plans to use collaboration arrangements to leverage our capabilities;

- our ability to retain and attract key personnel;

- the risk of misconduct of our employees, agents, consultants and commercial partners;
- disruptions to our operations due to expansions of our operations;
- the costs we would incur if we acquire or license technologies, resources or drug candidates;
- risks associated with product liability claims;
- our reliance on information technology systems and the liability or interruption associated with cyber-attacks or other breaches of our systems;
- our ability to use net operating loss carryforwards;
- provisions in our charter documents and state law that may prevent a change in control;
- our need to complete extensive clinical trials and the risk that we may not be able to demonstrate the safety and efficacy of our drug candidates;
- risks that that our clinical trials may be delayed or terminated;
- our ability to obtain domestic and foreign regulatory approval for our drug candidates;
- changes in existing laws and regulations affecting the healthcare industry;
- our reliance on third parties to conduct clinical trials for our drug candidates;
- our ability to maintain orphan drug exclusivity for our drug candidates;
- our reliance on third parties for manufacturing our clinical drug supplies;

- risks associated with the manufacture of our drug candidates;
- our ability to establish sales and marketing capabilities relating to our drug candidates;
  - market acceptance of our drug candidates;
  - third-party payor reimbursement practices;
- our ability to adequately protect the intellectual property of our drug candidates;
  - infringement on the intellectual property rights of third parties;
  - costs and time relating to litigation regarding intellectual property rights;
- our ability to adequately prevent disclosure by our employees or others of trade secrets and other proprietary information;
  - our need to raise additional capital;
  - the volatility of the trading price of our common stock;
  - our common stock being thinly traded;
- our ability to issue shares of common or preferred stock without approval from our stockholders;
  - our ability to pay cash dividends;
- costs relating to public investigations, fines, enforcement actions and other sanctions by regulatory agencies if we do not comply with regulations applicable to public companies; and
- our ability to regain and maintain compliance with the listing standards of the Nasdaq Capital Market.

Any forward-looking statement made by us in this prospectus and the documents incorporated by reference into this prospectus is based only on information currently available to us and speaks only as of the date on which it is made. We undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future developments or otherwise. However, you should carefully review the risk factors set forth in other reports or documents we file from time to time with the SEC.

## USE OF PROCEEDS

We expect to receive net proceeds from this offering of approximately \$      million (or approximately \$      million if the underwriter's option to purchase additional securities is exercised in full), based on an assumed combined public offering price of \$ per share of common stock and accompanying Series B Warrant, which is the last reported sale price of our common stock on the Nasdaq Capital Market on      , 2018, after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us, assuming no sale of any Pre-Funded Warrants in this offering and excluding the proceeds we may receive from the exercise of the Series B Warrants issued in this offering. We cannot predict when or if these Series B Warrants will be exercised. It is possible that these Series B Warrants may expire and may never be exercised.

A \$      increase or decrease in the assumed combined public offering price of \$      per share of common stock and accompanying Series B Warrant would increase or decrease the expected net proceeds to us from this offering by approximately \$      million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us, and excluding the proceeds we may receive from the exercise of the Series B Warrants issued in this offering.

Similarly, a one million share increase or decrease in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase or decrease the net proceeds to us by approximately \$      million, assuming the assumed combined public offering price of \$      per share of common stock and accompanying Series B Warrant remains the same, after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us, and excluding the proceeds we may receive from the exercise of the Series B Warrants issued in this offering.

We currently intend to use the net proceeds from this offering for working capital and general corporate purposes. As of the date of this prospectus, we cannot specify with certainty all of the particular uses of the proceeds from this offering. Accordingly, we will retain broad discretion over the use of such proceeds.

**DILUTION**

If you invest in our securities, you will experience immediate and substantial dilution to the extent of the difference between the combined public offering price per share of common stock and accompanying Series B Warrant in this offering and the adjusted net tangible book value per share of our common stock immediately after the offering.

Our net tangible book value per share is determined by subtracting our total liabilities from our total tangible assets, which is total assets less intangible assets, and dividing this amount by the number of shares of common stock outstanding. The historical net tangible book value of our common stock as of September 30, 2018 was approximately \$2.3 million, or \$0.18 per share, based on 13,309,833 shares of our common stock outstanding at September 30, 2018.

After giving effect to our sale of        shares of common stock and accompanying Series B Warrants to be sold in this offering (assuming no sale of Pre-Funded Warrants), at the assumed combined public offering price of \$        per share of common stock and accompanying Series B Warrant, which is the last reported sale price of our common stock on the Nasdaq Capital Market on       , 2018, and after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us, and excluding the proceeds we may receive from the exercise of the Series B Warrants issued in this offering, our net tangible book value as of September 30, 2018 would have been approximately \$        million, or \$        per share of common stock. This represents an immediate increase in net tangible book value of \$        per share to existing stockholders and an immediate dilution of \$        per share to new investors in this offering. The following table illustrates this dilution on a per share basis:

Assumed combined offering price per share and Series B Warrant (assuming no sale of Pre-Funded Warrants)	\$
Historical net tangible book value per share as of September 30, 2018	\$0.18
Increase in net tangible book value per share attributable to new investors	\$
As adjusted net tangible book value per share after this offering	\$
Dilution per share to new investors	\$

A \$        increase in the assumed combined public offering price of \$        per share and Series B Warrant would increase our adjusted net tangible book value after this offering by \$        million, or \$        per share, and the dilution per share to investors purchasing securities in this offering would be approximately \$        per share, assuming that the number of shares of common stock and Series B Warrants offered by us, as set forth on the cover page of this prospectus, remains the same (assuming no sale of Pre-Funded Warrants) and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, a \$        decrease in the assumed combined public offering price of \$        per share and Series B Warrant would decrease our adjusted net tangible book value after this offering by \$        million, or \$        per share, and the dilution per share to investors purchasing securities in

this offering would be \$ per share, assuming that the number of shares of common stock and Series B Warrants offered by us, as set forth on the cover page of this prospectus remains the same (assuming no sale of Pre-Funded Warrants) and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

We may increase or decrease the number of shares of common stock and accompanying Series B Warrants we offer from the assumed number of shares of common stock and accompanying Series B Warrants set forth on the cover page of this prospectus. An increase of one million shares of common stock and accompanying Series B Warrants offered by us from the assumed number of shares of common stock and accompanying Series B Warrants set forth on the cover page of this prospectus would increase our adjusted net tangible book value after this offering by \$ million, or \$ per share, and the dilution per share to investors purchasing securities in this offering would be approximately \$ per share, assuming that the assumed combined public offering price remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, a decrease of one million shares of common stock and accompanying Series B Warrants offered by us from the assumed number of shares of common stock and accompanying Series B Warrants set forth on the cover page of this prospectus would decrease our adjusted net tangible book value after this offering by \$ million, or \$ per share, and the dilution per share to investors purchasing securities in this offering would be approximately \$ , assuming that the assumed combined public offering price remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The information discussed above is for illustration only and will adjust based on the actual public offering price, the actual number of shares and Series B Warrants that we offer in this offering and other terms of this offering determined at pricing. The discussion and table above assume (i) no sale of Pre-Funded Warrants, which, if sold, would reduce the number of shares of common stock that we are offering on a one-for-one basis, (ii) no exercise of the underwriter's option to purchase up to an additional shares of common stock and/or Series B Warrants to purchase up to an additional shares of our common stock, and (iii) no exercise of Series B Warrants accompanying the shares of common stock sold in this offering.

If the underwriter exercises in full its option to purchase up to additional shares of common stock and Series B Warrants to purchase up to an additional shares of common stock at the assumed combined public offering price of \$ per share and Series B Warrant (the last reported sale price of our common stock on the Nasdaq Capital Market on , 2018), less underwriting discounts and commissions, the as-adjusted net tangible book value after this offering would be \$ million, or \$ per share, representing an increase in net tangible book value of \$ per share to existing stockholders and immediate dilution in net tangible book value of \$ per share to investors purchasing our securities in this offering at the assumed combined public offering price.

The above discussion and table are based on 13,309,833 shares of our common stock outstanding as of September 30, 2018, which excludes as of September 30, 2018:

996,333 shares of common stock reserved for issuance upon the exercise of outstanding options granted under our equity incentive plans with a weighted average exercise price of \$7.71 per share;

· 802,000 additional shares of common stock reserved for future issuance under our 2017 Stock Incentive Plan;

3,674,016 shares of common stock that may be issued upon exercise of outstanding warrants with a weighted average exercise price of \$2.61 per share;

292,461 shares of common stock that were issued upon exercise in full of pre-funded warrants with an exercise price of \$0.01 per share on October 4, 2018;

shares of common stock issuable upon exercise of the Pre-Funded Warrants to be issued to the investors in this offering with an exercise price of \$0.01 per share;

shares of common stock issuable upon exercise of the Series B Warrants to be issued to the investors in this offering with an exercise price of \$ per share; and

shares of common stock issuable upon exercise of the underwriter's warrants (assuming full exercise of the underwriter's option to purchase additional shares of common stock and/or Series B Warrants), with an exercise price of \$ to be issued to the underwriter in connection with this offering.

The above illustration of dilution per share to investors participating in this offering does not take into account further dilution to investors in this offering that could occur upon the exercise of outstanding options and warrants having a per share exercise price less than the public offering price per share in this offerings. To the extent that any of these outstanding options or warrants outstanding as of September 30, 2018, have been or are exercised in the future or we issue additional shares under our equity incentive plans, investors purchasing securities in this offering may experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

## **DESCRIPTION OF CAPITAL STOCK**

The following description of our common stock and preferred stock is a summary. It is not complete and is subject to and qualified in its entirety by our certificate of incorporation and first amended and restated bylaws, each of which is incorporated by reference into this prospectus. See the sections titled “Where You Can Find More Information” and “Information Incorporated by Reference.” As of the date of this prospectus, our certificate of incorporation authorizes us to issue 200,000,000 shares of common stock, par value \$0.001 per share, and 10,000,000 shares of preferred stock, par value \$0.001 per share. As of September 30, 2018, there were 13,309,833 shares of common stock issued and outstanding and no shares of preferred stock issued and outstanding.

### **Common Stock**

Holders of common stock are entitled to one vote for each share held in the election of directors and on all other matters submitted to a vote of stockholders. Cumulative voting of shares of common stock is prohibited. Accordingly, holders of a majority of the shares of common stock entitled to vote in any election of directors may elect all of the directors standing for election.

Subject to the prior rights of the holders of any outstanding preferred stock, holders of common stock are entitled to receive dividends when, as and if declared by our board of directors out of funds legally available therefor. Upon the liquidation, dissolution or winding up of our company, the holders of common stock are entitled to receive ratably the assets of our company remaining after payment of all liabilities and payment to holders of preferred stock if such preferred stock has an involuntary liquidation preference over the common stock. Holders of common stock have no preemptive, subscription, redemption or conversion rights. The outstanding shares of common stock are, and the shares offered by us in this offering will be, when issued and paid for, validly issued, fully paid and nonassessable.

As of December 26, 2018, there were approximately 235 holders of record of our common stock.

### **Preferred Stock**

The board of directors is authorized, without any further notice to or action of the stockholders, to issue 10,000,000 shares of preferred stock in one or more series and to determine the relative rights, preferences and privileges of the shares of any such series.

### **Limitation on Liability and Indemnification of Officers and Directors**

Our certificate of incorporation and first amended and restated bylaws provide for indemnification of our officers and directors to the fullest extent permitted by Delaware law. Our certificate of incorporation and first amended and restated bylaws limit the liability of our directors for monetary damages to the fullest extent permitted by Delaware law. We maintain directors' and officers' liability insurance.

### **Anti-Takeover Effects of Provisions of Our Certificate of Incorporation, Our Bylaws and Delaware Law**

Some provisions of Delaware law and our certificate of incorporation and our first amended and restated bylaws contain provisions that could have the effect of delaying, deterring or preventing another party from acquiring or seeking to acquire control of us. These provisions are intended to discourage certain types of coercive takeover practices and inadequate takeover bids and to encourage anyone seeking to acquire control of us to negotiate first with our board of directors. However, these provisions may also delay, deter or prevent a change in control or other takeover of our company that our stockholders might consider to be in their best interests, including transactions that might result in a premium being paid over the market price of our common stock and also may limit the price that investors are willing to pay in the future for our common stock. These provisions may also have the effect of preventing changes in our management.

Our certificate of incorporation and first amended and restated bylaws include anti-takeover provisions that:

authorize our board of directors, without further action by the stockholders, to issue shares of preferred stock in one or more series, and with respect to each series, to fix the number of shares constituting that series and establish the rights and other terms of that series;

establish advance notice procedures for stockholders to submit nominations of candidates for election to our board of directors and other proposals to be brought before a stockholders meeting;

provide that our first amended and restated bylaws may be amended by our board of directors without stockholder approval;

limit our stockholders' ability to call special meetings of stockholders;

allow our directors to establish the size of the board of directors by action of the board, subject to a minimum of three members;

provide that vacancies on our board of directors or newly created directorships resulting from an increase in the number of our directors may be filled only by a majority of directors then in office, even though less than a quorum; and

do not give the holders of our common stock cumulative voting rights with respect to the election of directors.

### **Business Combinations**

Section 203 of the Delaware General Corporation Law provides that we may not engage in certain "business combinations" with any "interested stockholder" for a three-year period following the time that the person became an interested stockholder, unless:

prior to the time that person became an interested stockholder, our board of directors approved either the business combination or the transaction which resulted in the person becoming an interested stockholder;

upon consummation of the transaction which resulted in the person 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 certain shares; or

at or subsequent to the time the person became an interested stockholder, the business combination is approved by the board of directors and by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Generally, a business combination includes a merger, consolidation, asset or stock sale or other transaction resulting in a financial benefit to the interested stockholder. Subject to certain exceptions, an interested stockholder is a person who, together with that person's affiliates and associates, owns, or within the previous three years owned, 15% or more of our voting stock. However, in the case of our company, the sponsors and any of their respective permitted transferees receiving 15% or more of our voting stock, such stockholders will not be deemed to be interested stockholders regardless of the percentage of our voting stock owned by them. The statute could prohibit or delay mergers or other takeover or change in control attempts with respect to us and, accordingly, may discourage attempts to acquire us.

### **Reverse Stock Split**

At the 2018 Annual Meeting of Stockholders of the Company held on December 20, 2018, the Company's stockholders approved an amendment to the Company's Certificate of Incorporation to effect a reverse stock split of the Company's common stock, par value \$0.001 per share, at a ratio of up to 1-for 20, to be determined by the Company's board of directors, subject to the authority of the board of directors to abandon such reverse stock split in its discretion. As of the date of this prospectus, the board of directors has not determined a reverse stock split ratio or whether to effect a reverse stock split.

### **Listing**

Our common stock is listed for trading on the Nasdaq Capital Market under the symbol "BPTH."

### **Transfer Agent and Registrar**

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC, 6201 15<sup>th</sup> Avenue, Brooklyn, New York 11219. Its phone number is (800) 937-5449.

## DESCRIPTION OF SECURITIES WE ARE OFFERING

We are offering up to    shares of our common stock and Series B Warrants to purchase up to    shares of our common stock (excluding the underwriter’s option to purchase up to an additional    shares of common stock and/or Series B Warrants to purchase up to an additional    shares of our common stock). In addition, we are also offering Pre-Funded Warrants in lieu of shares of common stock to those investors whose purchase of shares of our common stock in this offering would result in the investor, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the investor, 9.99%) of our outstanding common stock following the consummation of this offering. For each Pre-Funded Warrant we sell, the number of shares of common stock we are offering will be decreased on a one-for-one basis. We are also offering the shares of common stock issuable from time to time upon exercise of the Pre-Funded Warrants and the Series B Warrants offered hereby.

### Common Stock

The material terms and provisions of our common stock are described under the heading “Description of Capital Stock” in this prospectus.

### Pre-Funded Warrants

The material terms and provisions of the Pre-Funded Warrants to purchase shares of common stock being offered pursuant to this prospectus are summarized below. This summary is subject to and qualified in its entirety by the form of Pre-Funded Warrant, which will be provided to each investor in this offering and will be filed with the SEC as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of Pre-Funded Warrant for a complete description of the terms and conditions of the Pre-Funded Warrants.

*General Terms of the Pre-Funded Warrants.* The Pre-Funded Warrants to be issued in this offering represent the rights to purchase shares of common stock at an initial exercise price of \$0.01 per share. Each Pre-Funded Warrant will be exercisable upon issuance and at any time thereafter until exercised in full.

*Exercise.* Holders of the Pre-Funded Warrants may exercise their Pre-Funded Warrants to purchase shares of our common stock at any time after issuance until exercised in full by delivering (i) notice of exercise, appropriately completed and duly signed, and (ii) if such holder is not utilizing the cashless exercise provisions with respect to the

Pre-Funded Warrants, payment of the exercise price for the number of shares with respect to which the Pre-Funded Warrant is being exercised. Warrants may be exercised in whole or in part, but only for full shares of common stock. We provide certain rescission and buy-in rights to a holder if we fail to deliver the shares of common stock issuable upon exercise of the Pre-Funded Warrants by the date on which delivery of the stock certificate is required by the Pre-Funded Warrant. With respect to the rescission rights, the holder has the right to rescind the exercise if stock certificates are not timely delivered. The buy-in rights apply if after the date on which delivery of the stock certificate is required by the Pre-Funded Warrant, the holder purchases (in an open market transaction or otherwise) shares of our common stock to deliver in satisfaction of a sale by the holder of the Pre-Funded Warrant shares that the holder anticipated receiving from us upon exercise of the Pre-Funded Warrant. In this event, we will:

pay in cash to the holder the amount equal to the excess (if any) of the buy-in price over the product of (A) such number of Pre-Funded Warrant shares that we were required to deliver to the holder times (B) the price at which the sell order giving rise to holder's purchase obligation was executed; and

at the election of holder, either (A) reinstate the portion of the Pre-Funded Warrant as to such number of shares of common stock, or (B) deliver to the holder a certificate or certificates representing such number of shares of common stock.

In addition, the Pre-Funded Warrant holders are entitled to a "cashless exercise" option if, at the time of exercise, there is no effective registration statement registering, or no current prospectus available for, the issuance of the shares of common stock underlying the Pre-Funded Warrants. This option entitles the Pre-Funded Warrant holders to elect to receive fewer shares of common stock without paying the cash exercise price. The number of shares to be issued would be determined by a formula set forth in the Pre-Funded Warrant.

The shares of common stock issuable on exercise of the Pre-Funded Warrants will be, when issued and paid for in accordance with the Pre-Funded Warrants, duly and validly authorized, issued and fully paid and non-assessable. We will authorize and reserve at least that number of shares of common stock equal to the number of shares of common stock issuable upon exercise of all outstanding Pre-Funded Warrants.

*Fundamental Transactions.* If, at any time while the Pre-Funded Warrants are outstanding, (i) we, in one or more related transactions, effect any merger or consolidation with or into another person, (ii) we effect any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of our assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by us or another person) is completed pursuant to which holders of our common stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of our outstanding common stock, (iv) we, directly or indirectly, in one or more related transactions, effect any reclassification, reorganization or recapitalization of our common stock or any compulsory share exchange pursuant to which our common stock is effectively converted into or exchanged for other securities, cash or property, or (v) we, directly or indirectly, in one or more related transactions consummate a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another person or group of persons whereby such other person or group acquires more than 50% of our outstanding common stock (not including any shares of our common stock held by such other person or other persons making or party to, or associated or affiliated with such other persons making or party to, such stock or share purchase agreement or other business combination) (each, a “Fundamental Transaction”), then the holder shall have the right thereafter to receive, upon exercise of the Pre-Funded Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Pre-Funded Warrant shares then issuable upon exercise of the Pre-Funded Warrant, and any additional consideration payable as part of the Fundamental Transaction.

*Subsequent Rights Offerings.* If, at any time while the Pre-Funded Warrants are outstanding, we issue rights, options or warrants to all holders of our common stock entitling them to purchase our common stock, warrants, securities or other property, then the holders of the Pre-Funded Warrants will be entitled to acquire those rights, options and warrants on the basis of the number of shares of common stock acquirable upon complete exercise of the Pre-Funded Warrants (without regard to any limitations on exercise thereof, including without limitation, the beneficial ownership limitation).

*Pro Rata Distributions.* If, at any time while the Pre-Funded Warrants are outstanding, we make a dividend or distribution of assets or rights to acquire assets to all holders of our common stock, the holders of the Pre-Funded Warrants will be entitled to participate in the dividend or distribution of assets or rights to acquire assets on the basis of the number of shares of common stock acquirable upon complete exercise of the Pre-Funded Warrants (without regard to any limitations on exercise thereof, including without limitation, the beneficial ownership limitation).

*Certain Adjustments.* The exercise price and the number of shares of common stock purchasable upon the exercise of the Pre-Funded Warrants are subject to adjustment upon the occurrence of specific events, including stock dividends, stock splits, combinations and reclassifications of our common stock.

*Delivery of Shares.* Upon the holder's exercise of a Pre-Funded Warrant, we will promptly, but in no event later than two trading days after the delivery to the Company of the notice of exercise and no later than one trading date after the delivery to the Company of the aggregate exercise price, issue and deliver, or cause to be issued and delivered, the shares of common stock issuable upon exercise of the Pre-Funded Warrant. In addition, we will, if the holder provides the necessary information to us, issue and deliver the shares electronically through The Depository Trust Corporation through its Deposit Withdrawal Agent Commission System (DWAC) or another established clearing corporation performing similar functions. If we fail for any reason to timely deliver to the investor the Pre-Funded Warrant shares, we will pay to the investor, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Pre-Funded Warrant shares subject to such exercise, \$10 per trading day (increasing to \$20 per trading day on the fifth trading day after such liquidated damages begin to accrue) for each trading day after the trading day on which the Pre-Funded Warrant shares were required to be delivered, until such Pre-Funded Warrant shares are delivered or the investor rescinds such exercise.

*Notice of Corporate Action.* We will provide notice to holders of the Pre-Funded Warrants to provide them with the opportunity to exercise their Pre-Funded Warrants and hold common stock in order to participate in or vote on the following corporate events:

if we shall take a record of the holders of our common stock for the purpose of entitling them to receive a dividend or other distribution, or a redemption of common stock, or any warrant or right to subscribe for or purchase any shares of stock of any class or any other right;

any reclassification of our capital stock or any consolidation or merger with, or any sale, transfer or other disposition of all or substantially all of our property, assets or business to, or any compulsory share exchange with, another corporation; or

a voluntary or involuntary dissolution, liquidation or winding up of our Company.

*Limitations on Exercise.* The number of Pre-Funded Warrant shares that may be acquired by any holder upon any exercise of the Pre-Funded Warrant shall be limited to the extent necessary to ensure that, following such exercise (or other issuance), the total number of shares of common stock then beneficially owned by such holder and its affiliates and any other persons whose beneficial ownership of common stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act, does not exceed 4.99% (or on election of the holder, 9.99%) of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise), or the beneficial ownership limitation. The holder may elect to increase or decrease the beneficial ownership limitation provided that the beneficial ownership limitation does not exceed 9.99% of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise) upon not less than 61 days' prior written notice to the Company.

## **Series B Warrants**

The material terms and provisions of the Series B Warrants to purchase shares of common stock being offered pursuant to this prospectus are summarized below. This summary is subject to and qualified in its entirety by the form of Series B Warrant, which will be provided to each investor in this offering and will be filed with the SEC as an exhibit to the registration statement of which this prospectus forms a part. Prospective investors should carefully review the terms and provisions of the form of Series B Warrant for a complete description of the terms and conditions of the Series B Warrants.

*General Terms of the Warrants.* The Series B Warrants to be issued in this offering represent the rights to purchase up to shares of common stock at an initial exercise price of \$ per share. Each warrant will be exercisable immediately and have a term of years.

*Exercise.* Holders of the Series B Warrants may exercise their Series B Warrants to purchase shares of our common stock on or before the expiration date by delivering (i) notice of exercise, appropriately completed and duly signed, and (ii) if such holder is not utilizing the cashless exercise provisions with respect to the Series B Warrants, payment of the exercise price for the number of shares with respect to which the Series B Warrant is being exercised. Series B Warrants may be exercised in whole or in part, but only for full shares of common stock. We provide certain rescission and buy-in rights to a holder if we fail to deliver the shares of common stock underlying the Series B Warrants by the date on which delivery of the stock certificate is required by the Series B Warrant. With respect to the

rescission rights, the holder has the right to rescind the exercise if stock certificates are not timely delivered. The buy-in rights apply if after the date on which delivery of the stock certificate is required by the Series B Warrant, the holder purchases (in an open market transaction or otherwise) shares of our common stock to deliver in satisfaction of a sale by the holder of the Series B Warrant shares that the holder anticipated receiving from us upon exercise of the Series B Warrant. In this event, we will:

pay in cash to the holder the amount equal to the excess (if any) of the buy-in price over the product of (A) such number of Series B Warrant shares that we were required to deliver to the holder times (B) the price at which the sell order giving rise to holder's purchase obligation was executed; and

at the election of holder, either (A) reinstate the portion of the Series B Warrant as to such number of shares of common stock, or (B) deliver to the holder a certificate or certificates representing such number of shares of common stock.

In addition, holders of Series B Warrants are entitled to a "cashless exercise" option if, at the time of exercise, there is no effective registration statement registering, or no current prospectus available for, the issuance of the shares of common stock underlying the Series B Warrants. This option entitles the Series B Warrant holders to elect to receive fewer shares of common stock without paying the cash exercise price. The number of shares to be issued would be determined by a formula set forth in the Series B Warrant.

The shares of common stock issuable on exercise of the Series B Warrants will be, when issued and paid for in accordance with the Series B Warrants, duly and validly authorized, issued and fully paid and non-assessable. We will authorize and reserve at least that number of shares of common stock equal to the number of shares of common stock issuable upon exercise of all outstanding Series B Warrants.

*Fundamental Transactions.* If, at any time while the Series B Warrants are outstanding, (1) we, in one or more related transactions, effect any merger or consolidation with or into another person, (ii) we effect any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of our assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by us or another person) is completed pursuant to which holders of our common stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of our outstanding common stock, (iv) we, directly or indirectly, in one or more related transactions, effect any reclassification, reorganization or recapitalization of our common stock or any compulsory share exchange pursuant to which our common stock is effectively converted into or exchanged for other securities, cash or property, or (v) we, directly or indirectly, in one or more related transactions consummate a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another person or group of persons whereby such other person or group acquires more than 50% of our outstanding common stock (not including any shares of our common stock held by such other person or other persons making or party to, or associated or affiliated with such other persons making or party to, such stock or share purchase agreement or other business combination) (each, a “Fundamental Transaction”), then the holder shall have the right thereafter to receive, upon exercise of the Series B Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Series B Warrant shares then issuable upon exercise of the Series B Warrant, and any additional consideration payable as part of the Fundamental Transaction. In the event of a Fundamental Transaction other than a Fundamental Transaction that has not been approved by our board of directors, we or such successor entity shall, at a holder’s option, exercisable at any time concurrently with, or within 30 days after, the consummation of the Fundamental Transaction, purchase the Series B Warrants from such holder by paying to such holder an amount of cash equal to the black scholes value of the remaining unexercised portion of such Series B Warrants on the date of the consummation of such Fundamental Transaction.

*Subsequent Rights Offerings.* If, at any time while the Series B Warrants are outstanding, we issue rights, options or warrants to all holders of our common stock entitling them to purchase our common stock, warrants, securities or other property, then the holders of the Series B Warrants will be entitled to acquire those rights, options and warrants on the basis of the number of shares of common stock acquirable upon complete exercise of the Series B Warrants (without regard to any limitations on exercise thereof, including without limitation, the beneficial ownership limitation).

*Pro Rata Distributions.* If, at any time while the Series B Warrants are outstanding, we make a dividend or distribution of assets or rights to acquire assets to all holders of our common stock, the holders of the Series B Warrants will be entitled to participate in the dividend or distribution of assets or rights to acquire assets on the basis of the number of shares of common stock acquirable upon complete exercise of the Series B Warrants (without regard to any limitations on exercise thereof, including without limitation, the beneficial ownership limitation).

*Certain Adjustments.* The exercise price and the number of shares of common stock purchasable upon the exercise of the Series B Warrants are subject to adjustment upon the occurrence of specific events, including stock dividends,

stock splits, combinations and reclassifications of our common stock.

*Delivery of Shares.* Upon the holder's exercise of a Series B Warrant, we will promptly, but in no event later than two trading days after the delivery to the Company of the notice of exercise and no later than one trading date after the delivery to the Company of the aggregate exercise price, issue and deliver, or cause to be issued and delivered, the shares of common stock issuable upon exercise of the Series B Warrant. In addition, we will, if the holder provides the necessary information to us, issue and deliver the shares electronically through The Depository Trust Corporation through its Deposit Withdrawal Agent Commission System (DWAC) or another established clearing corporation performing similar functions. If we fail for any reason to timely deliver to the investor the Series B Warrant shares, we will pay to the investor, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Series B Warrant shares subject to such exercise, \$10 per trading day (increasing to \$20 per trading day on the fifth trading day after such liquidated damages begin to accrue) for each trading day after the trading day on which the Series B Warrant shares were required to be delivered, until such Series B Warrant shares are delivered or the investor rescinds such exercise.

*Notice of Corporate Action.* We will provide notice to holders of the Series B Warrants to provide them with the opportunity to exercise their Series B Warrants and hold common stock in order to participate in or vote on the following corporate events:

if we shall take a record of the holders of our common stock for the purpose of entitling them to receive a dividend or other distribution, or a redemption of common stock, or any warrant or right to subscribe for or purchase any shares of stock of any class or any other right;

any reclassification of our capital stock or any consolidation or merger with, or any sale, transfer or other disposition of all or substantially all of our property, assets or business to, or any compulsory share exchange with, another corporation; or

a voluntary or involuntary dissolution, liquidation or winding up of our Company.

*Limitations on Exercise.* The number of Series B Warrant shares that may be acquired by any holder upon any exercise of the Series B Warrant shall be limited to the extent necessary to ensure that, following such exercise (or other issuance), the total number of shares of common stock then beneficially owned by such holder and its affiliates and any other persons whose beneficial ownership of common stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act, does not exceed 4.99% (or on election of the holder, 9.99%) of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise), or the beneficial ownership limitation. The holder may elect to increase or decrease the beneficial ownership limitation provided that the beneficial ownership limitation does not exceed 9.99% of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise) upon not less than 61 days' prior written notice to the Company.

## UNDERWRITING

We have entered into an underwriting agreement dated \_\_\_\_\_, 2018 with H.C. Wainwright & Co., LLC, as underwriter, with respect to the securities being offered hereby. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriter and the underwriter has agreed to purchase from us, shares of our common stock and/or Pre-Funded Warrants and accompanying Series B Warrants to purchase shares of our common stock. Our common stock trades on the Nasdaq Capital Market under the symbol “BPTH.”

Pursuant to the terms and subject to the conditions contained in the underwriting agreement, we have agreed to sell to the underwriter named below, and the underwriter has agreed to purchase from us, the respective number of shares of common stock, Pre-Funded Warrants and Series B Warrants to purchase common stock set forth opposite its name below:

Underwriter	Number of Shares of Common Stock	Number of Pre-funded Warrants	Number of Series B Warrants
H.C. Wainwright & Co., LLC			

The underwriting agreement provides that the obligation of the underwriter to purchase the shares of common stock and/or Pre-Funded Warrants and the Series B Warrants to purchase shares of common stock offered by this prospectus is subject to certain conditions. The underwriter is obligated to purchase all of the shares of common stock and/or Pre-Funded Warrants and the Series B Warrants to purchase shares of our common stock offered hereby if any of the securities are purchased, other than those shares covered by the option to purchase additional securities described below.

### Option to Purchase Additional Securities

We have granted the underwriter an option to purchase additional securities. This option, which is exercisable for up to 30 days after the date of this prospectus, permits the underwriter to purchase up to shares of common stock at a price of \$ \_\_\_\_\_ per share and/or Series B Warrants exercisable for up to shares of common stock at a price of \$0.01 per Series B Warrant, less the underwriting discount and commissions.

### Discounts, Commissions and Expenses

The underwriter proposes to offer the shares of common stock and/or Pre-Funded Warrants and the accompanying Series B Warrants purchased pursuant to the underwriting agreement to the public at the public offering price set forth on the cover page of this prospectus and to certain dealers at that price less a concession not in excess of \$ \_\_\_\_\_ per share and accompanying Series B Warrant or \$ \_\_\_\_\_ per Pre-Funded Warrant and accompanying Series B Warrant, based on the combined public offering price per share and accompanying Series B Warrant or Pre-Funded Warrant and accompanying Series B Warrant set forth on the cover page of this prospectus. After this offering, the public offering price and concession may be changed by the underwriter. No such change shall change the amount of proceeds to be received by us as set forth on the cover page of this prospectus.

In connection with the sale of the common stock, Pre-Funded Warrants and/or Series B Warrants to be purchased by the underwriter, the underwriter will be deemed to have received compensation in the form of underwriting commissions and discounts. The underwriter's commissions and discounts will be 7% of the gross proceeds of this offering, or \$ \_\_\_\_\_ per share of common stock or per Pre-Funded Warrant and \$0.0007 per Series B Warrant.

The following table shows the underwriting discounts and commissions payable to the underwriter by us in connection with this offering:

	Per Share	Per Pre-Funded Warrant	Per Series B Warrant	Total Per Share and Series B Warrant	Total Per Pre-Funded Warrant and Series B Warrant
Public offering price	\$	\$	\$	\$	\$
Underwriting discounts and commissions payable by us	\$	\$	\$	\$	\$

We have also agreed to pay the underwriter a management fee equal to 1.0% of the gross proceeds raised in this offering, to reimburse the underwriter for reasonable out-of-pocket expenses, including legal fees and expenses, of up to \$100,000 and to provide the underwriter with a \$50,000 non-accountable expense allowance. We estimate the total expenses payable by us for this offering will be approximately \$ , which amount excludes the underwriting discount and commissions.

In addition, we have agreed to issue to the underwriter warrants to purchase up to shares of common stock, which represents 6% of the aggregate number of shares of common stock sold in this offering (including the number of shares of common stock issuable upon exercise of the Pre-Funded Warrants and assuming full exercise of the underwriter's option to purchase additional shares of common stock and/or Series B Warrants), at an exercise price of \$ per share (representing 125% of the combined public offering price for a share of common stock and accompanying Series B Warrant to be sold in this offering). The underwriter warrants will be exercisable immediately and for five years from the effective date of this offering. Pursuant to FINRA Rule 5110(g), the underwriter warrants and any shares issued upon exercise of the underwriter warrants shall not be sold, transferred, assigned, pledged, or hypothecated, or be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of the securities by any person for a period of 180 days immediately following the date of effectiveness or commencement of sales of this offering, except the transfer of any security: (i) by operation of law or by reason of our reorganization; (ii) to any FINRA member firm participating in the offering and the officers or partners thereof, if all securities so transferred remain subject to the lock-up restriction set forth above for the remainder of the time period; (iii) if the aggregate amount of our securities held by the underwriter or related persons do not exceed 1% of the securities being offered; (iv) that is beneficially owned on a pro-rata basis by all equity owners of an investment fund, provided that no participating member manages or otherwise directs investments by the fund and the participating members in the aggregate do not own more than 10% of the equity in the fund; or (v) the exercise or conversion of any security, if all securities remain subject to the lock-up restriction set forth above for the remainder of the time period.

### **Right of First Refusal**

We have also granted the underwriter a right of first refusal for a period of 12 months following the closing of this offering or until we raise in the aggregate in future transactions at least \$20 million in gross proceeds, (i) to act as our exclusive financial advisor in connection with any disposition or acquisition of business units, acquisition of outstanding securities or exchange or tender offer, merger, consolidation, business combination, recapitalization, reorganization and other similar transactions, if we decide to retain a financial advisor for such transaction; (ii) to act as sole book-runner, sole manager, sole placement agent or sole agent with respect to any financing or refinancing of any indebtedness using a manager or agent; and (iii) to act as sole book-running manager, sole underwriter or sole placement agent for any public offering or private placement of equity, equity-linked or debt securities using an underwriter or placement agent.

### **Tail Financing Payments**

We have also agreed to pay the underwriter a tail fee equal to the cash and warrant compensation in this offering, if any investor who was contacted or introduced to us by the underwriter during the term of the underwriter's engagement provides us with capital in any public or private offering or other financing or capital raising transaction during the 7-month period following expiration or termination of our engagement of the underwriter, subject to certain limitations.

### **Indemnification**

Pursuant to the underwriting agreement, we have agreed to indemnify the underwriter against certain liabilities, including liabilities under the Securities Act, or to contribute to payments that the underwriter or such other indemnified parties may be required to make in respect of those liabilities.

### **Determination of Offering Price**

The actual offering price of the securities we are offering will be negotiated between us and the underwriter based on the trading of our shares of common stock prior to the offering, among other things, and may be at a discount to the current market price.

## **Lock-Up Agreements**

We have agreed not to (i) offer, pledge, issue, sell, contract to sell, purchase, contract to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock or any securities convertible into or exercisable or exchangeable for our common stock; (ii) enter into any swap or other arrangement that transfers, in whole or in part, any of the economic consequences of ownership of shares of common stock; or (iii) file any registration statement with the SEC relating to the offering of any shares of our common stock or any securities convertible into or exercisable or exchangeable for shares of our common stock, without the prior written consent of H.C. Wainwright & Co., LLC for a period of 90 days following the date of this prospectus. This consent may be given at any time without public notice. These restrictions on future issuances are subject to exceptions, including for (i) the issuance of shares of our common stock, warrants and shares of our common stock underlying the Pre-Funded Warrants and Series B Warrants sold in this offering, (ii) the issuance of shares of our common stock upon the exercise of outstanding options or warrants or pursuant to certain other rights, (iii) the issuance of shares of our common stock or options to acquire shares of our common stock pursuant to our existing equity incentive plans and (iv) the filing of one or more registration statements on Form S-8 with respect to shares of our common stock underlying our equity incentive plans from time to time.

In addition, subject to certain limited circumstances, each of our directors and executive officers, and certain of our principal stockholders, has entered into a lock-up agreement with the underwriter. Under the lock-up agreements, the directors, executive officers and applicable stockholders may not, directly or indirectly, sell, offer to sell, contract to sell, or grant any option for the sale (including any short sale), grant any security interest in, pledge, hypothecate, hedge, establish an open “put equivalent position” (within the meaning of Rule 16a-1(h) under the Securities Exchange Act of 1934, as amended, or the Exchange Act), or otherwise dispose of, or enter into any transaction which is designed to or could be expected to result in the disposition of, any shares of our common stock or securities convertible into or exchangeable for shares of our common stock, or publicly announce any intention to do any of the foregoing, without the prior written consent of H.C. Wainwright & Co., LLC, for a period of 90 days from the date of this prospectus. This consent may be given at any time without public notice.

## **Electronic Distribution**

This prospectus may be made available in electronic format on websites or through other online services maintained by the underwriter or by its affiliates. In those cases, prospective investors may view offering terms online and prospective investors may be allowed to place orders online. Other than this prospectus in electronic format, the information on the underwriter’s websites or our website and any information contained in any other websites maintained by the underwriter or by us is not part of this prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or the underwriter in its capacity as underwriter, and should not be relied upon by investors.

### **Price Stabilization, Short Positions and Penalty Bids**

The underwriter may engage in syndicate covering transactions, stabilizing transactions and penalty bids or purchases for the purpose of pegging, fixing or maintaining the price of our shares of common stock:

Syndicate covering transactions involve purchases of securities in the open market after the distribution has been completed in order to cover syndicate short positions. Such a naked short position would be closed out by buying securities in the open market. A naked short position is more likely to be created if the underwriter is concerned that there could be downward pressure on the price of the securities in the open market after pricing that could adversely affect investors who purchase in the offering.

Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specific maximum.

Penalty bids permit the underwriter to reclaim a selling concession from a syndicate member when the securities originally sold by the syndicate member are purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These syndicate covering transactions, stabilizing transactions and penalty bids may have the effect of raising or maintaining the market prices of our securities or preventing or retarding a decline in the market prices of our securities. As a result, the price of our shares of common stock may be higher than the price that might otherwise exist in the open market. Neither we nor the underwriter make any representation or prediction as to the effect that the transactions described above may have on the price of our shares of common stock. These transactions may be effected on the Nasdaq Capital Market, in the over-the-counter market or on any other trading market and, if commenced, may be discontinued at any time.

In connection with this offering, the underwriter also may engage in passive market making transactions in our shares of common stock in accordance with Regulation M during a period before the commencement of offers or sales of our shares of common stock in this offering and extending through the completion of the distribution. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for that security. However, if all independent bids are lowered below the passive market maker's bid that bid must then be lowered when specific purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

Neither we nor the underwriter make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the prices of our securities. In addition, neither we nor the underwriter make any representation that the underwriter will engage in these transactions or that any transactions, once commenced, will not be discontinued without notice.

### **Other Relationships**

From time to time, certain of the underwriter and their affiliates have provided, and may provide in the future, various advisory, investment and commercial banking and other services to us in the ordinary course of business, for which they have received and may continue to receive customary fees and commissions. H.C. Wainwright & Co., LLC served as our exclusive placement agent in connection with our registered public offerings we consummated in July 2016 and September 2018, for which it received compensation.

The transfer agent for our common stock to be issued in this offering is American Stock Transfer & Trust Company, LLC.

## **LEGAL MATTERS**

The validity of the issuance of the securities offered hereby will be passed upon for us by Winstead PC, Houston, Texas. The underwriter is being represented by Haynes and Boone, LLP, New York, New York.

## **EXPERTS**

The consolidated financial statements as of December 31, 2017 and 2016 and for the years then ended incorporated by reference in this prospectus have been so incorporated in reliance on the report of BDO USA, LLP, an independent registered public accounting firm (the report on the consolidated financial statements contains an explanatory paragraph regarding the Company's ability to continue as a going concern), incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

## **WHERE YOU CAN FIND MORE INFORMATION**

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the securities being offered hereby. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules filed therewith. For further information about us and the securities offered hereby, we refer you to the registration statement and the exhibits filed thereto. Statements contained in this prospectus regarding the contents of any contract or any other document that is filed as an exhibit to the registration statement are not necessarily complete, and each such statement is qualified in all respects by reference to the full text of such contract or other document filed as an exhibit to the registration statement.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, including us. The SEC's Internet site can be found at <http://www.sec.gov>. In addition, we make available on or through our Internet site copies of these reports as soon as reasonably practicable after we electronically file or furnished them to the SEC. Our Internet site can be found at <http://www.biopathholdings.com>. The information contained in, or that can be accessed through, our website is not incorporated by reference in, and is not part of, this prospectus.

## **INFORMATION INCORPORATED BY REFERENCE**

We are incorporating by reference into this prospectus certain information that we file with the SEC, which means that we are disclosing important information to you by referring you to those documents. The information incorporated by reference is deemed to be part of this prospectus, except for information incorporated by reference that is superseded by information contained in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any statements in the prospectus or any document previously incorporated by reference have been modified or superseded. This prospectus incorporates by reference the documents set forth below that we have previously filed with the SEC:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2017;

- our Quarterly Reports on Form 10-Q for the quarters ended March 31, June 30, and September 30, 2018;

- our Definitive Proxy Statement on Schedule 14A relating to our 2018 Annual Meeting of Stockholders, filed November 2, 2018;

- our Current Reports on Form 8-K filed with the SEC on February 5, 2018 (other than information furnished under Item 7.01 and exhibits related thereto); February 9, 2018 (other than information furnished under Item 7.01 and exhibits related thereto); February 26, 2018; September 21, 2018 (other than information furnished under Item 7.01 and exhibits related thereto); November 2, 2018 (other than information furnished under Item 7.01 and exhibits related thereto); and December 21, 2018; and

- the description of our common stock contained in our registration statement on Form 8-A filed with the SEC on March 5, 2014, as updated by our Current Report on Form 8-K filed with the SEC on January 6, 2015.

Any information in any of the foregoing documents will automatically be deemed to be modified or superseded to the extent that information in this prospectus or in a later filed document that is incorporated or deemed to be incorporated herein by reference modifies or replaces such information.

We also incorporate by reference all documents we subsequently file in the future pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act after the effective date of the registration statement of which this prospectus forms a part prior to the termination of the offering. These documents include periodic reports, such as Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K (except, in any such case, the portions furnished and not filed pursuant to Item 2.02, Item 7.01 or otherwise), as well as any proxy statements.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus but not delivered with the, including exhibits which are specifically incorporated by reference into such documents. You may request a copy of these filings at no cost, by writing to or telephoning us at the following address:

Bio-Path Holdings, Inc.  
Attention: Secretary  
4710 Bellaire Boulevard, Suite 210  
Bellaire, Texas 77401  
(832) 742-1357

**UP TO            SHARES OF COMMON STOCK**

**PRE-FUNDED WARRANTS TO PURCHASE UP TO            SHARES OF COMMON STOCK**

**SHARES OF COMMON STOCK UNDERLYING THE PRE-FUNDED WARRANTS**

**SERIES B WARRANTS TO PURCHASE UP TO            SHARES OF COMMON STOCK**

**SHARES OF COMMON STOCK UNDERLYING THE SERIES B WARRANTS**

, 2018

**PART II****INFORMATION NOT REQUIRED IN PROSPECTUS****Item 13. Other Expenses of Issuance and Distribution.**

The following table sets forth an estimate of the fees and expenses payable by the registrant in connection with the issuance and distribution of the securities being registered, other than underwriting discounts and commissions. All amounts are estimated, except the Securities and Exchange Commission (“SEC”) registration fee and the FINRA filing fee. All of the expenses below will be paid by us.

	AMOUNT	
SEC registration fee	\$ 1,447	
FINRA Filing Fee		*
Printing and related expenses		*
Legal fees and expenses		*
Transfer agent and registrar fees and expenses		*
Accounting fees and expenses		*
Miscellaneous expenses		*
Total	\$	*

\* To be filed by amendment.

**Item 14. Indemnification of Directors and Officers.**

Section 102(b)(7) of the Delaware General Corporation Law (the “DGCL”) permits a corporation to eliminate or limit the personal liability of its directors to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his or her duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit. Our certificate of incorporation provides that to the fullest extent elimination or limitation of personal liability of directors is permitted by the DGCL, no director of the Company shall be liable to the Company or its stockholders for monetary damages

for breach of fiduciary duty as a director.

Section 145 of the DGCL permits a corporation to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against expenses (including attorneys' fees), judgments, fines and amounts paid in settlements actually and reasonably incurred by the person in connection with an action, suit or proceeding to which he or she is party or is threatened to be made a party by reason of such position, if such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful, except that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or other adjudicating court determines that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnification for such expenses which the Court of Chancery or such other court shall deem proper.

Our first amended and restated bylaws and our certificate of incorporation provide that each person (and the heirs, executors or administrators of such person) who was or is made or is threatened to be made a party or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such person is or was a director or officer of the Company shall be indemnified and held harmless by the Company to the fullest extent permitted by applicable law. Our certificate of incorporation also states that we will pay or reimburse the reasonable expenses incurred in defending any such action, suit or proceeding in advance of its final disposition if we have received an undertaking by the person receiving such payment or reimbursement to repay all amounts advanced if it should be ultimately determined that he or she is not entitled to be indemnified.

We have entered into indemnification agreements with each of our directors. The contractual rights to indemnification provided by these indemnity agreements are subject to the limitations and conditions specified in such agreements.

II-1

The effect of the foregoing is to require us to indemnify our officers and directors for any claim arising against such persons in their official capacities if such person acted in good faith and in a manner that he or she reasonably believed to be in or not contrary to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended (the "Securities Act") may be permitted to our directors and officers, we have been advised that in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

We have directors and officers insurance which includes insurance for claims against these persons brought under securities laws.

#### **Item 15. Recent Sales of Unregistered Securities.**

Set forth below is information regarding securities issued by the Company since January 1, 2015 that were not registered under the Securities Act. Also included is the consideration received by the Company for such securities and information relating to the section of the Securities Act or rule of the SEC under which exemption from registration was claimed. On February 8, 2018, we effected a reverse stock split of our outstanding shares of common stock at a ratio of 1-for-10, and our common stock began trading on the split-adjusted basis on the Nasdaq Capital Market at the commencement of trading on February 9, 2018. The following share and per share amounts, to the extent relating to periods prior to the 1-for-10 reverse stock split, have been adjusted to give effect to the 1-for-10 reverse stock split.

At the 2018 Annual Meeting of Stockholders of the Company held on December 20, 2018, the Company's stockholders approved an amendment to the Company's Certificate of Incorporation to effect a reverse stock split of the Company's common stock, par value \$0.001 per share, at a ratio of up to 1-for 20, to be determined by our board of directors, subject to the authority of the board of directors to abandon such reverse stock split in its discretion. As of the date of this registration statement, the board of directors has not determined a reverse stock split ratio or whether to effect a reverse stock split. Accordingly, the following share and per share amounts have not been adjusted to reflect this proposed reverse stock split.

(1) On July 5, 2016, we completed the closing of a registered direct offering with several institutional and accredited investors for the sale an aggregate of 588,235 shares of our common stock and warrants to purchase up to 294,118 shares of our common stock for gross proceeds of approximately \$10.0 million. We also issued warrants to purchase up to 25,000 shares of our common stock, with an exercise price of \$24.60, exercisable from January 5, 2017 until January 5, 2022 (the "2016 Placement Agent Warrants") to representatives of H.C. Wainwright & Co., LLC as part of its compensation as the placement agent for the registered direct offering. The 2016 Placement Agent Warrants were issued in reliance on the exemption from registration provided by Section 4(a)(2) under the

Securities Act and/or Regulation D promulgated thereunder.

On May 21, 2017, we entered into Warrant Exercise Agreements with certain holders of then-outstanding warrants (the “Original Warrants”) exercisable for 441,176 shares of our common stock pursuant to which the holders agreed to exercise their Original Warrants at a negotiated exercise price equal to \$3.80 per share. In addition, we also issued to each exercising holder a new warrant (“New Warrants”) to purchase shares of our common stock equal to the number of shares of common stock received by such holder upon exercise of its Original Warrants. The terms (2) of the New Warrants were substantially similar to the terms of the Original Warrants, except that the New Warrants (i) became exercisable immediately upon issuance for a period of five years from the closing date of the Warrant Exercise Agreements and (ii) had an exercise price equal to \$6.00 per share. The New Warrants were issued in reliance on the exemption from registration provided by Section 4(a)(2) under the Securities Act and/or Regulation D promulgated thereunder. Each exercising holder represented that it was an accredited investor, as defined in Rule 501 of Regulation D promulgated under the Securities Act.

On November 6, 2017, we completed the closing of a registered direct offering with several institutional and accredited investors for the sale an aggregate of 1,333,333 shares of our common stock and warrants to purchase up to 666,667 shares of our common stock for gross proceeds of approximately \$4.0 million. We also issued (3) warrants to purchase up to 16,000 shares of our common stock, with an exercise price of \$4.50, exercisable from May 6, 2018 until May 3, 2022 (the “2017 Placement Agent Warrants”) Roth Capital Partners, LLC as part of its compensation as the placement agent for the registered direct offering. The 2017 Placement Agent Warrants were issued in reliance on the exemption from registration provided by Section 4(a)(2) under the Securities Act and/or Regulation D promulgated thereunder.

(4) On September 25, 2018, we completed the closing of a registered direct offering with several institutional and accredited investors for the sale an aggregate of 1,969,077 shares of our common stock and pre-funded warrants to purchase up to 292,461 shares of our common stock, with an exercise price of \$0.01, for gross proceeds of approximately \$1.5 million. In a concurrent private placement, we sold to each investor unregistered Series A warrants to purchase up to 2,261,538 shares of our common stock, with an exercise price of \$0.96, exercisable from March 25, 2019 until March 25, 2024 (the “Series A Warrants”). We also issued warrants to purchase up to 135,692 shares of our common stock, with an exercise price of \$0.96, exercisable from March 25, 2019 until September 20, 2023 (the “2018 Placement Agent Warrants”) to representatives of H.C. Wainwright & Co., LLC as part of its compensation as the placement agent for the registered direct offering. The Series A Warrants and the 2018 Placement Agent Warrants were issued in reliance on the exemption from registration provided by Section 4(a)(2) under the Securities Act and/or Regulation D promulgated thereunder. Each investor represented that it was an accredited investor, as defined in Rule 501 of Regulation D promulgated under the Securities Act.

**Item 16. Exhibits and Financial Statement Schedules.**

**(a) Exhibits**

<b>Exhibit Number</b>	<b>Exhibit</b>
1.1**	Form of Underwriting Agreement.
<u>2.1</u>	<u>Agreement and Plan of Merger and Reorganization dated September 27, 2007, by and among the Company, Biopath Acquisition Corp., a Utah corporation and wholly owned subsidiary of the registrant, and Bio-Path, Inc., a Utah corporation (incorporated by reference to Exhibit 2.1 to the Company’s Current Report on Form 8-K filed on September 27, 2007).</u>
<u>3.1</u>	<u>Certificate of Incorporation (incorporated by reference to Exhibit 3.3 to the Company’s Current Report on Form 8-K filed on January 6, 2015).</u>
<u>3.2</u>	<u>Certificate of Amendment to the Certificate of Incorporation of Bio-Path Holdings, Inc. (incorporated by reference to Exhibit 3.1 to the Company’s Current Report on Form 8-K filed on February 9, 2018).</u>
<u>3.3</u>	<u>First Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to the Company’s Current Report on Form 8-K filed on June 7, 2017).</u>
<u>4.1</u>	<u>Form of Common Stock Certificate (incorporated by reference to Exhibit 4.1 to the Company’s Annual Report on Form 10-K filed on March 16, 2015).</u>
<u>4.2</u>	<u>Warrant Agreement, dated April 25, 2008, by and between the Company and Randeep Suneja, M.D. (incorporated by reference to Exhibit 4.2 to the Company’s Annual Report on Form 10-K filed on March 31, 2014).</u>

- 4.3 Form of Warrant issued to Maxim Group LLC, Sabby Healthcare Volatility Master Fund, Ltd. and Sabby Volatility Warrant Master Fund, Ltd. (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K on January 21, 2014).
- 4.4 Form of Warrant issued to certain investors (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on June 29, 2016).
- 4.5 Form of Warrant issued to H.C. Wainwright & Co., LLC and certain of its designees (incorporated by reference to Exhibit 4.5 to the Company's Quarterly Report on Form 10-Q filed on August 9, 2016).
- 4.6 Form of New Warrant (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on May 22, 2017).
- 4.7 Form of Warrant Amendment (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on June 19, 2017).

II-3

- 4.8 Form of Warrant issued to certain investors (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on November 6, 2017).
- 4.9 Form of Warrant issued to Roth Capital Partners, LLC (incorporated by reference to Exhibit 4.9 to the Company's Annual Report on Form 10-K filed on April 2, 2018).
- 4.10 Form of Pre-Funded Warrant (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on September 21, 2018).
- 4.11 Form of Series A Warrant issued to certain investors (incorporated by reference to Exhibit 4.2 to the Company's Current Report on Form 8-K filed on September 21, 2018).
- 4.12 Form of Warrant issued to H.C. Wainwright & Co., LLC and certain of its designees (incorporated by reference to Exhibit 4.3 to the Company's Quarterly Report on Form 10-Q filed on November 14, 2018).
- 4.13\*\* Form of Pre-Funded Warrant.
- 4.14\*\* Form of Series B Warrant.
- 4.15\*\* Form of Underwriter Warrant
- 5.1\*\* Opinion of Winstead PC.
- 10.1+ Employment Agreement – Peter H. Nielsen (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on February 19, 2008).
- 10.2+ Amended 2007 Stock Incentive Plan (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form S-8 filed on December 10, 2008).
- 10.3+ First Amendment to First Amended 2007 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on August 14, 2013).
- 10.4 Patent and Technology License Agreement, dated as of November 2, 2007, by and between the Company and the Board of Regents of The University of Texas System on behalf of The University of Texas M.D. Anderson Cancer Center (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q filed on May 15, 2013).
- 10.5 Amendment No. 1 to the Patent and Technology Agreement, dated as of May 11, 2009, by and between the Company and the Board of Regents of the University of Texas System on behalf of The University of Texas M.D. Anderson Cancer Center (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q filed on May 15, 2013).
- 10.6 Form of Securities Purchase Agreement by and between the Company, Sabby Healthcare Volatility Master Fund, Ltd. and Sabby Volatility Warrant Master Fund, Ltd. (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on January 21, 2014).
- 10.7

Form of Waiver, Consent and Amendment to that certain Securities Purchase Agreement by and between Sabby Healthcare Volatility Master Fund, Ltd. and Sabby Volatility Warrant Master Fund, Ltd. (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K on January 21, 2014).

10.8+ First Amendment to Employment Agreement, dated March 26, 2014 – Peter H. Nielsen (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on March 26, 2014).

10.9 Lease Agreement dated April 16, 2014 by and between the Company and Pin Oak North Parcel TT, LLC (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 18, 2014).

II-4

- 10.10 Form of Indemnification Agreement (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on April 16, 2015).
- 10.11 Controlled Equity Offering<sup>SM</sup> Sales Agreement, dated June 24, 2015, by and between the Company and Cantor Fitzgerald & Co. (incorporated by reference to Exhibit 1.1 to the Company's Current Report on Form 8-K filed on June 25, 2015).
- 10.12 Form of Securities Purchase Agreement by and between the Company and certain investors (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on June 29, 2016).
- 10.13 Form of Warrant Exercise Agreement (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on May 22, 2017).
- 10.14 Form of Securities Purchase Agreement by and between the Company and certain investors (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on November 6, 2017).
- 10.15 Form of Leak-Out Agreement by and between the Company and certain investors (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on November 6, 2017).
- 10.16+ Bio-Path Holdings, Inc. 2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on December 27, 2017).
- 10.17 Form of Incentive Stock Option Award Agreement under 2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on December 27, 2017).
- 10.18 Form of Non-Qualified Stock Option Award Agreement under 2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on December 27, 2017).
- 10.19 Form of Restricted Share Unit Award Agreement (Time-Vested) under 2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed on December 27, 2017).
- 10.20 Form of Restricted Share Unit Award Agreement (Performance-Based) under 2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.5 to the Company's Current Report on Form 8-K filed on December 27, 2017).
- 10.21 Form of Restricted Share Award Agreement under 2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.6 to the Company's Current Report on Form 8-K filed on December 27, 2017).
- 10.22 Form of Stock Appreciation Right Award Agreement under 2017 Stock Incentive Plan (incorporated by reference to Exhibit 10.7 to the Company's Current Report on Form 8-K filed on December 27, 2017).
- 10.23 Form of Securities Purchase Agreement (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on September 21, 2018).
- 21.1 Subsidiaries of Bio-Path Holdings, Inc. (incorporated by reference to Exhibit 21.1 to the Company's Annual Report on Form 10-K filed on April 2, 2018).

II-5

23.1\* Consent of BDO USA, LLP, an independent registered public accounting firm.

23.2\*\* Consent of Winstead PC (included in Exhibit 5.1).

24.1\* Power of Attorney (contained on the signature page).

\* Filed herewith.

\*\* To be filed by amendment.

+ Management contract or compensatory plan.

**(b) Financial statement schedules.**

No financial statement schedules are provided because the information called for is not required or is shown either in the financial statements or the notes thereto.

**Item 17. Undertakings.**

The undersigned registrant hereby undertakes:

(1) to file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) to include any prospectus required by section 10(a)(3) of the Securities Act of 1933;

(ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume

and price represent no more than 20% change in the maximum aggregate offering price set forth in the “Calculation of Registration Fee” table in the effective registration statement and

(iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

*provided, however,* that paragraphs (1)(i), (ii), and (iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement;

(2) that, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof;

(3) to remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering;

(4) that, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date;

(5) that, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) any other communication that is an offer in the offering made by the undersigned registrant to the purchaser;

(6) that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each

filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof;

(7) insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue; and

(8) that:

(i) for purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective; and

(ii) for the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Bellaire, State of Texas, on December 27, 2018.

BIO-PATH HOLDINGS, INC.

By: /s/ Peter H. Nielsen

Peter H. Nielsen

President

Chief Executive Officer

(Principal Executive Officer)

Chief Financial Officer

(Principal Financial Officer and Principal Accounting Officer)

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Peter H. Nielsen his or her true and lawful attorney-in-fact, with the power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including pre-effective amendments and post-effective amendments) to this registration statement, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent or his substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed below by the following persons in the capacities and on the dates indicated.

/s/ Peter H. Nielsen

Peter H. Nielsen

President, Chief Executive Officer (Principal

Executive Officer), Chief Financial Officer (Principal

December 27, 2018

Financial Officer and Principal Accounting Officer)  
and Director

/s/ Heath W. Cleaver  
Heath W. Cleaver  
Director

December 27, 2018

/s/ Mark P. Colonnese  
Mark P. Colonnese  
Director

December 27, 2018

/s/ Paul D. Aubert  
Paul D. Aubert  
Director

December 27, 2018

/s/ Douglas P. Morris  
Douglas P. Morris  
Director and Secretary

December 27, 2018