ALDER BIOPHARMACEUTICALS INC
Form 10-K
March 13, 2015

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2014

OR

¨TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE TRANSITION PERIOD FROM TO

Commission File Number 001-36431

Alder BioPharmaceuticals, Inc.

(Exact name of Registrant as specified in its Charter)

Delaware (State or other jurisdiction of incorporation or organization)	90-0134860 (I.R.S. Employer Identification No.)
11804 North Creek Parkway South Bothell, WA (Address of principal executive offices)	 98011 (Zip Code)

Registrant's telephone number, including area code: (425) 205-2900

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Exchange on Which Registered
Common Stock, $0.0001 par value per share	The NASDAQ Stock Market LLC (The NASDAQ Global Market)

Securities registered pursuant to Section 12(g) of the Act:

None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. YES ¨ NO x

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. YES ¨ NO x

Indicate by check mark whether the Registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past

90 days. YES x NO ¨

Indicate by check mark whether the Registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit and post such files). YES x NO ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405) is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. x

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definition of "large accelerated filer", "accelerated filer", and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ¨	Accelerated filer ¨
Non-accelerated filer x (Do not check if a smaller reporting company)	Smaller reporting company ¨

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). YES ¨ NO x

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the Registrant, based on the closing price of the shares of common stock on The NASDAQ Stock Market on June 30, 2014, was $202,240,332. Excludes an aggregate of 20,726,920 shares of the registrant's common stock held as of such date by officers, directors and stockholders that the registrant has concluded are or were affiliates of the registrant. Exclusion of such shares should not be construed to indicate that the holder of any such shares possesses the power, direct or indirect, to direct or cause the direction of the management or policies of the registrant or that such person is controlled by or under common control with the registrant.

The number of shares of Registrant's Common Stock outstanding as of March 6, 2015 was 37,923,916.

DOCUMENTS INCORPORATED BY REFERENCE

Part III incorporates information by reference from the registrant's definitive proxy statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A, not later than 120 days after the end of the fiscal year covered by this Annual Report on Form 10-K, in connection with the Registrant's 2015 Annual Meeting of Stockholders (the "2015 Proxy Statement").

Alder BioPharmaceuticals, Inc.

Annual Report on Form 10-K

For the Year Ended December 31, 2014

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In this Annual Report on Form 10-K, "we," "our," "us," "Alder," and "the Company" refer to Alder BioPharmaceuticals, Inc. and, where appropriate, its consolidated subsidiaries. "Alder" and the Alder logo are the property of Alder

BioPharmaceuticals, Inc. This report contains references to our trademarks and to trademarks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this report may appear without the ® or ™ symbols, but such references are not intended to indicate, in any way, that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. We do not intend our use or display of other companies' trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

PART I

Forward-Looking Information

This Annual Report on Form 10-K contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements are based on our management's beliefs and assumptions and on information currently available to our management. All statements other than statements of historical facts are "forward-looking statements" for purposes of these provisions, including those relating to future events or our future financial performance and financial guidance. In some cases, you can identify forward-looking statements by terminology such as "may," "might," "will," "should," "expect," "plan," "anticipate," "project," "believe," "estimate," "predict," "potential," "intend" or "continue," terms like these or other comparable terminology, and other words or terms of similar meaning in connection with any discussion of future operating or financial performance. These statements are only predictions. All forward-looking statements included in this Annual Report on Form 10-K are based on information available to us on the date hereof, and we assume no obligation to update any such forward-looking statements. Any or all of our forward-looking statements in this document may turn out to be wrong. Actual events or results may differ materially. Our forward-looking statements can be affected by inaccurate assumptions we might make or by known or unknown risks, uncertainties and other factors. We discuss many of these risks, uncertainties and other factors in this Annual Report on Form 10-K in greater detail under the heading "Item 1A—Risk Factors." We caution investors that our business and financial performance are subject to substantial risks and uncertainties.

Item 1. Business

We are a clinical-stage biopharmaceutical company that discovers, develops and seeks to commercialize therapeutic antibodies with the potential to meaningfully transform current treatment paradigms. We have developed a proprietary antibody platform designed to select antibodies that have the potential to maximize efficacy as well as speed of onset and durability of therapeutic response. In addition, we believe our ability to efficiently manufacture antibodies using our yeast-based manufacturing technology, MabXpress, allows us to target diseases that traditionally have not been addressed by antibodies. We believe the clinical data obtained in our development program for ALD403 exhibits the potential of this product candidate to transform the way physicians treat migraine prevention. ALD403 was discovered by Alder scientists, has achieved clinical proof-of-concept for high frequency migraine and we have initiated a Phase 2b dose-ranging trial for the preventative treatment of chronic migraines in preparation for progression to Phase 3 trials if supported by the data. If approved, we intend to commercialize ALD403 on our own in the United States. Our second program, Clazakizumab, also known as ALD518, is designed to block the pro-inflammatory cytokine IL-6 and has completed one Phase 2b clinical study and is currently in a second Phase 2b clinical study. We are seeking a new partner to continue the development of Clazakizumab and we believe there is an opportunity to position Clazakizumab as an option for first-line biologic therapy for treatment of rheumatoid arthritis by demonstrating superior disease control rates versus biologic standard of care. We estimate that the rheumatoid arthritis therapy market had more than $12 billion in worldwide sales in 2012 and will grow to $15 billion by 2016. Finally, our third development program, ALD1613 for treatment of Cushing's Disease, presents an orphan disease opportunity and is at a preclinical stage of

development.

ALD403 is our novel monoclonal antibody targeted to calcitonin gene-related peptide, or CGRP, for migraine prevention. CGRP is a validated target that is believed to play a key role in migraine. We are developing ALD403 for the prevention of migraine, and in a recent proof-of-concept trial, treatment with ALD403 resulted in 16% of patients with high frequency migraine achieving complete remission from their migraines. Approximately 36 million Americans suffer from migraines; however, only 22.3 million migraine sufferers have been clinically diagnosed. Migraine is a significant cause of disability, generally affecting individuals between the ages of 20 and 50, which are prime working years. The Migraine Research Foundation estimates U.S. employers lose more than $13 billion each year as a result of 113 million lost work days due to migraine. We believe the area of critical unmet need in migraine is preventive therapy with improved efficacy and tolerability to treat patients who have five or more migraine days per month. For the 12.6 million U.S. migraine patients who are candidates for migraine prevention, there are few therapeutic options to manage their disease. We believe this group of migraine patients is highly motivated to seek new treatments due to the limited success of current therapies.

We have completed a three month double blind, randomized, placebo-controlled proof-of-concept trial of ALD403 in 163 patients suffering from five to 14 migraine days per month, or high frequency migraine. In this trial, a single intravenous, or IV, dose of ALD403 completely prevented migraines in 16% of patients over the entire three month period versus zero with placebo, representing a statistically significant reduction ($p<0.001$). Furthermore, ALD403 reduced migraine days by at least half in 61% of patients. ALD403 had a similar level of safety to placebo and was well tolerated and our trial had a dropout rate of less than 5%. In October 2014, we initiated a Phase 2b dose-ranging trial of an IV formulation of ALD403 in 600 patients suffering from greater than 15 migraine days per month, or chronic migraine. The primary endpoint in the trial is the change in migraine days between ALD403 and placebo as judged by the difference in the responder rates at week 12. We expect primary endpoint data from this trial in the second half of 2015. In the first half of 2015, we plan to initiate a second Phase 2b dose-ranging trial of ALD403 for the treatment of

high frequency migraine sufferers with the primary endpoint being the change in migraine days between ALD403 and placebo as judged by the difference in the responder rates at week 12. We believe ALD403 has the potential to address the unmet need in the migraine prevention market and as such represents a substantial market opportunity. We plan to build a 75 to 100 person sales force targeting high-prescribing neurologists and headache centers in the United States, if ALD403 is approved, and to seek one or more partners to develop and commercialize ALD403 outside the United States.

Clazakizumab is a novel monoclonal antibody that inhibits the pro-inflammatory cytokine interleukin-6, or IL-6, and is being developed for both rheumatoid arthritis, or RA, and psoriatic arthritis, or PsA. IL-6 is a protein associated with acute and chronic inflammation and is believed to initiate an acute immune response and the production of antibodies. IL-6 may also contribute to bone destruction. In November 2009, we entered into a license and collaboration agreement with Bristol-Myers Squibb, or BMS, under which we granted BMS worldwide exclusive rights to develop and commercialize Clazakizumab for all indications other than cancer. On August 29, 2014, BMS notified us that it had elected to terminate the license and collaboration agreement effective as of December 29, 2014, at which time all rights to Clazakizumab were returned to us. The decision by BMS to terminate the agreement was the result of an internal BMS portfolio review process wherein BMS determined that Clazakizumab did not warrant further investment based on other priorities in their pipeline. Under the terms of the agreement until June 29, 2015, BMS continues to be responsible for the costs of ongoing clinical studies that were initiated prior to August 29, 2014, including the Phase 2b dose-ranging trial. We are seeking a new partner to continue the development of Clazakizumab in autoimmune and inflammatory disease. The RA treatment market is currently dominated by a class of drugs that target tumor necrosis factor alpha, or anti-TNFs, such as Humira or Enbrel. Nevertheless, anti-TNFs are associated with low rates of disease remission and the response to these agents is not typically durable. The American College of Rheumatology, or ACR, has recommended that treatment of RA should be directed at achieving remission in patients or low disease activity if remission cannot be achieved. In a completed Phase 2b trial, the rates of disease remission of Clazakizumab plus methotrexate were numerically higher than those treated with Humira plus methotrexate. Methotrexate, or MTX, is one of the most commonly used medicines for the treatment of RA. MTX may decrease pain and swelling of RA and may delay or decrease damage to joints. MTX in combination with biologics has been shown to be more effective than MTX alone. We estimate that the rheumatoid arthritis therapy market had more than $12 billion in worldwide sales in 2012 and will grow to $15 billion by 2016. Phase 2b dose-ranging trials are ongoing in preparation for progression to Phase 3 trials if supported by the data. Based on current plans, we expect to announce data from an ongoing Phase 2b dose-ranging clinical trial of Clazakizumab in RA patients in the first half of 2015. We believe there is an opportunity to position Clazakizumab as an option for first-line biologic therapy for the treatment of RA by demonstrating superior disease control rates versus a biologic standard of care in Phase 3 trials.

ALD1613 is a genetically engineered monoclonal antibody discovered by us that was designed specifically to inhibit Adrenocorticotropic Hormone, or ACTH, for the treatment of Cushing's Disease. This disease is driven by long-term exposure to cortisol as a result of increased expression of ACTH produced by a pituitary tumor. Chronic, excessive exposure to cortisol induces a wide range of clinical features including: obesity, protein wasting, diabetes, dyslipidemia, hypertension, psychological dysfunction, and osteoporosis. Surgery is commonly employed in this population it provides a transient solution so there remains a significant need for new therapy despite available pharmacotherapy. The current medicines have significant side effect issues and provide limited efficacy. We believe that a novel, mechanism-based approach to address Cushing's Disease using a monoclonal antibody targeted to ACTH that diminishes the overproduction of cortisol with a sound safety profile would provide a significant advantage over the current standard of care and provide an important new therapeutic option to both patients and physicians. ALD1613 is currently at a preclinical stage of development.

Our proprietary antibody platform leverages three technologies for the selection, humanization and manufacturing of monoclonal antibodies. We focus on protein targets that have biology which has been validated by prior scientific or clinical research, specifically ligands, which are circulating proteins, rather than receptors, which are their fixed

docking sites. We believe this strategy can lead to fewer drug doses at lower concentrations, while potentially minimizing off target activity and associated side-effects. To date we have discovered all of our product candidates in-house with a technology we call antibody selection, or ABS. This versatile technology allows us to identify the best site to inhibit on a particular target ligand and select an antibody that has both a high affinity and specificity for the target. We have pioneered a process that humanizes rabbit antibodies to produce antibodies that are greater than 95% human. However, unlike fully-human antibodies, we specifically design our antibodies to lack certain sugars in an effort to minimize the body's recognition of such antibodies as foreign, thereby limiting infusion reactions as well as maximizing durability of the therapeutic response.

Our yeast-based proprietary manufacturing technology, MabXpress, offers distinct advantages over traditional mammalian cell culture approaches widely used in the manufacturing of antibodies. We are able to efficiently and reproducibly manufacture large quantities of high-quality antibodies. This is in contrast to mammalian cell culture approaches that are generally characterized by extended production times, costly media, risk of viral contamination and a lack of uniformity of the end product. Our proprietary manufacturing processes are designed to produce antibodies on a significantly larger scale than traditional antibody manufacturing processes. Together, these technologies have enabled us to progress to proof-of-concept in the clinic significantly faster than traditional programs which rely on mammalian cells for manufacturing.

Our founders and executive management team have held senior positions at leading biotechnology and pharmaceutical companies, possess over 100 years of combined experience across drug discovery and development and members of our management

team have been involved in bringing several drugs to market. Prior to our founding, members of our senior management team occupied prominent roles at Celltech, a biotech company that was subsequently acquired by UCB. Our management team's role in the discovery and development of the monoclonal antibodies, Cimzia and romosozumab, exemplifies their approach of pursuing novel intervention strategies. While the efficacy of an antibody was previously assumed to be related to both the binding and killing of the target cell, Cimzia demonstrated in RA patients that antibodies blocking TNF did not need to have cell-killing function to be effective. In osteoporosis, UCB's romosozumab, partnered with Amgen, shows significant promise in being the first bone-building injectable antibody in what is currently a market served predominantly by oral therapeutics. Our combined experience led us to establish our proprietary platform that we believe enables us to develop best-in-class antibodies to transform current treatment paradigms.

Our Strategy

We aim to build an enduring, diversified biopharmaceutical company. We intend to leverage our expertise in discovery, development and commercialization to bring first-in-class and best-in-class monoclonal antibody therapeutics to patients who are underserved by current therapies.

Key elements of our strategy include:

- Advance and commercialize ALD403 for the prevention of migraine. We plan to commercialize both an infusion and an injectable formulation of ALD403. We have initiated a Phase 2b dose-ranging trial in chronic migraine sufferers and intend to initiate a second Phase 2b dose-ranging trial in high frequency migraine patients in the first half of 2015. Data from these two dose-ranging trials will be used in order to identify the appropriate dose level and dosing frequency for pivotal Phase 3 trials. Subject to confirmatory Phase 2b data, we plan to initiate pivotal Phase 3 trials in 2016 that are designed to obtain regulatory approval in the United States and to support regulatory filings in Europe for ALD403 for the treatment of patients with high frequency migraine and chronic migraine. We plan to build a 75 to 100 person sales force targeting high-prescribing neurologists and headache centers in the United States, if ALD403 is approved, and to seek one or more partners to develop and commercialize ALD403 outside the United States.
- Seek a partner to advance and commercialize Clazakizumab as an option for first-line biologic therapy in autoimmune and inflammatory disease. We are seeking a partner to continue the development of Clazakizumab as an option for autoimmune and inflammatory disease therapy.
- Advance ALD1613 for the treatment of Cushing's Disease. We plan to advance ALD1613 through IND enabling toxicology studies in 2015 and commence a Phase 1 clinical study in patients with Cushing's Disease in 2016.
- Leverage our technology platform to discover future product candidates for areas of unmet need. We have been evaluating four programs with the view of advancing at least one candidate into the clinic in 2016 for a disease indication where therapeutic antibodies have not previously played a therapeutic role. We recently designated ALD1613 as the candidate to advance to IND enabling studies for the treatment of Cushing's Disease. We will continue to enhance our technologies to discover optimized product candidates that can be manufactured efficiently on a very large scale. We may seek to monetize our technology platform by consummating partnerships with leading biotechnology and pharmaceutical companies. We also intend to continue to deploy capital to selectively develop our own portfolio of product candidates.
- Build a leading biopharmaceutical company to transform current treatment paradigms. We have brought together a group of world class scientists and drug developers that, when coupled with our proprietary technologies, allow us to discover, develop and commercialize antibody-based therapeutics that have the potential to change the lives of patients suffering from many types of disease. We intend to establish targeted commercialization and marketing capabilities for our products in the United States.

Product Candidates

Our pipeline includes three internally discovered humanized monoclonal antibodies, all unpartnered, as well as preclinical programs targeting additional indications that are in the discovery phase.

ALD403

ALD403 is a genetically engineered monoclonal antibody that targets CGRP for prevention of migraine. CGRP is a small protein that is involved in the transmission and heightened sensitivity to pain experienced in migraine. Drugs that block the CGRP pathway have been long sought after as a novel way to treat migraine. Small molecules, such as Merck's Telcagepant, established that blocking CGRP could provide abortive treatment for migraine. By building on prior CGRP experiences, we believe there is compelling rationale to support the development of ALD403 for the prevention of migraine.

Migraine is a common neurological disorder that is characterized by over-excitability of specific areas of the brain. Migraine symptoms are debilitating and include intense sharp or throbbing pain, which is commonly accompanied by nausea, vomiting and high sensitivity to light and sound. For those individuals afflicted with nausea and vomiting, these symptoms can make taking oral medications challenging or ineffective. The duration of a migraine can span from hours to days and when symptoms become severe, migraine sufferers often seek treatment through emergency room visits. According to a 2012 report by the U.S. Agency for Healthcare Research and Quality, headaches accounted for 2.1 million visits to the emergency room annually. Migraines can severely restrict normal activities and often require bed rest, making holding a job or maintaining a normal lifestyle difficult. The Migraine Research Foundation estimates U.S. employers lose more than $13 billion each year as a result of 113 million lost work days due to migraine.

The Migraine Research Foundation estimates that 36 million Americans suffer from migraines. It is estimated that there are 22.3 million migraine sufferers who have been diagnosed. According to the American Migraine Foundation, migraine is three times more common in women than men and migraine affects 30% of women over a lifetime. Migraine is most common between the ages of 20 and 50 in both men and women. We divide migraine frequency into low frequency, high frequency and chronic. We characterize low frequency migraine as zero to four migraine days per month, high frequency migraine as five to 14 migraine days per month and chronic migraine as 15 or more migraine days per month. Approximately 12.6 million patients, or 56% of diagnosed migraine sufferers, are candidates for migraine prevention therapy.

We believe the area of critical unmet need in migraine is for preventive therapies with improved efficacy and tolerability to treat the individuals with high frequency and chronic migraine. Indications for preventive migraine medications may include:

- frequency of migraine attacks greater than two per month with disability that lasts three or more days per month;
- abortive medications fail or are overused;
- symptomatic medications (e.g. analgesics or anti-emetics) are contraindicated or ineffective; or
- migraine variants such as those that effect motor function, or hemiplegic migraine, or migraines producing profound disruption or risk of permanent neurologic injury.

Current treatments are ineffective for many of these patients and side-effects severely limit their use. We believe, in the presence of a more effective treatment, patients who have previously abandoned therapy will again seek treatment.

Current Therapies

Migraine treatment involves abortive and preventive therapy. Abortive medications aim to reverse, or at least stop, the progression of a migraine once it has started. Preventive medications, which are given even in the absence of a migraine, aim to reduce the frequency and severity of the migraine attack, make acute attacks more responsive to abortive medications and may improve the patient's quality of life to a greater degree than abortive medications alone.

Abortive Medications. Numerous abortive medications are used for migraine. The choice for an individual patient depends on the severity of the attacks, associated symptoms, such as severity of pain, incidence of nausea and vomiting, and the patient's treatment response. Patients most commonly use a non-steroidal anti-inflammatory drug, a 5-hydroxytryptamine–1 agonists, or triptans, or a combination of both to abort a migraine. Triptans are most effective when taken early during a migraine and may be repeated in two hours as needed, with a maximum of two doses daily. Triptans are not recommended for use more than three days a week because overuse can lead to increased frequency of migraines and medication overuse headache. Approximately 30% to 50% of patients respond to triptans and there is a high rate of recurrence of migraine within 24 hours. To avoid the development of medication overuse headache, patients are limited to no more than 10 doses of triptans in any one month, which may be insufficient to treat patients with high frequency or chronic migraines. This limitation can also be problematic for migraine patients who suffer from nausea and vomiting and cannot keep triptans in their systems. In addition to these limitations, triptans are also contraindicated for patients with existing, or at risk of, coronary artery disease.

Preventive Medications. Currently, preventive medications approved for migraine include beta blockers, such as propranolol, topiramate, sodium valproate, and botulinum toxin, or Botox.

In patients with high frequency and chronic migraine, beta blockers, topiramate and sodium valproate are commonly used. These medications are often not well-tolerated by patients because of adverse events such as cognitive impairment, nausea, fatigue and sleep disturbance. In clinical trials, complete responses, or a 100% reduction in migraine days or episodes, with topiramate were less than 6%. In the affected patient population, predominantly women of child-bearing age, the association of these agents with poor pregnancy outcomes and fetal abnormalities can limit their use.

Botox is only approved in patients with 15 or more migraine days per month, or chronic migraine. Approximately 47% of Botox-treated patients experience a 50% reduction in either migraine days per month or migraine frequency per month within six months, which leaves more than half of patients inadequately treated. In Phase 3 trials, Botox did not report any complete responses. In addition, the dosing regimen requires approximately 31 subcutaneous injections at various sites on the head and neck which is repeated every 12 weeks if the patient has a therapeutic response.

Unmet Need

According to the U.S. Agency for Healthcare Research and Quality, only about 12% of adults with high frequency or chronic migraine take preventive medications. According to the American Migraine Foundation, medication side-effects often limit the use of migraine medications. We believe there is a need for a new therapy that is long lasting, safe, effective and has reduced side-effects compared to currently available therapies, and that can either prevent migraines completely or reduce the frequency to a level where patients can find adequate relief from existing abortive medications. Such a therapy could provide benefit for both patients on existing therapies and patients who have abandoned therapy.

Our Solution

We are developing ALD403 as a highly potent, long-acting therapeutic that modulates the activity of CGRP for the prevention of migraine in patients with high frequency or chronic migraine. Based on clinical trials data from our proof-of-concept trial, ALD403 provides substantial relief to patients with high frequency with no observed tolerability or safety issues. The high selectivity and low off-target action, the long half-life and favorable dosing options of ALD403, suits this treatment setting where compounds need robust, safe and sustained benefit for the patient seeking treatment. We are developing both an infusion and an infectable formulation in order to provide options for less frequent dosing of the therapy and accommodate patients' preferred method of administration. In our proof-of-concept trial in high frequency migraine patients with an average of nine migraine days per month, approximately 27% of patients using ALD403 experienced a complete response, with no migraines in the first month. Furthermore, the majority of patients

had a statistically significant reduction in migraine days per month; for example, 61% of all treated patients had a reduction in migraine days by at least half. We believe reductions of this magnitude can shift the disease into a range of migraine days that can be managed with abortive medications. In addition, to date we have not observed any differences in safety data between ALD403 and placebo.

Other CGRP Directed Therapeutics

There are no currently approved medications that target CGRP. Small molecule CGRP inhibitors, such as Merck's Telcagepant, established that blocking CGRP was effective as an abortive treatment for migraine. However, these small molecules, which have very different properties than ALD403, had side-effects and toxicity issues that curtailed their development. The Merck experience clinically validated CGRP biology as a target for migraine but suggested a different strategy for intervention to be utilized to avoid off-target toxicity issues. By building on prior experiences of other companies targeting the CGRP pathway and our own efficacy data in the prevention of high frequency migraine, we believe there is compelling rationale to continue the development of a highly selective antibody, such as ALD403, for the prevention of migraine. In clinical trials of ALD403 to date, involving more than 160 subjects, we have not observed any significant side-effects or toxicity issues.

There are a number of compounds in different phases of development that are targeting CGRP biology. These are summarized below.

Compound	Company	Target	Stage of Development	Efficacy Results
ALD403	Alder	CGRP	Proof-of-Concept—High frequency migraine	Effective in treating high frequency migraines
			Phase 2b—Chronic migraine dose-ranging	Trial commenced in October 2014
			Phase 2b—High frequency migraine dose-ranging	Trial expected to be commenced in first half of 2015
LBR101/ PF-04427429	Teva (Labrys)	CGRP	Phase 2—High frequency episodic migraine	Not available; study on-going
			Phase 2—Chronic migraine	Not available; study on-going
LY-2951742	Lilly (Arteaus)	CGRP	Phase 2a—Frequent episodic migraine proof-of-concept	Effective in treating high frequency migraines
			Phase 2b—Episodic migraine dose-ranging	Not available; study on-going
			Phase 2—Osteoarthritis	Not available; study ongoing
AMG-334	Amgen	CGRP-R	Phase 2—Dose-ranging in high frequency migraine	Not yet announced
			Phase 1—Efficacy, safety, tolerability and pharmacokinetics in women with hot flashes associated with menopause	Not available; study on-going
AMG-334	Amgen	CGRP-R	Phase 2—Dose-ranging in chronic migraine	Not available; study on-going

Clinical Trials

ALD403 has been evaluated in two clinical trials and two ongoing clinical trials. The table below summarizes the clinical trials completed to date or ongoing and the planned Phase 2b trial.

Trial	Stage of Development	Trial Population	Study Locations	Active/Placebo	Trial Status
ALD403	Phase 1	Healthy Subjects	Australia	67/37	Completed
ALD403	Proof-of-Concept Trial	High Frequency Migraine	United States	81/82	Completed
ALD403	Phase 1	Healthy Subjects	Australia	36/24	On-going
ALD403	Phase 2b	Chronic Migraine	Various	480/120	On-going
ALD403	Phase 2b	High Frequency Migraine	TBD	TBD	Planned

Completed Proof-of-Concept Trial. Our most recently completed clinical trial of ALD403 was a single dose, double-blind, placebo-controlled, randomized proof-of-concept trial to evaluate the safety, pharmacokinetics and efficacy of ALD403 in patients with high frequency migraine. Pharmacokinetics, or PK, measures the amount of a specific drug in the body over a period of time, and includes the process of absorption, distribution, metabolism and excretion of the drug. Approximately 80 patients each received one dose of ALD403 in the clinical trial.

Differences in the change in mean migraine days per month was the approvable endpoint for the pivotal clinical trials of Botox and topiramate, which have been approved for preventive migraine therapy. The primary endpoint for our proof-of-concept trial was the difference between ALD403 and placebo in the change of mean migraine days per month from baseline to weeks five through eight following one dose of ALD403. As illustrated in the figure below, in the trial, one dose of ALD403 produced a rapid and durable reduction in migraine days that was statistically significant when compared to placebo, in terms of both change in migraine days per month ($p=0.03$) and the magnitude of the change in migraine days prevented across all patients ($p<0.001$) at the primary endpoint of eight weeks. The reduction in migraine days per month was also statistically significant across the entire combined three month trial period ($p=0.0078$).

In this trial, the “p” values were statistical calculations to determine whether the effects of ALD403 were significant in comparison to placebo based on pre-specified statistical targets. We specified that any result less than p=0.05 would be significant. This trial was designed to provide statistically significant results. Phase 3 trials will be needed to confirm the significant findings of the proof-of-concept trial in order to support regulatory approvals.

ALD403 1000 mg IV versus Placebo IV as a Single Dose

As illustrated in the table below, 16% of patients receiving a single dose of ALD403 achieved complete response versus 0% on placebo over the entire 12 week trial. In any four week period of the trial (weeks 1-4, 5-8 or 9-12), approximately 75% of patients achieved a 50% reduction, 45% or more achieved a 75% reduction and 27% or more achieved a 100% reduction in migraine days. We believe measuring response rates, or the magnitude of the change in migraine days prevented across patients, provides an important measure of patient benefit to prescribing physicians and patients. For example, telling a patient that he or she has a one in six chance of achieving a complete response, meaning no migraines, can be easier to relate to than reduction of mean migraine days per month.

Number (Percentage) of Patients Achieving a 50%, 75% and 100%

Reduction in Migraine Days During Weeks 1-4, 5-8, and 9-12

	Percent Reduction			
Time Period	Migraine Days	Placebo IV	ALD403 1000 mg IV	p-value
Weeks 1-4	Number of Evaluable Patients	80	76	
	50%	40 (50.0)	57 (75.0)	p=0.0011
	75%	19 (23.8)	39 (51.3)	p=0.0003
	100%	4 (5.0)	21 (27.6)	p<0.0001
Weeks 5-8	Number of Evaluable Patients	80	78	
	50%	43 (53.8)	59 (75.6)	p=0.0032
	75%	28 (35.0)	35 (44.9)	p=0.1347
	100%	12 (15.0)	21 (26.9)	p=0.0493
Weeks 9-12	Number of Evaluable Patients	78	73	
	50%	52 (66.7)	55 (75.3)	p=0.1603
	75%	24 (30.8)	39 (53.4)	p=0.0039
	100%	13 (16.7)	30 (41.1)	p=0.0008
Weeks 1-12	Number of Evaluable Patients	76	68	
	50%	25 (32.9)	41 (60.3)	p=0.0006

75%	7 (9.2)	22 (32.4)	p=0.0004
100%	0	11 (16.2)	p=0.0001

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The following figure presents data from patients who achieved a 50%, 75% and 100% reduction in migraines at all-time points in the trial. ALD403 provided a statistically significant reduction versus placebo in migraines at all response levels in these patients ($p<0.001$).

ALD403 was well-tolerated and adverse events were comparable in terms of type and frequency across ALD403 and placebo groups. In addition, there were no differences between ALD403 treatment and placebo groups with respect to adverse events, cardiovascular measures or laboratory safety data.

Patients in this trial were followed for an additional three months for a total of six months (24 weeks) follow-up. The percentage of patients achieving a 50, 75 or 100% response for the entire 24 week duration of follow-up was similar as observed for the first 12 weeks indicating that the response to a single dose of ALD403 was durable and long lasting.

Reduction in Migraine Days for Three and Six Months is Similar

Comparison of ALD403 and Arteaus LY-2951742 Clinical Trial Data

The following table compares data from our proof-of-concept trial of ALD403 with data recently published in Lancet Neurology by the American Academy of Neurology from a separate clinical trial of LY-2951742. LY-2951742 is a monoclonal antibody that, like ALD403, targets the CGRP ligand.

	ALD403	LY-2951742
Category & target	Monoclonal antibody to CGRP ligand	Monoclonal antibody to CGRP ligand
Patient migraine days	5 to 14 migraines per month	4 to 14 migraines per month
Dosing/Formulation	Single 1,000 mg dose IV	Biweekly 150 mg doses SQ
Decrease in number (percentage) of migraine days per month		
	At 8 weeks:	At 12 weeks:
	ALD403: 5.6 (66%)	LY-2951742: 4.2 (62.5%)
	Placebo: 4.6 (52%)	Placebo: 3 (42%)
100% reduction in percentage of migraine days per month		
	At 12 weeks:	At 12 weeks:
	ALD403: 41%	LY-2951742: 33%
	Placebo: 17%	Placebo: 17%
Responder analysis (reduction of migraine days) weeks 1-12 inclusive		
	50% reduction:	Not reported
	ALD403: 61%	
	Placebo: 33%	
	75% reduction:	
	ALD403: 33%	
	Placebo: 9%	

	100% reduction: ALD403: 16% Placebo: 0%	
Other adverse event data	No difference in type or frequency compared to placebo	Upper respiratory tract infections, abdominal pain and injection site pain as compared to placebo

The following figure compares the mean change in headache days from our proof-of-concept trial of ALD403 with data reported in Lancet Neurology for LY-2951742. ALD403 is already at peak effect by month one whereas LY-2951742 requires two months to reach peak effect.

This comparison is not based on data resulting from a head-to-head trial and is not a direct comparison. Different protocol designs, trial designs, patient selection and populations, number of patients, trial endpoints, trial objectives and other parameters that

are not the same between the relevant trials may lead to bias in the results causing comparisons of results from different trials to be unreliable. Any such comparisons would not be permitted by the FDA to support an application for approval to market ALD403.

Completed Phase 1 Clinical Trial. The first clinical trial of ALD403 consisted of three parts:

- Part A: The first part was a single dose, placebo-controlled, randomized, ascending dose trial to determine the safety, tolerability and pharmacokinetics of IV administered ALD403 in healthy volunteers and migraine patients. Fifty-five subjects received one IV dose (dose range: 1 – 1000 mg) of ALD403. ALD403 was well-tolerated and there were no differences exhibited in any safety measure, including laboratory safety parameters, between subjects who received ALD403 and subjects who received placebo at any dose level. ALD403 displayed a long half-life of approximately 32 days for the 1000 mg dose and linear pharmacokinetics for doses ranging from 1 to 1000 mg. Pharmacodynamic effects characterized by a dose-related inhibition of vasodilation induced by topically applied capsaicin were observed in subjects receiving IV administration of ALD403 and persisted through 84 days post-treatment. Pharmacodynamics describe the biochemical and physiological effects of a specific drug on the body and the relationship between drug concentration and effect.
- Part B: In the second part, we demonstrated that ALD403 can be used safely in combination with triptans, the dominant abortive treatment for low frequency migraines. When ALD403 was administered and then followed by triptan administration, no changes in systolic or diastolic blood pressure or other safety parameters were noted beyond these when triptans were given alone.

- Part C: In the third part, as illustrated in the following figure, our subcutaneous, or SQ, formulation of ALD403 was 70.3% bioavailable when compared to IV and the pharmacodynamics, or PD, effect was similar to that of IV in magnitude, duration and speed of onset of its effect.

Clinical Development Plan

In October 2014, we initiated a Phase 2b dose ranging, double blind, randomized, placebo-controlled trial (four dose levels, with approximately 120 patients per group) of an IV formulation in patients with chronic migraine. We expect to have initial data from this Phase 2b trial in the second half of 2015. In addition, we intend to initiate a second Phase 2b dose ranging, double blind, randomized, placebo-controlled trial in patients with high frequency migraine in the first half of 2015. Data from these two dose-ranging trials will be used in order to identify the appropriate dose level and dosing frequency to take forward into pivotal Phase 3 trials in 2016. The main efficacy endpoints in both trials will be the responder analysis (patents achieving 50%, 75% and 100% reduction in migraine days per month) and mean difference in migraine days per month.

We currently hold an IND for ALD403 for the treatment of migraine, which was submitted in December 2012 and remains active. If we generate positive Phase 2b data, we plan to conduct Phase 3 trials in both high frequency and chronic migraine patients utilizing both formulations as appropriate.

Commercial Strategy

In the United States, due to the severity of the disease, patients with high frequency or chronic migraine seek preventive treatment from neurologists and pain specialists. By the time a high frequency or chronic migraine patient begins prevention therapy, the patient may have experienced any or all of increased headache frequency, nonresponse to abortive therapy and significant migraine-related disability. Neurologists prescribe preventive therapies more often than do primary care physicians and pain specialists across all headache frequencies. For example, in the case of topiramate, a leading preventive migraine medication, despite representing only 9% of the doctors prescribing anti-migraine medications, neurologists account for almost half of all the prescriptions written for topiramate. Given the referral patterns for migraine and the need for improved patient care, the American Migraine Foundation has initiated a program to establish headache centers in major cities across the United States. We plan to build a 75 to 100 person sales force targeting the high-prescribing neurologists and headache centers in the United States, if ALD403 is approved, and to seek one or more partners to develop and commercialize ALD403 outside the United States.

We intend to commercialize both an infusion and an injectable formulation in order to optimize rapidity of onset, sustained delivery of efficacy and patient choice. We are currently evaluating the timing of studies for these formulations as part of our pivotal Phase 3 trial strategy. The injectable allows for self-administration, which provides patients convenience and greater control over the treatment of their disease. In addition, we believe that an infusion formulation that allows for more infrequent dosing may provide an alternative for patients to determine how their disease is managed. An infusion formulation also may be preferable for neurologists for a number of reasons, including enabling better monitoring of treatment. Neurologists have access to IV delivery infrastructure, including infusion centers, which they currently use to deliver therapies for diseases such as multiple sclerosis.

Clazakizumab

Clazakizumab is a humanized monoclonal antibody that binds to and inhibits IL-6. IL-6 is an important driver of the inflammatory response and is implicated in the transition from acute to chronic inflammation. Chronic inflammation is a notable feature of several diseases, including RA and PsA. IL-6 is implicated in the pathogenesis of RA as it has been shown to be the main driver that stimulates the immune system to increase tissue destruction and joint damage. IL-6 also drives the systemic symptoms in RA patients, which include flu-like symptoms such as malaise and fatigue. Targeting IL-6 is an established approach for the treatment of RA as evidenced by the use of Genentech’s Actemra for this patient population.

Rheumatoid Arthritis

RA is a chronic inflammatory disorder that principally attacks joints. Approximately 2.4 million patients, predominantly women, suffer from RA in the United States. RA affects the lining of joints, causing a painful swelling that can eventually result in bone erosion and joint deformity. It also leads to stiffness and redness in the joints. RA may also have general effects such as fatigue and cause damage to organs, such as the lungs and the cardiovascular system. Uncontrolled RA also is associated with substantial morbidity and mortality.

We estimate that global sales of RA therapies was more than $12 billion in 2012 and will grow to $15 billion by 2016.

Current Therapies

Methotrexate, or MTX, is an immunosuppressive drug initially developed for cancer and was approved for treatment of RA in 1988. MTX continues to play a role in first-line therapy for the approximately 50% of RA patients who initially respond to MTX, even though it is associated with side-effects including nausea, abdominal pain and serious lung and liver toxicities. A major advancement in treatment of RA began in 1998 with the approval of the first biologic therapy. Biologic therapies involve the use of antibodies or other proteins produced by living organisms to treat disease and represent a significant improvement in patient care. Biologic therapy

of RA is currently dominated by the anti-TNF class, which, when administered in combination with MTX, reduces inflammation and structural damage to the joints. There is increasing recognition that treating patients with biologic therapy early on in the course of their disease delays irreversible structural damage to joints. Since anti-TNFs came on the market, their utilization has increased and they have changed the treatment paradigm for RA.

Current Treatment Paradigm. Anti-TNFs are currently the standard of care for first- and second-line biologic therapies for RA patients who have an inadequate response to MTX alone. Anti-TNFs are often prescribed in combination with MTX for those inadequate responders who are able to tolerate MTX. Anti-TNFs have shown benefit in reducing both symptoms of RA and joint destruction. However, there is a significant need for therapies that deliver a greater degree of efficacy than anti-TNFs, given both the debilitating symptoms and irreversible joint damage caused by RA. Approximately one-third of RA patients do not adequately respond to anti-TNFs and are typically referred to as anti-TNF inadequate responders. In addition, anti-TNFs are associated with low rates of disease remission and the response to these agents is not typically durable. As a result, anti-TNFs lead to therapeutic cycling, where an anti-TNF inadequate responder is switched to another anti-TNF. A significant number of patients treated with an anti-TNF will be cycled to their second and third anti-TNF within 24 months of anti-TNF therapy initiation. Therapeutic cycling is a serious issue for patients because the efficacy of each successive drug is not known typically for several months, which contributes to progression of disease and continued irreversible structural joint damage. The ACR has recommended a higher goal for treatment of RA that focuses on achieving remission or if remission cannot be achieved, low disease activity.

Other New Therapies. Genentech's Actemra, an anti-IL-6 receptor antibody, BMS's Orencia, a CTLA4Ig Fc fusion protein, Biogen Idec and Genentech's Rituxan, an anti-CD20 antibody, and Pfizer's tofacitinib, an oral JAK kinase inhibitor, are all approved for use in RA patients. All except tofacitinib, which was approved in November 2012, have reported annual sales of approximately $900 million or greater. They all may be used as second-line or third-line therapies in the TNF inadequate responder population. Orencia was recently shown to be non-inferior to Humira in terms of ACR20 efficacy in a head-to-head trial, which may drive more use as first-line biologic therapy. Based on reported sales, tofacitinib has had low uptake to date, which we believe is due in part to its safety profile, and it was rejected at all dose levels by the European Medicines Agency.

Future Treatment Paradigm. Unlike the approach taken by the other biologic therapies under development for the anti-TNF inadequate responders, we are seeking to position Clazakizumab as an option for first-line biologic therapy for RA. We believe that a new biologic therapy that demonstrates superior disease control to an anti-TNF and has strong durability presents an opportunity to change the current treatment paradigm to one of first-line use of biologics that have the potential to stop disease progression in more patients. The following diagram depicts the current and our anticipated future treatment paradigm of treating patients with a goal of achieving remission or lowest possible disease activity.

Measurements of RA Disease. The severity of RA disease can be assessed using several indices as recommended by ACR: the ACR criteria, the DAS28 and the CDAI.

The ACR criteria measures improvement in tender or swollen joint counts and includes other parameters which take into account the patient's and physician's assessment of disability. These clinical disease activity parameters are combined to form composite percentages of clinical response that are known as ACR20, ACR50, and ACR70. An ACR20 score represents a 20% improvement in these criteria and is considered a modest improvement in a patient's

disease. The ACR20 is currently the regulatory bar by which new therapeutics in RA are approved by the FDA. An ACR50 score and ACR70 score represents a 50% and 70% improvement in the clinical response criteria, respectively, and are considered evidence of clinically meaningful improvements in a patient's disease. We believe physicians are looking for agents which deliver at least an ACR50 or ACR70 level of benefit to their patients.

Two other highly discriminating scoring systems for RA include the Disease Activity Score, or DAS, and the Clinical Disease Activity Index, or CDAI. As with the ACR score, both the DAS28-CRP and the CDAI are composite indices that quantify a patient's degree of improvement. The DAS provides a number between zero and 10, indicating how active the RA is at that moment. A patient who has a DAS28-CRP score of less than 2.6 is considered to have achieved disease remission. The CDAI has range from 0 to 76. A patient is considered to be in CDAI remission if they have a CDAI score of equal to or less than 2.8. With each measure, remission means the patient experiences little or no disease activity and is the ultimate objective for every RA patient.

Today the efficacy bar for treatment success is moving: rather than being satisfied with modest improvements in disease activity, such as an ACR20, the ACR has set low disease activity and remission as the new target for RA therapies. These more stringent outcomes can be assessed using newer measures such as ACR70, DAS28-CRP remission and CDAI remission.

Comparative Efficacy. We believe the current approved anti-TNFs and non-anti-TNFs have demonstrated in clinical trials, broadly, similar efficacy based on ACR and DAS28 scores, when used in combination with MTX, which is standard of care. The following table compares data from representative anti-TNFs, the leading non-anti-TNF, Orencia and the only approved IL-6 agent, Actemra.

Response and Remission Rates

in Methotrexate Inadequate Responders at Six Months

(Placebo + MTX Response in Brackets)

		Response Rates (%)			Remission Rates (%)
		ACR20	ACR50	ACR70	DAS28 <2.6
Representative Approved Anti-TNFs	Humira + MTX	68 (39)	49 (18)	19 (7)	23.7
	Remicade + MTX	59 (42)	37 (20)	24 (9)	25.2
	Enbrel + MTX	71 (27)	39 (3)	15 (0)	30
Representative Approved Non-anti-TNFs	Orencia + MTX	68 (40)	40 (17)	20 (7)	Not Reported
	Actemra + MTX	59 (27)	44 (11)	22 (2)	16.3

(anti-IL-6R)

Our Solution

We believe there is an opportunity to position Clazakizumab as an option for first-line biologic therapy for the treatment of RA by demonstrating superior disease control rates versus a biologic standard of care in Phase 3 trials. In the completed Phase 2b clinical trial, the ACR70 and rates of disease remission of Clazakizumab and Humira were:

		Remission Rates (%)	
	ACR70 (%)	DAS28-CRP < 2.6	CDAI £2.8
Clazakizumab 25mg + MTX	27.1	49.2	15.3
Clazakizumab 100mg + MTX	38.3	41.7	20.0
Clazakizumab 200mg + MTX	30.0	41.7	20.0
Humira + MTX	18.6	23.7	8.5

ACR70 and remission rates were not specified as primary endpoints in the Phase 2b trial so an additional trial would be needed to confirm these findings.

We believe demonstrating superior disease control rates for Clazakizumab versus a biologic standard of care in a head-to-head trial would be valued by physicians who are choosing the best first-line RA therapy for their patients.

Other IL-6 Inhibitors in Development

There have been two main approaches to targeting IL-6 biology, targeting the ligand or the receptor. Clazakizumab targets the ligand. Because the concentration of IL-6 receptor is 1000-fold higher than the ligand, we believe by targeting the ligand we may be able to disrupt IL-6 biology by administering relatively low levels of drug.

Late Stage IL-6 Inhibitors

Compound	Company	Target	Formation	Dosing	Stage of Development	Usage	Clinical Program
Sarilumab	Regeneron / Sanofi	Receptor	Subcutaneous	Q2 week	Phase 3	With MTX	DMARD-IR and Second-line after anti-TNF
Sirukumab	Janssen J&J / GSK	Ligand	Subcutaneous	Q2 week / Q4 week	Phase 3	With MTX	DMARD-IR and Second-line after anti-TNF and monotherapy
Clazakizumab	BMS	Ligand	Subcutaneous	Q4 week	Phase 2b	With MTX	First-line and DMARD-IR

Clinical Trials

To date, an aggregate of nine human clinical trials of Clazakizumab have been conducted or initiated by BMS and us, collectively involving over 1,000 patients, including Phase 1 and Phase 2 trials in healthy volunteers and patients with RA, PsA and cancer. In general, the safety profile of Clazakizumab has been the same or better than other RA therapies and is consistent with the known pharmacology of an IL-6 inhibitor. We believe these trials have also demonstrated that Clazakizumab has the potential to be superior to Humira.

Completed Phase 2b Clinical Trial in RA. BMS has completed a randomized, double-blind, placebo-controlled, dose-ranging trial including Humira as an active comparator. Approximately 418 patients were randomized to one of seven treatment arms: five Clazakizumab doses (three in combinations with MTX, two monotherapy), placebo in combination with MTX, and Humira in combination with MTX. Patients were dosed monthly for 24 weeks with a 24 week extension and open-label extension as well at a common fixed dose. Patients randomized to Clazakizumab monotherapy received MTX after week 24. The primary objective of the trial was to compare the efficacy of Clazakizumab versus placebo on a background of MTX as assessed by ACR20 response rates.

The trial met the primary endpoint with a greater proportion of patients achieving an ACR20 response at week 12 in all Clazakizumab treatment arms as compared to placebo, in combination with MTX. At week 24, all Clazakizumab treatment groups and the Humira treatment group had numerically higher percentage of patients achieving an ACR20, ACR50 and ACR70 score. In addition, remission rates as judged by a DAS28-CRP score < 2.6 or CDAI score £ 2.8 were numerically favorable to placebo in all treatment groups.

Response Rates and Remission Rates in BMS's Phase 2b Trial at 24 Weeks

		Response Rates(%)			Remission Rates(%)	
Treatment Arm	Number of Patients	ACR20	ACR50	ACR70	DAS28-CRP < 2.6	CDAI £ 2.8
Placebo + MTX	61	39.3	18.0	6.6	13.1	1.6
Claza 25 mg + MTX	59	83.1	47.5	27.1	49.2	15.3
Claza 100 mg + MTX	60	63.3	45.0	38.3	41.7	20.0
Claza 200 mg + MTX	60	66.7	43.3	30.0	41.7	20.0
Claza 100 mg + placebo	60	58.3	36.7	16.7	28.3	6.7
Claza 200 mg + placebo	59	57.6	33.9	25.4	35.6	6.8
Humira + MTX	59	67.8	49.2	18.6	23.7	8.5

The safety profile of Clazakizumab at 24 weeks exhibited rates of adverse events that were similar across all Clazakizumab arms (ranging from 83.1% to 96.7%), compared to 59% and 74.6% for the MTX and Humira arms, respectively. The rates of serious adverse events, or SAEs, ranged from 8.3% to 13.6% in the Clazakizumab arms versus 3.3% for MTX and 5.1% for Humira + MTX. The most frequent SAEs were serious infections. Rates of serious infections ranged from 1.7% to 5.1% in the Clazakizumab arms versus 0% for MTX and 3.4% for Humira + MTX.

Additionally, the Clazakizumab arms exhibited increases in mean total cholesterol without changes in HDL/LDL ratio, increases in hemoglobin, increases in liver function tests and decreases in neutrophils, a type of white blood cell, and platelets, which are expected from IL-6 inhibition. Clazakizumab arms also exhibited low rates of immunogenicity and lacked serious infusion reactions.

Completed Phase 2a Clinical Trial in RA. Efficacy and remission rates of Clazakizumab in the Phase 2a trial conducted by us and the Phase 2b trial conducted by BMS are consistent. In addition, the safety profile for Clazakizumab in both trials was consistent. Prior to our collaboration agreement with BMS, we assessed the clinical efficacy of Clazakizumab in moderate to severe RA in a parallel-group, double-blind, randomized, placebo-controlled, 16 week trial. Clazakizumab was administered intravenously in patients with active RA with an inadequate response to MTX. A total of 132 patients were enrolled, of which 127 received at least one dose of trial drug and 116 received two doses of trial drug. Patients were randomized to receive two intravenous infusions of Clazakizumab 80, 160, 320 mg or placebo on day one and at week eight. In all treatment groups, patients continued to take a stable dose of MTX. The demographic and other baseline characteristics were balanced across treatment groups. The trial met the primary endpoint with a greater proportion of patients achieving an ACR20 response at week 12, with 81.3%, 70.6%, and 82.1% of patients in the Clazakizumab 80, 160, and 320 mg groups, respectively, compared with 27.3% in the placebo group ($p>0.0005$ for each comparison to placebo). A greater proportion of patients in the Clazakizumab groups compared with placebo also achieved ACR50 and ACR70 responses. Furthermore, there were additional incremental increases in ACR50 and ACR70 response rates between weeks 12 and 16. In this trial, the “p” values were statistical calculations to determine whether the effects of Clazakizumab were significant in comparison to placebo based on pre-specified statistical targets. We specified that any result less than $p=0.05$ would be significant.

Response Rates and Remission Rates in Our Phase 2a Trial at 16 Weeks

		Response Rates(%)			Remission Rates(%)
Treatment Arm	Number of Patients	ACR20	ACR50	ACR70	DAS28-CRP < 2.6
Placebo + MTX	33	36	15	6	0
Claza 80 mg IV every 8 wks + MTX	32	75	41	22	13.8
		(p=0.0026)	(p=0.028)	(p=0.082)	(p=0.002)
Claza 160 mg IV every 8 wks + MTX	34	65	41	18	28.1
		(p=0.028)	(p=0.029)	(p=0.258)	(p=0.0001)
Claza 320 mg IV every 8 wks + MTX	28	82	50	43	44
		(p=0.005)	(p=0.005)	(p=0.0015)	(p=0.0001)

Ongoing Clinical Trials in RA. BMS is currently conducting a Phase 2b, dose-ranging clinical trial of Clazakizumab designed to determine the safety and efficacy of Clazakizumab in RA patients who are anti-TNF inadequate responders. Approximately 140 patients taking background MTX have been enrolled and randomized to one of four dose groups: 1, 5, 25 mg Clazakizumab or placebo. Patients receive monthly subcutaneous injections. The primary objective of the trial is to compare the efficacy of Clazakizumab plus MTX in reducing signs and symptoms of RA as assessed by change in the baseline DAS28-CRP at 12 weeks of treatment. The trial is now fully enrolled and BMS continues to be responsible for all costs of this clinical trial through June 29, 2015. We expect top line data from this study during the first half of 2015. We filed an IND for Clazakizumab in November 2008, which was subsequently transferred to BMS. BMS filed an IND for Clazakizumab in May 2011. Both INDs remain active and BMS is obligated to transfer to us the IND that BMS filed in May 2011.

Other Indications

We believe that Clazakizumab has the potential for further development as a therapeutic agent for one or more additional diseases where high levels of IL-6 are believed to play a role, such as PsA. As a result of the termination of our agreement with BMS, we have regained worldwide rights for all clinical and other product development activities and for manufacturing Clazakizumab.

Psoriatic Arthritis. PsA is a form of arthritis that affects some people who have psoriasis, a skin condition characterized by red patches of skin topped with silvery scales. PsA often strikes earlier in life than RA, affecting patients as early as their 20s. Most PsA patients have concurrent joint pain, stiffness and swelling, as well as skin lesions. PsA is clinically distinct from RA, but causes similar significant morbidity and mortality. Despite the relatively small PsA incidence, the worldwide sales of PsA biologic therapies totaled $1.7 billion in 2011, with anti-TNFs representing 89% of the market. By contrast to RA, there are only three anti-TNF therapies approved for the treatment of PsA: Enbrel, Humira and Simponi. Anti-TNFs are ineffective for approximately 33% of PsA patients

and an additional 20% of PsA patients become anti-TNF inadequate responders over time, resulting in therapeutic cycling and joint destruction. PsA patients have fewer options for follow-on treatment than RA patients.

BMS completed a Phase 2b, dose-ranging clinical trial of Clazakizumab in PsA that was designed to determine the safety, efficacy and dose response of Clazakizumab in patients with active PsA who have had an inadequate response to nonsteroidal anti-inflammatory drugs and non-biologic disease-modifying anti-rheumatic drugs, or DMARDs. Approximately 150 patients taking a stable dose of background MTX were randomized to one of four dose groups: 25, 100, or 200 mg Clazakizumab or placebo. Patients received monthly subcutaneous injections for six months. The primary objective of the trial was to compare the efficacy of Clazakizumab in reducing the signs and symptoms of PsA as assessed by ACR20 response rates. BMS initiated the trial in December 2011 and presented data from the trial in November 2014. Clazakizumab met the primary endpoint of the study, ACR20 response rate at week 16 versus placebo. At week 16, ACR20 response rates were 29.3, 46.3, 52.4 and 39% for placebo, and 25, 100 and 200 mg Clazakizumab, respectively.

Other Prior Clinical Trials. We have completed five clinical trials in cancer indications where tumors secrete high levels of IL-6, which may promote resistance to treatment, increase the rate of metastatic spread, and lead to anemia, fatigue and weight loss. One hundred ninety-eight patients have received at least one dose of Clazakizumab in these trials. Clazakizumab has a safety profile in cancer patients comparable to the safety profile in the auto-immune patients studied to date. We currently hold an IND for Clazakizumab for the treatment of cancer, which was submitted in October 2010 and is inactive. Due to our prioritization of our ALD403 program, we are not currently pursuing further development of Clazakizumab in cancer at this time. We may resume development of Clazakizumab in cancer indications in the future.

Strategy

We are seeking a partner to continue the development of Clazakizumab and in the event that we do not find a partner, the development of Clazakizumab could be significantly delayed or result in the discontinuation of the development of Clazakizumab.

ALD1613

ALD1613 is a genetically engineered monoclonal antibody discovered by us that was designed specifically to inhibit ACTH for the treatment of Cushing's Disease. This disease is driven by long-term exposure to cortisol as a result of increased expression of ACTH produced by a pituitary tumor. Chronic, excessive exposure to cortisol induces a wide range of clinical features including: obesity, protein wasting, diabetes, dyslipidemia, hypertension, psychological dysfunction, and osteoporosis. Surgery is commonly employed in this population; however, it provides a transient solution so there remains a significant need for new therapy despite available pharmacotherapy. The current medicines have significant side effect issues and provide limited efficacy. We believe a novel, mechanism-based approach to address Cushing's Disease using a monoclonal antibody targeted to ACTH that diminishes the overproduction of cortisol with a sound safety profile would provide a significant advantage over the current standard of care and provide an important new therapeutic option to both the patient and physician. ALD1613 is currently at a preclinical stage of development.

Preclinical Pipeline

We are actively working to expand our antibody therapeutic pipeline in opportunities where our technology provides favorable development advantage in areas of unmet medical need, seeking both first-in-class and best-in-class therapeutics. We prioritize targets that meet the criteria of either genetic validation or clinical demonstration that they play a central role in the disease state. We recently designated ALD1613 as the candidate to advance to IND enabling studies for the treatment of Cushing's Disease. We are continuing to evaluate additional potential candidates that represent diverse opportunities in indications that may be eligible for orphan designations and/or indications where monoclonal antibodies have not previously played a role in the treatment paradigm such as our ALD403 program for migraine prevention.

Technology Platform

We have developed a proprietary antibody platform to select antibodies that not only maximizes efficacy, but also speed of onset and durability of therapeutic response. In addition, our ability to efficiently manufacture antibodies allows us to target diseases that traditionally have not been addressed by antibodies. Our antibody platform accomplishes this by utilizing three technologies:

- ABS, which allows us to discover antibodies that are optimized for therapeutic efficacy;
- rabbit humanization, which allows us to limit side-effects and maximize durability; and
- MabXpress, which allows us to efficiently and reproducibly manufacture large quantities of antibodies.

We also believe these technologies allow us to address a number of critical development priorities early, thereby reducing our development cost and timeline.

Antibody Discovery and Candidate Selection Technology

Antibodies are produced by the immune system in humans and other warm-blooded animals. They are naturally generated to help defend and protect from disease and infections. Antibodies are produced and secreted by specialized antibody producing cells called B cells. Traditionally, rodents have been used as the source of therapeutic antibodies. To find these antibodies, we remove the B cells from the spleen and fuse to a cancer cell. The combined cancer and B cell, or a “hybridoma,” is able to live longer than normal B cells would alone. Generally, this process has trouble recovering the desired therapeutic antibody due to its low efficiency. Collectively this limits the ability to identify high-quality antibody therapeutics with optimal therapeutic properties.

We discover all of our product candidates in-house with a technology we call ABS. As a precursor to discovery, we choose to target freely-circulating proteins, such as ligands, which are critical to the disease biology and are part of well understood disease pathways. We believe this strategy can lead to fewer drug doses at lower concentrations, while potentially minimizing off target activity and associated side-effects. The clinical relevance of these proteins is highly validated by prior scientific or clinical research.

Our ABS technology has been successfully applied to a wide cross section of therapeutic targets that range from small biologically active peptides to more traditional monoclonal antibody targets. ABS allows us to rapidly evaluate all the B cells in a host and identify the key subset of cells that produce the antibody responsible for the desired therapeutic effect. We believe one of our competitive advantages is our proprietary method to keep these B cells alive while we exhaustively screen them. This is an iterative process that allows us to identify the rare antibodies that possess the ideal qualities needed to be a successful therapeutic, for example manufacturability, therapeutic stability, durability and favorable safety.

Our Antibody Selection Process

Our ABS technology has been applied in all our preclinical and clinical programs and led to the selection of our lead product candidate, ALD403, as well as Clazakizumab and ALD1613. We also use our ABS technology to provide bio-analytical support for all our product candidates in the clinic.

Antibody Humanization and Therapeutic Design

Antibodies derived from non-human sources elicit a natural rejection response, and if left unchanged when injected into humans, are removed rapidly and quickly lose their therapeutic effect. Common sources of antibodies include mice and rats, which have antibodies that are structurally different from humans and need to be altered to be more human-like.

Historically it is a complex and difficult undertaking to convert rodent antibodies into human therapeutics that retain all the original rodent antibody properties. This is a highly iterative process that is both time and labor intensive and is fraught with significant failure.

We have pioneered the use of rabbit antibodies as the starting materials for our product candidates. Compared to rodent antibody humanization, our rabbit antibody humanization results in more human-like antibodies that maintain their original properties and are faster to produce. As a result, our process requires fewer iterations to complete humanization. Using our proprietary technology, we consistently generate antibody therapeutics that are greater than 95% human in terms of their sequence content. However, unlike fully-human antibodies, we specifically design our antibodies to lack certain sugars in order to further minimize the body’s recognition of such antibodies as foreign, thereby limiting infusion reactions, as well as maximizing durability of the therapeutic response. Our technology results in product candidates that are well-tolerated by patients.

MabXpress Protein Expression

Historically, commercial manufacturing of large molecule proteins has posed a number of significant challenges. In particular, the ability to efficiently, from a time and cost perspective, manufacture biologics has been a bottleneck to the development and successful commercialization of these types of molecules. Furthermore, these inefficiencies have created a barrier to the use of biologics for certain therapeutics. We express complex molecules like monoclonal antibodies in a simple microorganism with our technology we call MabXpress. MabXpress addresses the previous inefficiencies in manufacturing, which we believe may allow us to target diseases that traditionally have not been addressed by antibodies.

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MabXpress is based on the expression of recombinant polypeptides including antibodies in diploid Pichia pastoris host yeast strains. Recombinant polypeptides are manipulated forms of natural proteins generated through the use of various molecular techniques to produce large quantities of proteins. Pichia pastoris has been widely used in commodity production, such as Purafine, a product that is commonly used in waste water treatment. Pichia pastoris yields rapid production cycles, excellent scale-up characteristics and success in production runs at up to 160,000 liters scale. This yeast strain is currently used to produce non-antibody therapeutic proteins approved by the FDA, and which may provide an established framework for regulatory approval for our product candidates.

We employ MabXpress to produce our product candidates, because it offers distinct time, scale and viral clearance advantages over traditional mammalian cell culture approaches, such as Chinese Hamster Ovary, or CHO, as depicted in the table below.

Production Advantages of Using MabXpress

Characteristics	Pichia Pastoris	CHO
Cell line manufacture and release	Up to 1 month	6-9 months
Fermentation cycle time	5-7 days	15-30 days
Maximum scale of production	Up to 160,000 liters	Up to 25,000 liters
Viral clearance and validation of viral clearance	Not Applicable	3-6 months

We have pioneered the use of this yeast to produce full-length therapeutic antibodies, which are the core products of our business. The purification process makes use of industry standard methods, and has been scaled to a commercial level for Clazakizumab. These antibodies have been engineered to enhance the fundamental properties of the product candidate. The process results in antibody products which are similar from lot to lot and we specifically design our antibodies to lack certain sugars in an effort to minimize the body’s recognition of such antibodies as foreign, and to improve product half-life thereby limiting infusion reactions as well as maximizing durability of the therapeutic response.

During product candidate selection, we consider manufacturing attributes including efficiency, product stability, homogeneity and scalability to commercial levels. We also select multiple back up antibodies all compatible with the final product candidate profile. This supports rapid and successful delivery of product candidate supply and if an unforeseen production or stability problem emerges, we are able to more efficiently transition to an alternate antibody. We have successfully implemented MabXpress in multiple contract manufacturing facilities throughout the world. Upon successful transfer and subject to availability, our contract manufactures’ facilities can execute production runs in days compared to the weeks required by traditional mammalian production.

Collectively, our proprietary technologies enable rapid progression into human clinical trials. We were able to bring each of our two product candidates, ALD403 and Clazakizumab, from discovery initiation against the disease target to dosing of patients in clinical trials in 20 months.

Intellectual Property

Our success will significantly depend upon our ability to obtain and maintain patent and other intellectual property and proprietary protection for our product candidates and antibody platform. For the specific antibody product candidates in all of our programs, we seek to protect the candidate antibody and variants thereof, compositions containing the antibody, methods of manufacturing the antibody, and the use of the antibody in treating human disease conditions where we or any future partner is actively pursuing, or contemplate pursuing regulatory approval permitting the marketing of the antibody for use as a human therapeutic agent. In addition to pursuing patent protection for our key technologies, we rely upon unpatented trade secrets, know-how and continuing technological innovation to develop and maintain our competitive position.

We seek to protect our proprietary information, in part, by using confidentiality agreements with our collaborators, employees and consultants and invention assignment agreements with our employees and selected consultants. Despite these measures, any of our intellectual property and proprietary rights could be challenged, invalidated, circumvented, infringed or misappropriated, or such intellectual property and proprietary rights may not be sufficient to permit us to take advantage of current market trends or otherwise to protect competitive advantages. For more information, see the section of this Annual Report on Form 10-K titled “Risk Factors—Risk Related to Intellectual Property.”

Clazakizumab

Our patents and patent applications relating to Clazakizumab have been broadly filed worldwide. Many of these applications have issued in the United States and other countries and will expire between 2028 and 2031, or later if patent term extension applies.

We hold one U.S. patent with granted claims directed to the Clazakizumab antibody and compositions containing the Clazakizumab antibody. This patent will expire in 2028 or later if patent term extension applies.

We hold one U.S. patent with granted claims directed to nucleic acids encoding Clazakizumab and methods of use thereof to produce this antibody. This patent will expire in 2028.

We hold nine U.S. patents with granted claims broadly or specifically directed to the use of Clazakizumab and variants thereof, alone or in combination, to treat or prevent human disease conditions associated with elevated IL-6. These patents will expire between 2028 and 2030, or later if patent term extension applies.

ALD403

Our patent applications relating to ALD403 have also been broadly filed worldwide. If these applications issue as patents, they are estimated to expire in 2032.

We own, or co-own with exclusive rights, three patent families related to ALD403. Each family contains one pending U.S. patent application, one international (PCT) application, and various foreign counterpart applications with claims directed to compositions and methods of using ALD403 and variants thereof, alone or in combination to treat or prevent various human diseases and conditions associated with elevated CGRP. Patents based on these applications, if granted, are expected to expire in 2032.

We have full ownership of the first ALD403 patent family, which relates to ALD403 compositions and methods for treating or preventing various human disease conditions associated with elevated CGRP.

We are the co-owner and exclusive licensee of the second ALD403 patent family, which relates to ALD403 compositions and methods for treating or preventing various human disease conditions associated with photophobia or light aversion.

We are the co-owner and exclusive licensee of the third ALD403 patent family, which relates to ALD403 compositions and methods for treating or preventing various other human disease conditions associated with diarrhea.

ALD1613

We hold six U.S. patent applications related to ALD1613 and are actively filing additional U.S. applications. If these applications issue as patents, they are estimated to expire in 2035.

Technologies

We hold three U.S. patents and numerous foreign patents related to MabXpress. Our MabXpress patents and patent applications relate to the expression of heteropolymeric polypeptides, such as antibodies, in Pichia. These patents will expire between 2024 and 2026.

We have sought patent protection for our antibody discovery method, of which five foreign patents have been granted, and one pending U.S. application and six foreign applications are under examination. These foreign patents will expire in 2027. A patent based on the U.S. application, if issued, is expected to expire in 2027.

We also have sought patent protection for our proprietary method of humanizing rabbit antibodies. Three of these patents have been granted in foreign territories and two U.S. and thirteen pending foreign patent applications are under examination. These foreign patents will expire in 2028. Patents based on the U.S. applications, if issued, are expected to expire in 2028. Patents based on the foreign applications, if issued, are expected to expire in 2028.

We also hold two granted U.S. patents claiming a yeast promoter sequence useful in the MabXpress technology. These patents will expire in 2027.

Early Stage Programs

All programs where there is a potential at a later stage to transition into clinical candidate nomination are covered by pending U.S. (non-provisional or provisional), international (PCT) or directly filed foreign patent applications. There are currently ten U.S. patent applications and one granted U.S. patent that support these programs, and in some instances corresponding PCT and/or foreign counterpart applications have been filed.

Technology Licenses

Keck Graduate Institute of Applied Life Sciences

In October 2004, we entered into a license agreement with Keck Graduate Institute of Applied Life Sciences, or Keck, under which we obtained an exclusive, worldwide license to Keck's patent rights in certain inventions, or the Keck patent rights, and technology or the Keck technology, related to production and optimization of antibodies in yeast, including certain patents relating to our ABS and MabXpress technologies. Under the license agreement, we are permitted to research, develop, manufacture and commercialize products utilizing the Keck patent rights for all research and commercial uses, and to sublicense such rights. Keck retained the right, on behalf of itself and other non-profit institutions, to use the Keck patent rights and Keck technology for educational and research purposes and to publish information about the Keck patent rights and to further use the Keck technology for purposes other than production and optimization of antibodies in yeast.

In consideration for the rights granted to us under the license agreement, we issued Keck an aggregate of 40,000 shares of our common stock. As additional consideration, we are required to pay an annual license maintenance fee during the term of the agreement.

The license agreement requires that we use commercially reasonable efforts to develop and commercialize one or more products that are covered by the Keck patent rights. We may terminate the license agreement upon 30 days' notice to Keck. Either party may terminate the license agreement in the event of material breach of the license agreement which remains uncured after 90 days of receiving written notice of such breach. Absent early termination, the license agreement will automatically terminate on a country-by-country basis upon the expiration date of the longest-lived patent right included in the Keck patent rights.

Other

We also license intellectual property from certain other parties that we believe to be useful for the conduct of our business and may enter into additional license agreements in the future.

Terminated Collaboration Agreement with Bristol-Myers Squibb

In November 2009, we entered into a license and collaboration agreement with BMS for the development and commercialization of Clazakizumab and received an $85 million upfront payment. On August 29, 2014, we received written notice that BMS had elected to terminate the license and collaboration agreement effective as of December 29, 2014, or the Termination Date, at which time all rights to Clazakizumab were returned to us. The decision by BMS to terminate the agreement was the result of an internal BMS portfolio review process wherein BMS determined that Clazakizumab did not warrant further investment based on other priorities in their pipeline. Under the terms of the agreement, we granted BMS worldwide exclusive rights to develop and commercialize Clazakizumab for all indications other than cancer. In addition to the $85 million upfront payment, BMS was responsible for paying 100% of worldwide development costs for all indications, except cancer, and reimbursing us for certain clinical supply and development costs. To date, in addition to the upfront payment, we have received two milestone payments totaling $18.5 million in the aggregate and we have been reimbursed for clinical supply and development costs of $26.9 million. We would have been eligible to receive additional development-based, regulatory-based and sales-based milestone payments and tiered royalties on net sales of Clazakizumab had the agreement not been terminated.

BMS continues to be responsible for all costs of the clinical trials through June 29, 2015 that were initiated prior to August 29, 2014. If any milestone event is achieved during the period between August 29, 2014 and the Termination Date, BMS will not be obligated to pay the corresponding milestone payment. Effective on the Termination Date, all rights granted to BMS with respect to Clazakizumab terminated and reverted to us, and BMS granted to us an exclusive license, with the right to grant sublicenses, under certain BMS intellectual property solely to make, have made, use, import, export, offer for sale, and sell Clazakizumab. BMS is obligated to transfer to us the Investigational New Drug Application that BMS filed for Clazakizumab with the U.S. Food and Drug Administration and all material data related to Clazakizumab that has not previously been transferred to us. We have the right to purchase all of BMS' existing manufactured drug supply of Clazakizumab at cost.

We will be required to pay a low single-digit royalty to BMS on sales of Clazakizumab unless the regulatory approval of Clazakizumab is not based in whole or in part upon data from BMS's Phase 2b clinical trial(s) in rheumatoid arthritis and psoriatic arthritis. Aside from those clinical trial expenses that BMS is obligated to pay after the Termination Date, we will be solely responsible for performing and funding any new Clazakizumab development and clinical trial activities initiated after the Termination Date. We are seeking a partner to continue the development of Clazakizumab and in the event that we do not find a partner, we expect the development of Clazakizumab to be discontinued for the foreseeable future.

Manufacturing

We have adopted a manufacturing strategy of contracting with a variety of contract manufacturing organizations, or CMOs, within North America and Europe for the manufacture of ALD403 and future product candidates. This has enabled us to produce products under current good manufacturing practices, or cGMP, controls for our completed and planned clinical trials. A protocol of methods has been established at these manufacturers along with specific testing facilities to generate sufficient information to inform the appropriate regulatory authorities. We anticipate there will be continued interaction with additional CMOs as our product candidates advance and we seek to expand our access to larger production facilities to supply clinical trials and commercialization. We have identified multiple CMOs that we believe would be capable of implementing and validating the manufacturing process for ALD403. If we secure a partner to continue the development of Clazakizumab, we would expect such partner to manage the manufacturing process of Clazakizumab.

Competition

The development and commercialization of new therapeutic products is highly competitive. Our success will be based in part on our ability to identify, develop and manage products that are safer, more efficacious and/or more cost-effective than alternative therapies. We face competition with respect to our current product candidates, and will face competition with respect to product candidates that we may seek to develop or commercialize in the future, from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide. In addition, our ability to compete may be affected in many

cases by insurers or other third-party payors seeking to encourage the use of biosimilar products, which are expected to become available over the coming years. Many of our competitors are large pharmaceutical companies that will have a greater ability to reduce prices for their competing drugs in an effort to gain market share and undermine the value proposition that we might otherwise be able to offer to payors.

Potential competitors also include academic institutions, government agencies and other public and private research organizations that conduct research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and commercialization. Many of these competitors are attempting to develop therapeutics for our target indications.

ALD403

ALD403, if approved, will compete with beta blockers that are approved for prevention of high frequency and chronic migraine such as topiramate, marketed by Johnson & Johnson, propranolol, marketed by Wyeth, and sodium valproate, marketed by Divalproex. In addition, Botox, marketed by Allergan, is approved for the prevention of chronic migraine and commonly prescribed for high frequency migraine. We are also aware of several CGRP inhibiting therapies currently in development that could compete with ALD403, including therapies using antibodies similar to ALD403 that are being developed by Amgen, Lilly and Teva (Labrys). Furthermore, even though not as effective in treating high-frequency and chronic migraine, patients may be satisfied using cheaper generic abortive medications such as triptans, which could limit ALD403 market penetration in the migraine prevention marketplace.

Clazakizumab

Clazakizumab, if approved, will compete with other biologic therapies including anti-TNFs and non-anti-TNFs. Anti-TNFs include Humira, marketed by AbbVie, Enbrel, marketed by Amgen, and Remicade, marketed by Johnson & Johnson. Non-anti-TNFs include Orencia, a CTLA4Ig Fc fusion protein, marketed by BMS and Actemra, an IL-6 inhibitor, marketed by Genentech. In addition, we are aware of several other IL-6 therapies currently in development including Sarilumab which is being developed by Regeneron and Sanofi, and Sirukumab which is being developed by Johnson & Johnson and GSK. Unless we or a future partner is able to demonstrate superior disease control to a biologic standard of care and position Clazakizumab as an option for first line biologic therapy, it will face significant competition in an increasingly crowded biologic therapy market. In addition, we expect that by the time Clazakizumab could enter the marketplace, there may be several anti-TNF biosimilars on the market. The entry of such products could potentially put pricing and access pressures on Clazakizumab.

The commercial opportunity for ALD403 or Clazakizumab could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, more convenient or less expensive than our product candidates or any other product candidate that we may develop. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours. In addition, our ability to compete may be affected because in many cases insurers or other third-party payers seek to encourage the use of generic products.

We believe that ALD403 and Clazakizumab have potential benefits over these competitive products as described in more detail under “—Product Candidates—ALD403—Current Therapies” and “—Product Candidates—Clazakizumab—Curre Therapies.” As a result, we believe that ALD403 and Clazakizumab should be well placed to capture market share from competing products if approved. However, even with those benefits, ALD403 and Clazakizumab may be unable to compete successfully against these products. See “Risk Factors — Risks Related to Our Business and the Development and Commercialization of Our Product Candidates.”

Government Regulation

The FDA and comparable regulatory agencies in state and local jurisdictions and in foreign countries impose substantial requirements upon the clinical development, manufacture and marketing of biopharmaceutical products. These agencies and other federal, state and local entities regulate research and development activities and the testing, manufacture, quality control, import, export, safety, effectiveness, labeling, storage, distribution record keeping, approval, advertising and promotion of our products.

The process required by the FDA before product candidates may be marketed in the United States generally involves the following:

- submission of an investigational new drug application, or IND, which must become effective before clinical trials may begin;
- adequate and well-controlled human clinical trials to establish the safety, purity and potency of the proposed biologic product candidate for its intended purpose;
- pre-approval inspection of manufacturing facilities for their compliance with cGMP and selected clinical investigations for their compliance with Good Clinical Practices; and
- FDA approval of a Biologics License Application, or BLA, to permit commercial marketing for particular indications for use.

The testing and approval process requires substantial time, effort and financial resources. Prior to commencing the first clinical trial with a product candidate, we must submit an IND to the FDA. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises safety concerns or questions about the conduct of the clinical trial by

imposing a clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. Submission of an IND may not result in FDA authorization to commence a clinical trial. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development. Furthermore, an independent institutional review board for each medical center proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial commences at that center. Regulatory authorities or an institutional review board or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk. Some studies also include a data safety monitoring board, which receives special access to unblinded data during the clinical trial and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy.

For purposes of BLA approval, human clinical trials are typically conducted in three sequential phases that may overlap.

- Phase 1—Studies are initially conducted to test the product candidate for safety, dosage tolerance, absorption, metabolism and distribution.
- Phase 2—Studies are conducted with groups of patients with a specified disease or condition to provide enough data to evaluate the preliminary efficacy, optimal dosages and dosing schedule and expanded evidence of safety. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
- Phase 3—Clinical trials are undertaken in large patient populations to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety in an expanded patient population at multiple clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the product and provide an adequate basis for product approval.
- Phase 4—The FDA may require, or companies may pursue, additional clinical trials after a product is approved. These so-called Phase 4 studies may be made a condition to be satisfied after approval. The results of Phase 4 studies can confirm the effectiveness of a product candidate and can provide important safety information.

Concurrent with clinical trials, companies usually complete additional animal studies and must also develop additional information about the biological characteristics of the product candidate as well as finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, must develop methods for testing the identity, strength, quality and purity of the final product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

BLA Submission and Review by the FDA

The results of product development, nonclinical studies and clinical trials are submitted to the FDA as part of BLA. The submission of BLA requires payment of a substantial User Fee to the FDA. The FDA may convene an advisory committee to provide clinical insight on application review questions. The FDA reviews applications to determine, among other things, whether a product is safe and effective for its intended use and whether the manufacturing controls are adequate to assure and preserve the product's identity, strength, quality and purity. Before approving an NDA or BLA, the FDA will inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Once the BLA submission has been accepted for filing, the FDA typically takes one year to review the application and respond to the applicant, which can take the form of either a Complete Response Letter or Approval. The review

process is often significantly extended by FDA requests for additional information or clarification. The FDA may delay or refuse approval of a BLA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product. FDA approval of any BLA submitted by us will be at a time the FDA chooses. Also, if regulatory approval of a product is granted, such approval may entail limitations on the indicated uses for which such product may be marketed. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing regulatory standards is not maintained or if problems occur after the product reaches the marketplace. In addition, the FDA may require Phase 4 post-marketing studies to monitor the effect of approved products, and may limit further marketing of the product based on the results of these post-marketing studies.

The FDA has a fast track program that is intended to expedite or facilitate the process for reviewing new drugs and biological products that meet certain criteria. Specifically, new drugs and biological products are eligible for fast track designation if they are intended to treat a serious or life-threatening condition and demonstrate the potential to address unmet medical needs for the condition. Fast track designation applies to the combination of the product and the specific indication for which it is being studied. For a fast track product, the FDA may consider for review on a rolling basis sections of the BLA before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the BLA, the FDA agrees to accept sections of the BLA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the BLA. A fast track designated product candidate may also qualify for priority review, under which the FDA reviews the BLA in a total of eight months rather than 12 months time.

The FDA may also accelerate the approval of a designated breakthrough therapy, which is a therapy that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the therapy may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. Sponsors may request the FDA to designate a breakthrough therapy at the time of, or any time after, the submission of an IND. If the FDA designates a breakthrough therapy, it must take actions appropriate to expedite the development and review of the application, which may include holding meetings with the sponsor and the review team throughout the development of the therapy; providing timely advice to, and interactive communication with, the sponsor regarding the development of the drug to ensure that the development program to gather the nonclinical and clinical data necessary for approval is as efficient as practicable; involving senior managers and experienced review staff, as appropriate, in a collaborative, cross-disciplinary review; assigning a cross-disciplinary project lead for the FDA review team to facilitate an efficient review of the development program and to serve as a scientific liaison between the review team and the sponsor; and taking steps to ensure that the design of the clinical trials is as efficient as practicable, when scientifically appropriate, such as by minimizing the number of patients exposed to a potentially less efficacious treatment.

Fast track designation, priority review and breakthrough therapy designation do not change the standards for approval but may expedite the development or approval process.

Post-Approval Requirements

Any products manufactured or distributed by us pursuant to FDA approvals are subject to continuing regulation by the FDA, including record-keeping requirements and reporting of adverse experiences. Biologic manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP, which impose certain procedural and documentation requirements upon us and our third-party manufacturers. We cannot be certain that we or our present or future suppliers will be able to comply with the cGMP regulations and other FDA regulatory requirements. If our present or future suppliers are not able to comply with these requirements, the FDA may halt our clinical trials, require us to recall a product from distribution, or withdraw approval of the BLA.

The FDA closely regulates the marketing and promotion of biologics. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA. Failure to comply with these requirements can result in adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe legally available products for uses that are not described in the product’s labeling and that differ from those tested by us and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer’s communications on the subject of off-label use.

Healthcare and Reimbursement Regulation

Our sales, promotion, medical education and other activities following product approval, and certain activities prior to approval, are and will be subject to regulation by numerous regulatory and law enforcement authorities in the United States in addition to FDA, including potentially the Federal Trade Commission, the Department of Justice, the Centers for Medicare and Medicaid Services, other divisions of the Department of Health and Human Services and state and local governments. Our current and future business activities, including our future promotional and scientific/educational programs, may be subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which we conduct our business. Such laws include, without limitation, state and federal anti-kickback, fraud and abuse, false claims, privacy and security and

physician sunshine laws and regulations, many of which may become more applicable if our product candidates are approved and we begin commercialization.

Depending on the circumstances, failure to meet these applicable regulatory requirements can result in criminal prosecution, fines or other penalties, injunctions, recall or seizure of products, total or partial suspension of production, denial or withdrawal of pre-marketing product approvals, private “qui tam” actions brought by individual whistleblowers in the name of the government or refusal to allow us to enter into supply contracts, including government contracts.

Sales of pharmaceutical products, when and if approved for marketing, depend significantly on the availability of third-party coverage and adequate reimbursement. Third-party payors include government health administrative authorities, managed care providers, private health insurers and other organizations. We anticipate third-party payors will cover, and provide adequate reimbursement for, our products. However, these third-party payors are increasingly challenging the price and examining the cost-effectiveness of medical products and services. In addition, significant uncertainty exists as to the coverage and reimbursement status of newly approved healthcare products. We may need to conduct expensive clinical studies to demonstrate the comparative cost-effectiveness of our products. The product candidates that we develop may not be considered cost-effective. It is time consuming and expensive for us to seek reimbursement from third-party payors. Decreases in third-party reimbursement for our product candidates or a decision by a third-party payor not to cover our product candidates could reduce physician usage of our products once approved and have a material adverse effect on our sales, results of operations and financial condition. Coverage and adequate reimbursement may not be available or sufficient to allow us to sell our products on a competitive and profitable basis.

The United States and some foreign jurisdictions are considering or have enacted a number of legislative and regulatory proposals to change the healthcare system in ways that could affect our ability to sell our products profitably. Among policy makers and payers in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives, such as the PPACA. Adoption of price controls and cost containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit our net revenue and results.

Foreign Regulation

In addition to regulations in the United States, we will be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our products to the extent we choose to develop or sell any products outside of the United States. The approval process varies from country to country and the time may be longer or shorter than that required to obtain FDA approval. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from country to country.

In the European Union, or EU, member states require both regulatory clearances by the national competent authority and a favorable ethics committee opinion prior to the commencement of a clinical trial. Under the EU regulatory systems, marketing authorization applications may be submitted under either a centralized or decentralized procedure. The centralized procedure provides for the grant of a single marketing authorization that is valid for all EU member states. It is compulsory for medicines produced by certain biotechnological processes. Because our products are produced in that way, we would be subject to the centralized process. Under the centralized procedure, pharmaceutical companies submit a single marketing authorization application to the EMA. Once granted by the European Commission, a centralized marketing authorization is valid in all EU member states, as well as the EEA countries Iceland, Liechtenstein and Norway. By law, a company can only start to market a medicine once it has received a marketing authorization.

Employees

As December 31, 2014, we had 79 employees. Substantially all of our employees are in Bothell, Washington. None of our employees are represented by a labor union or covered under a collective bargaining agreement. We consider our employee relations to be good.

Corporate Information

We were incorporated in Delaware in May 2002 as Alder BioPharmaceuticals, Inc. Our headquarters are located at 11804 North Creek Parkway South, Bothell, WA 98011, and our telephone number is (425) 205-2900. Our website address is www.alderbio.com. The information contained in, or that can be accessed through, our website is not part of, and is not incorporated into, this Annual Report on Form 10-K.

We file electronically with the Securities and Exchange Commission our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934. We make available on our website at www.alderbio.com, free of charge, through a hyperlink on our website, copies of these reports, as soon as reasonably practicable after electronically filing such reports with, or furnishing them to, the Securities and Exchange Commission.

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Item 1A. Risk Factors

You should carefully consider the following risk factors, in addition to the other information contained in this report on Form 10-K, including the section of this report titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes. If any of the events described in the following risk factors and the risks described elsewhere in this report occurs, our business, operating results and financial condition could be seriously harmed. This report on Form 10-K also contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of factors that are described below and elsewhere in this report.

Risks Related to Our Business and the Development and Commercialization of Our Product Candidates

We have incurred significant losses since our inception and anticipate that we will continue to incur significant losses for the foreseeable future.

We are a clinical-stage biopharmaceutical company. We do not currently have any products approved for sale, and we continue to incur significant research and development and general and administrative expenses. We have incurred significant operating losses in the past and expect to incur substantial and increasing losses for the foreseeable future. Our net loss was $17.8 million and $20.6 million for the years ended December 31, 2012 and 2013, respectively. For the year ended December 31, 2014, we recognized $54.5 million in revenue relating to our collaboration agreement with BMS most of which was previously deferred, which resulted in net income of $8.9 million for the year. However, our collaboration agreement with BMS has been terminated and, as a result, BMS will no longer be responsible for ongoing clinical trials after June 29, 2015 and we will not receive additional revenue from BMS. As of December 31, 2014, we had an accumulated deficit of $136.9 million.

To date, we have devoted substantially all of our efforts to research and development, including clinical trials, but have not completed development or commercialized any product candidates. We anticipate that our expenses will increase substantially as we:

continue the research and development of our product candidates, including clinical trials of ALD403;

seek regulatory approvals for our product candidates that successfully complete clinical trials;

establish a sales, marketing and distribution infrastructure and scale-up manufacturing capabilities to commercialize ALD403 or any of our future product candidates if they receive regulatory approval; and

enhance operational, financial and information management systems and hire additional personnel, including personnel to support development of our product candidates and, if a product candidate is approved, our commercialization efforts.

To be profitable in the future, we and any of our future collaborators must succeed in developing and eventually commercializing products with significant market potential. This will require success in a range of activities, including advancing product candidates, completing clinical trials of product candidates, obtaining regulatory approval for these product candidates and manufacturing, marketing and selling those products for which regulatory approval is obtained. We are only in the preliminary stages of some of these activities. We and any of our future collaborators may not succeed in these activities and may never generate revenues that are sufficient to be profitable in the future.

Drug development is a highly speculative undertaking and involves a substantial degree of uncertainty. We have never generated any revenues from product sales and may never be profitable.

We have devoted substantially all of our financial resources and efforts to developing our technology platform, identifying product candidates and conducting preclinical studies and clinical trials for our product candidates. We are still in the early stages of developing our product candidates and have not completed the development of any products. We have never generated revenues from the sale of any products. Our ability to generate revenues and achieve profitability depends in large part on our ability, on our own or with any of our future collaborators, to successfully complete the development of, obtain the necessary regulatory approvals for, and commercialize our product candidates. We do not anticipate generating revenues from sales of products for the foreseeable future. Our ability to generate future revenues from product sales depends on our and any of our future collaborators' success in:

completing clinical development and obtaining regulatory approval for ALD403;

entering into collaboration agreements with third parties with respect to our product candidates, including ALD403 and Clazakizumab, for their development and commercialization in the United States or in international markets, and the continued financial and other support of these third parties under such collaboration agreements;

launching and commercializing ALD403, if approved, and successfully establishing sales, marketing and distribution infrastructure;

obtaining regulatory approvals for future product candidates that we discover and successfully develop;

establishing and maintaining supply and manufacturing relationships with third parties;

obtaining coverage and adequate reimbursement from third-party payors; and

maintaining, protecting, expanding and enforcing our intellectual property, including intellectual property we license from third parties.

Because of the numerous risks and uncertainties associated with biologic product development, we are unable to predict the timing or amount of increased expenses and when we will be able to achieve or maintain profitability, if ever. In addition, our expenses could increase beyond expectations if we are required by the U.S. Food and Drug Administration, or FDA, or foreign regulatory agencies, to perform studies and trials in addition to those that we currently anticipate, or if there are any delays in our or any of our future collaborators' clinical trials or the development of any of our product candidates. If one or more of the product candidates that we independently develop is approved for commercial sale, we anticipate incurring significant costs associated with commercializing such product candidates.

The termination of our Clazakizumab collaboration agreement with BMS means that any further development of Clazakizumab will require significant resources from another collaborator, and in the event that we do not find a collaborator, we expect the development of Clazakizumab to be discontinued for the foreseeable future.

On August 29, 2014, BMS terminated our collaboration agreement for the development and commercialization of Clazakizumab. The termination of this collaboration agreement became effective on December 29, 2014, and a new collaborator will be responsible for funding any new Clazakizumab development and clinical trial activities undertaken after June 29, 2015. Any such further development will require significant resources to develop and commercialize Clazakizumab, and we do not believe that such further development is possible in the foreseeable future without a new collaborator. There are no assurances that we can find a new collaborator or that the terms and timing of any such arrangements would be acceptable to us, or that any future collaborator will continue to pursue development of Clazakizumab to commercialization. It can be expected that any future collaborator will have wide discretion in determining the efforts and resources that it will apply to its partnership with us and therefore the timing and amount of any development milestones, and downstream commercial milestones and royalties that we may receive under such partnership will depend on, among other things, the efforts, allocation of resources and successful development and commercialization of Clazakizumab. As a result, we could experience a significant delay in the Clazakizumab development process. If we determine instead to discontinue the development of Clazakizumab, we will not receive any future return on our investment from that product candidate.

We will need additional funds to support our operations, and such funding may not be available to us on acceptable terms, or at all, which would force us to delay, reduce or suspend our research and development programs and other operations or commercialization efforts.

We are focused on the advancement of ALD403 through the clinical development process, as well as the evaluation of future product candidates. The completion of the development and the potential commercialization of our product candidates, should they receive regulatory approval, will require substantial funds. We will need to obtain substantial additional sources of funding to develop ALD403 as currently contemplated. If such additional funding is not available on favorable terms or at all, we may need to delay or reduce the scope of our ALD403 development program or grant rights in the United States, as well as outside the United States, to ALD403 to one or more partners. As of December 31, 2014, we had $55.9 million in cash, cash equivalents and investments. In January 2015, we completed an underwritten public offering in which we issued 6,900,000 shares of common stock, which included 900,000 shares the company issued pursuant to the underwriters' exercise of their option to purchase additional shares, and received approximately $190.7 in net proceeds, after deducing underwriting discounts and commissions of $12.2 million and offering expenses of $0.6 million. We believe that our available cash, cash equivalents and investments, together with the net proceeds of our offering in January 2015, will be sufficient to fund our anticipated level of operations, including our ALD403 development program, through 2016. However, our future financing requirements will depend on many factors, some of which are beyond our control, including the following:

the rate of progress, recruitment and cost of our clinical trials and clinical success for ALD403 and any future product candidates;

the timing of, and costs involved in, seeking and obtaining approvals from the FDA and other regulatory authorities;

the costs of commercialization activities if any of our product candidates, such as ALD403, receive regulatory approval, including sales, marketing and distribution infrastructure;

the degree and rate of market acceptance of any products launched by us or any of our future collaborators;

our ability to enter into additional collaboration, licensing, commercialization or other arrangements and the terms and timing of such arrangements; and

the emergence of competing technologies or other adverse market developments.

We do not have any material committed external source of funds or other support for our development efforts. Until we can generate sufficient revenues to finance our cash requirements, which we may never do, we expect to finance future cash needs through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other marketing and distribution arrangements. Additional financing may not be available to us when we need it or it may not be available on favorable terms. If we raise additional capital through marketing and distribution arrangements or other collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish certain valuable rights to our product candidates, technologies, future revenue streams or research programs or grant licenses on terms that may not be favorable to us. If we raise additional capital through public or private equity offerings, the ownership interest of our existing stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect our stockholders' rights. If we raise additional capital through debt financing, we may be subject to covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, buying or selling assets, making capital expenditures or declaring dividends. If we are unable to obtain adequate financing when needed, we may have to delay, reduce the scope of, suspend or eliminate one or more of our clinical trials or research and development programs or our commercialization efforts.

In addition, our clinical trials for ALD403 may encounter manufacturing, enrollment or other issues that could cause our development costs to increase more than we expect. We do not have sufficient cash to complete the clinical development of any of our product candidates and will require additional funding in order to complete the development activities required for regulatory approval of ALD403 or any future product candidates that we develop independently. We intend to prioritize our development efforts on ALD403, both in terms of funding and attention of management and our organization. Because successful development of our product candidates is uncertain, we are unable to estimate the actual funds we will require to complete research and development and commercialize our product candidates.

Furthermore, we may seek additional capital due to favorable market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans.

If ALD403 is not successfully commercialized, our business will be harmed.

We currently only have two product candidates in clinical trials. We have invested a significant portion of our efforts and financial resources into the development of ALD403 to prevent migraines. As a result of termination of our collaboration agreement with BMS, we will need to find a collaborator to invest significant resources into further development of Clazakizumab, as we do not expect to continue the development of Clazakizumab without a collaborator. Our ability to generate revenues from products, which we do not expect to occur for the foreseeable future, if ever, will depend heavily on the successful development, regulatory approval and eventual commercialization of our product candidates. The success of these product candidates will depend on several factors, including the following:

successful enrollment in, and completion of, clinical trials;

our ability to reach agreements with the FDA and other regulatory authorities on the appropriate regulatory path for approval for ALD 403;

receipt of approvals from the FDA and similar regulatory authorities outside the United States for these product candidates;

establishing commercial manufacturing arrangements with third parties;

successfully launching sales, marketing and distribution of any product candidate that may be approved, whether alone or in collaboration with others;

acceptance of any approved product by the medical community, third-party payors and patients and others involved in the reimbursement process, such as the Centers for Medicare and Medicaid Services in the United States and the National Institute of Clinical Excellence in the United Kingdom;

effectively competing with other therapies;

achieving a continued acceptable safety profile of the product following approval, including intellectual property we license from third parties; and

obtaining, maintaining, enforcing and defending intellectual property rights and claims.

If we do not achieve one or more of these factors in a timely manner, or at all, we could experience significant delays or an inability to successfully commercialize our product candidates, which would harm our business.

If clinical trials of our product candidates fail to demonstrate safety and efficacy to the satisfaction of the FDA or similar regulatory authorities outside the United States or do not otherwise produce positive results, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of our product candidates.

Before obtaining regulatory approval for the sale of our product candidates, we or any of our future collaborators must conduct extensive clinical trials to demonstrate the safety and efficacy of our product candidates in humans. Clinical trials are expensive, difficult to design and implement, can take many years to complete and are uncertain as to outcome. A failure of one or more of such clinical trials could occur at any stage of evaluation. The outcome of preclinical testing and early clinical trials may not be predictive of the success of later clinical trials, and interim results of a clinical trial do not necessarily predict final results.

In some cases, we utilize novel mechanisms of action to treat diseases that have not previously been addressed by antibody therapies. We or any of our future collaborators may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent our or any of our future collaborators' ability to receive regulatory approval or commercialize our product candidates, including the following:

clinical trials of our product candidates may produce negative or inconclusive results, and we or any of our future collaborators may decide, or regulators may require us, to conduct additional clinical trials or abandon product development programs;

the number of patients required for clinical trials of our product candidates may be larger than we or any of our future collaborators anticipate, enrollment in these clinical trials may be insufficient or slower than anticipated or patients may drop out of these clinical trials at a higher rate than anticipated;

the cost of clinical trials of our product candidates may be greater than anticipated;

third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us or any of our future collaborators in a timely manner, or at all;

we or any of our future collaborators might have to suspend or terminate clinical trials of our product candidates for various reasons, including a finding that our product candidates have unanticipated serious side-effects or other unexpected characteristics or that the patients are being exposed to unacceptable health risks;

regulators may not approve our or any of our future collaborators' proposed clinical development plans;

regulators or institutional review boards may not authorize us, any of our future collaborators or our investigators to commence a clinical trial or conduct a clinical trial at a prospective site;

regulators or institutional review boards may require that we, any of our future collaborators or our investigators suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements; and

the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates may be insufficient or inadequate.

If we or any of our future collaborators are required to conduct additional clinical trials or other testing of our product candidates beyond those currently contemplated, if we or any of our future collaborators are unable to successfully complete clinical trials of our product candidates or other testing, if the results of these trials or tests are not positive or are only modestly positive or if there are safety concerns, we or any of our future collaborators may:

be delayed in obtaining regulatory approval for our product candidates;

not obtain regulatory approval at all;

obtain regulatory approval for indications that are not as broad as intended;

have the product removed from the market after obtaining regulatory approval;

be subject to additional post-marketing testing requirements; or

be subject to restrictions on how the product is distributed or used.

Our product development costs will also increase if we experience delays in testing or approvals. We do not know whether any clinical trials will begin as planned, will need to be restructured or will be completed on schedule, or at all. Significant clinical trial delays also could shorten any periods during which we or any of our future collaborators may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before we or any of our future collaborators do, which would impair our or any of our future collaborators' ability to commercialize our product candidates and harm our business and results of operations.

The results of clinical trials conducted at sites outside the United States may not be accepted by the FDA and the results or clinical trials conducted at sites inside the United States may not be accepted by international regulatory authorities.

We have conducted, and may in the future choose to conduct, one or more of our clinical trials outside the United States. Regions that are planned for inclusion in the ALD403 Phase 2b clinical trials include Australia, New Zealand and Canada. In addition, through June 29, 2015, BMS will be conducting a Phase 2b trial of Clazakizumab in U.S. and international regions, which are planned to include sites in Australia, Argentina, Europe, Japan, Mexico and South Africa. Although the FDA may accept data from clinical trials conducted outside the United States, acceptance of this data is subject to certain conditions imposed by the FDA. For example, the clinical trial must be well-designed and conducted and performed by qualified investigators in accordance with ethical principles. The study population must also adequately represent the U.S. population, and the data must be applicable to the U.S. population and U.S. medical practice in ways that the FDA deems clinically meaningful. Generally, the patient population for any clinical trials conducted outside of the United States must be representative of the population for whom we intend to label the product in the United States. In addition, while these clinical trials are subject to the applicable local laws, FDA acceptance of the data will be dependent upon its determination that the trials also complied with all applicable U.S. laws and regulations. There can be no assurance the FDA will accept data from trials conducted outside of the United States. If the FDA does not accept the data from our or BMS's international clinical trials, or if international regulatory authorities do not accept the data from our or BMS's U.S. clinical trials, it would likely result in the need for additional trials, which would be costly and time-consuming and could delay or permanently halt the development of a product candidate.

The development and commercialization of biologic products is subject to extensive regulation, and we may not obtain regulatory approvals for any of our product candidates.

The clinical development, manufacturing, labeling, packaging, storage, recordkeeping, advertising, promotion, export, import, marketing and distribution and other possible activities relating to ALD403, Clazakizumab and any other product candidate that we may develop in the future are subject to extensive regulation in the United States. Biologics, like ALD403 and Clazakizumab, require the submission of a Biologics License Application, or BLA, to the FDA and such product candidates are not permitted to be marketed in the United States until approval from the FDA of a BLA for that product has been obtained. A BLA must be supported by extensive preclinical and clinical data, as well as extensive information regarding chemistry, manufacturing and controls, or CMC, sufficient to demonstrate the safety, purity, potency and effectiveness of the applicable product candidate to the satisfaction of the FDA. We have not submitted an application for approval or obtained FDA approval for any product. This lack of experience may impede our ability to obtain FDA approval in a timely manner, if at all, for ALD403 and our future product candidates.

Regulatory approval of a BLA is not guaranteed, and the approval process is an expensive and uncertain process that may take several years. The FDA and foreign regulatory entities also have substantial discretion in the approval process. The number and types of preclinical studies and clinical trials that will be required for BLA approval varies depending on the product candidate, the disease or the condition that the product candidate is designed to target and the regulations applicable to any particular product candidate. Despite the time and expense associated with preclinical studies and clinical trials, failure can occur at any stage, and we could encounter problems that require us to repeat or perform additional preclinical studies or clinical trials or generate additional CMC data. The FDA and similar foreign authorities could delay, limit or deny approval of a product candidate for many reasons, including because they:

may not deem the product candidate to be adequately safe or effective;

may not find the data from preclinical studies, clinical trials or CMC data to be sufficient to support a claim of safety and efficacy;

may not approve the manufacturing processes or facilities associated with the product candidate;

may conclude that the long-term stability of the formulation of the drug product for which approval is being sought has been sufficiently demonstrated;

may change approval policies or adopt new regulations; or

may not accept a submission due to, among other reasons, the content or formatting of the submission.

To market any biologics outside of the United States, we and any of our future collaborators must comply with the numerous and varying regulatory and compliance related requirements of other countries. Approval procedures vary among countries and can involve additional product testing and additional administrative review periods, including obtaining reimbursement and pricing approval in select markets. The time required to obtain approval in other countries might differ from that required to obtain FDA approval. The regulatory approval process in other countries may include all of the risks associated with FDA approval as well as additional, presently unanticipated, risks. Regulatory approval in one country does not ensure regulatory approval in another, but a failure or delay in obtaining regulatory approval in one country may negatively impact the regulatory process in others, including the risk that our product candidates may not be approved for all indications requested and that such approval may be subject to limitations on the indicated uses for which the product may be marketed.

We face substantial competition, and others may discover, develop or commercialize products before or more successfully than we do.

The development and commercialization of new therapeutic products is highly competitive. We face competition with respect to our current product candidates, and will face competition with respect to product candidates that we may seek to develop or commercialize in the future, from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide. In addition, our ability to compete may be affected in many cases by insurers or other third-party payors seeking to encourage the use of biosimilar products, which are expected to become available over the coming years. For example, if approved, we expect that by the time Clazakizumab enters the marketplace, if at all, there may be several anti-TNF biosimilars on the marketplace. The entry of such products could potentially put pricing pressure on Clazakizumab. In addition, many of our competitors are large pharmaceutical companies that have a greater ability to reduce prices for their competing drugs in an effort to maintain or gain market share and undermine the value proposition that drugs commercialized by us might otherwise be able to offer to payors.

Potential competitors also include academic institutions, government agencies and other public and private organizations that conduct research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and commercialization. Many of these competitors are attempting to develop therapeutics for our target indications.

Currently in the United States, there are relatively few medications approved for the prevention of high frequency and chronic migraines. Most of the medications used today are generics that are prescribed for abortive treatment of migraines. Botox is approved for the prevention of chronic migraine but is also prescribed for high frequency migraine. There are also several other companies, including Amgen, Lilly and Labrys Biologics, or Labrys, which was acquired by Teva Pharmaceutical Industries Ltd. in July 2014, that have ongoing clinical trials for CGRP blocking therapies using monoclonal antibodies similar to ALD403. Other companies may be in later stages of development than we are or may progress their product candidates through clinical trials faster than our product candidates and, therefore, may obtain FDA or other regulatory approval for their products before we obtain approval for ours. For example, we are aware that Amgen has initiated its Phase 2b clinical trial and may be able to initiate Phase 3 clinical trials as early as 2015.

Clazakizumab is currently being developed for the treatment of the autoimmune disorders rheumatoid arthritis, or RA, and psoriatic arthritis, or PsA. Several large pharmaceutical and biotechnology companies currently market and sell biologics for the treatment of RA, including BMS's Orencia. The current standard of care for the treatment of RA after the immunosuppressive drug methotrexate, or MTX, is biologic therapy. Currently the market for biologic therapy is dominated by anti-TNFs, primarily Humira and Enbrel. In addition, there are several other agents currently in development, including monoclonal antibody therapies that modulate IL-6-biology and other oral medications. As a result, marketing Clazakizumab may be difficult in this competitive market.

Many of our competitors, including a number of large pharmaceutical companies that compete directly with us, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. Our competitors may develop products that are more effective, safer, more convenient or less costly than any that we are developing or that would render our product candidates obsolete or non-competitive. It is possible that our competitors might get FDA or other regulatory approval for their products before us. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early stage companies may also prove to be significant

competitors, particularly through collaborative arrangements with large and established companies. These third parties compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient enrollment for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

Delays in the enrollment of patients in our clinical trials could increase our development costs and delay completion of the trials and delays in enrollment of patients in any of our future collaborators' clinical trials could delay completion of any of our future collaborators' trials.

We may not be able to initiate or continue clinical trials for our product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these trials as required by the FDA or other regulatory authorities. Even if we are able to enroll a sufficient number of patients in our clinical trials, if the pace of enrollment is slower than we expect, the development costs for our product candidates may increase and the completion of our trials may be delayed or our trials could become too expensive to complete.

For example, our Phase 2b clinical trial of ALD403 for the treatment of chronic migraine sufferers is expected to enroll approximately 600 patients at more than 60 sites throughout the world and our planned Phase 2b clinical trial for ALD403 for the treatment of high frequency migraine sufferers is expected to enroll approximately 400 patients at more than 70 sites throughout the world. We have never previously conducted a trial of this magnitude and can provide no assurance that we will be able to enroll patients at a sufficient pace to complete the clinical trials within our projected time frame. Completing future migraine trials will require us to continue to activate new clinical trial sites and to enroll patients at forecasted rates at both new and existing clinical trial sites. Our forecasts regarding the rates of clinical site activation and patient enrollment at those sites are based on a number of assumptions, including assumptions based on experience with our last ALD403 clinical trial. However, there can be no assurance that those forecasts will be accurate or that we will complete, following collection of six month data, our next ALD403 trials on schedule. We anticipate obtaining primary endpoint data from the chronic migraine trial in the second half of 2015 and from the high frequency trial in the first half of 2016. During the initial months of this planned clinical trial, the number of clinical sites activated and the number of patients enrolled at each clinical site per month could be lower than we have forecasted and, as a result, we might need to make a number of adjustments to the clinical trial plan, including increasing the number of clinical trial sites. We can provide no assurance that those adjustments will be sufficient to enable us to complete the study within our anticipated time frame. If we experience delays in enrollment, our ability to complete the study could be materially adversely affected.

While the Phase 2b, dose-ranging clinical trial for Clazakizumab in RA has been fully enrolled with approximately 140 patients, any future collaborator will need to recruit over 1,000 patients at numerous sites throughout the world to complete the multiple Phase 3 trials that would be required by the FDA for approval of Clazakizumab in RA. There can be no assurance that any of our future collaborators will commit the resources required to activate the number of trial sites, and enroll the number of patients, required to complete these clinical trials in a timely manner or at all. Even if any of our future collaborators commit significant resources to activating sites and enrolling RA patients, the pace of enrollment could be adversely affected by competition with other trials enrolling RA patients. A slower pace of enrollment could increase the development costs for Clazakizumab which could adversely affect any of our or our

future collaborator's commitment to developing Clazakizumab in RA, or at all.

If serious adverse side-effects are identified during the development of any of our product candidates, we or any of our future collaborators may need to abandon development of that product candidate.

Our lead product candidates are still in clinical development and their risk of failure is high. It is impossible to predict when or if any of our product candidates will prove effective and safe enough to receive regulatory approval.

With respect to ALD403, while we have observed few SAEs to date, ALD403 has only been evaluated in a limited number of patients. The observed SAEs to date include inguinal hernia, kidney infection, transient ischemic attack, which is a precursor to stroke, conversion disorder, which is a mental health condition in which a person has blindness, paralysis, or other nervous system symptoms that cannot be explained by medical evaluation, chest pain, shortness of breath and wound infection. Each of these events was observed a single time in the ALD403 trial, with no one patient exhibiting more than one SAE. The clinical investigator concluded that all of these events were found to be unrelated to ALD403. We have observed some itching and redness injection-site reactions (ISRs) in our Phase 1 study of a subcutaneous injection of ALD403. Additional studies or requirements from the FDA for future studies may be necessary to address these ISRs.

To date, the safety profile observed in the Clazakizumab trials have been consistent with other previously approved anti-IL-6 inhibitors. The most frequent serious adverse events, or SAEs, for Clazakizumab were serious infections. Additionally, patients in clinical trials for Clazakizumab exhibited increases in mean total cholesterol without changes in HDL/LDL ratio, increases in

hemoglobin, increases in liver function tests and decreases in neutrophils, a type of white blood cell, and platelets, which are expected from IL-6 inhibition.

There can be no assurance that our planned trials for ALD403 or Clazakizumab will not fail due to safety issues. In such an event, we might need to abandon development of ALD403 or Clazakizumab.

The manufacture of our product candidates is complex and we may encounter difficulties in production. If we or any of our third-party manufacturers encounter such difficulties, our ability to provide supply of our product candidates for clinical trials or our products for patients, if approved, could be delayed or stopped.

The process of manufacturing our products is complex, highly-regulated and subject to multiple risks. The manufacture of biologics involves complex processes, including developing cells or cell systems to produce the biologic, growing large quantities of such cells and harvesting and purifying the biologic produced by them. As a result, the cost to manufacture biologics is generally far higher than traditional small molecule chemical compounds, and the biologics manufacturing process is less reliable and is difficult to reproduce. Manufacturing biologics, such as ALD 403 and Clazakizumab, is highly susceptible to product loss due to contamination, equipment failure, improper installation or operation of equipment, vendor or operator error, inconsistency in yields, variability in product characteristics and difficulties in scaling the production process. Even minor deviations from normal manufacturing processes could result in reduced production yields, product defects and other supply disruptions. If microbial, viral or other contaminations are discovered in our product candidates or in the manufacturing facilities in which our product candidates are made, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. We utilize third-party contract manufacturers to produce ALD403 and BMS currently also uses third-party contract manufacturers to produce Clazakizumab using our proprietary yeast production technology.

The manufacturing facilities in which our product candidates are made could be adversely affected by equipment failures, labor shortages, natural disasters, power failures and numerous other factors. There are risks associated with scaling-up manufacturing to commercial scale including, among others, cost overruns, potential problems with process scale-up, process reproducibility, stability issues, lot consistency and timely availability of raw materials. Even if we or any of our future collaborators obtain regulatory approval for any of our product candidates, there is no assurance that manufacturers will be able to manufacture the approved product to specifications acceptable to the FDA or other regulatory authorities, to produce it in sufficient quantities to meet the requirements for the potential launch of the product or to meet potential future demand. If our or any of our future collaborators' manufacturers are unable to produce sufficient quantities of an approved product for commercialization, commercialization efforts would be impaired, which would have an adverse effect on our business, financial condition, results of operations and growth prospects.

ALD403 is currently produced for us by a third-party contract manufacturer using a small-scale process that would not support commercialization of ALD403. We plan to transfer our manufacturing processes to a commercial

manufacturer. Scaling up a biologic manufacturing process is a difficult and uncertain task, and we may not be successful in transferring our production system or the manufacturer may not have the necessary capabilities to complete the implementation and development process. If we are unable to adequately validate or scale-up the manufacturing process for ALD403 with our current manufacturer, we will need to transfer to another manufacturer and complete the manufacturing validation process, which can be lengthy. If we are able to adequately validate and scale-up the manufacturing process for ALD403 or other product candidates with a contract manufacturer, we will still need to negotiate with such contract manufacture an agreement for commercial supply and it is not certain we will be able to come to agreement on terms acceptable to us.

Even though Clazakizumab has been administered to over 1,000 patients, the MabXpress production system is a non-traditional antibody production platform and as we or any of our future collaborators produce product in commercial quantities, we or any such collaborators may experience unforeseen safety or other manufacturing issues which would adversely affect the commercialization of Clazakizumab.

Even if our product candidates receive regulatory approval, they may fail to achieve the degree of market acceptance by physicians, patients, healthcare payors and others in the medical community necessary for commercial success.

If any of our product candidates receive regulatory approval, they may nonetheless fail to gain sufficient market acceptance by physicians, patients, healthcare payors and others in the medical community. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including the following:

the efficacy and potential advantages compared to alternative treatments;

the prevalence and severity of any side-effects;

the price we or any of our future collaborators charge for our products;

the availability of third-party coverage and adequate reimbursement;

the convenience and ease of administration compared to alternative treatments;

the willingness of the target patient population to try new therapies and of physicians to prescribe these new therapies; and

the size and effectiveness of our sales, marketing and distribution support.

If our product candidates are approved and do not achieve an adequate level of acceptance, we may not generate significant product revenues and we may not become profitable on a sustained basis.

We currently have no sales or distribution personnel or infrastructure and only limited marketing capabilities. If we are unable to develop a sales, marketing and distribution infrastructure on our own or through collaborations or other marketing arrangements, we will not be successful in commercializing ALD403, Clazakizumab or any of our future products.

We do not currently have sales or distribution capabilities and have limited experience in the sale, marketing and distribution of therapeutic products. To achieve commercial success for any approved product, we must either develop a sales and marketing organization or outsource these functions to third parties. We plan to establish a sales force in the United States targeting high-prescribing neurologists and headache centers and work with collaborators in international markets to commercialize ALD403 globally, if it is approved. We are seeking a new partner for development of Clazakizumab and may work with one or more additional collaborators in the United States and international markets to commercialize Clazakizumab, if it is approved.

There are risks involved with both establishing our own sales and marketing capabilities and entering into arrangements with third parties to perform these services. For example, recruiting and training a sales force is expensive and time-consuming and could delay any product launch. If the commercial launch of a product for which we recruit a sales force and establish marketing capabilities is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we do not have another product to sell in the same specialty market.

We also may not be successful entering into arrangements with third parties to sell and market our product candidates or may be unable to do so on terms that are favorable to us. We likely will have little control over such third parties,

and any of them may fail to devote the necessary resources and attention to sell and market our products effectively and could damage our reputation. If we do not establish sales and marketing capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our product candidates.

If we are able to commercialize any product candidates, the products may become subject to unfavorable pricing regulations, third-party reimbursement practices or healthcare reform initiatives, thereby harming our business.

The regulations that govern marketing approvals, pricing and reimbursement for new therapeutic products vary widely from country to country. Some countries require approval of the sale price of a product before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we or any of our future collaborators might obtain regulatory approval for a product in a particular country, but then be subject to price regulations that delay commercial launch of the product and negatively impact the revenues we are able to generate from the sale of the product in that country. Adverse pricing limitations may hinder our ability to recoup our investment in our products, even if our product candidates obtain regulatory approval.

Our and any of our future collaborators' ability to commercialize any products successfully also will depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments becomes available from government health administration authorities, private health insurers and other third-party payors. Third-party payors decide which medications they will cover and establish reimbursement levels. The primary focus in the U.S. healthcare industry and elsewhere is cost containment. Government authorities and these third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. Increasingly, third-party payors are requiring that companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. We cannot be sure that reimbursement will be available for any product that we or any of our future collaborators commercialize and, if reimbursement is available, what the level of reimbursement will be. Reimbursement may impact the demand for, or the price of, any product for which we or any of our future collaborators obtain approval. Obtaining coverage and adequate reimbursement for our products may be particularly difficult because of the higher prices often associated with products administered under the supervision of a physician. If

reimbursement is not available or is available only to limited levels, we or any of our future collaborators may not be able to successfully commercialize any product that has been approved.

There may be significant delays in obtaining reimbursement for approved products, and coverage may be more limited than the purposes for which the product is approved by the FDA or regulatory authorities in other countries. Moreover, eligibility for reimbursement does not imply that any product will be paid for in all cases or at a rate that covers our or any of our future collaborators' costs, including research, development, manufacture, sale and distribution. Interim payments for new products, if applicable, may also not be sufficient to cover our or any of our future collaborators' costs and may not be made permanent. Payment rates may vary according to the use of the product and the clinical setting in which it is used, may be based on payments allowed for lower cost products that are already reimbursed and may be incorporated into existing payments for other services. Net prices for products may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of products from countries where they may be sold at lower prices than in the United States. Private third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement policies. Our or any of our future collaborators' inability to promptly obtain coverage and profitable payment rates from both government funded and private payors for newly developed products could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize products and our overall financial condition.

We may not be successful in our efforts to use and enhance our proprietary antibody platform to create a pipeline of product candidates and develop commercially successful products.

We are using our proprietary antibody platform for the selection and manufacturing of monoclonal antibodies. We used this platform to create our two lead product candidates, ALD403 and Clazakizumab, as well as ALD1613 and the other future product candidates that we are currently evaluating. We are at an early stage of development and our platform has not yet, and may never, lead to approved or commercially successful products. Even if we are successful in continuing to build our pipeline, the future product candidates that we evaluate may not be suitable for clinical development, including as a result of their harmful side-effects, limited efficacy or other characteristics that make it unlikely such product candidates will receive regulatory approval or achieve commercial success. If we do not successfully develop and commercialize product candidates using our proprietary antibody platform, we may not be able to obtain product or collaboration revenues in future periods, which would harm our business and prospects.

Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical trials and will face an even greater risk if we commercially sell any products that we may develop. If we cannot successfully defend ourselves against claims that our product candidates or products caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

decreased demand for any product candidates or products that we or any of our future collaborators may develop;

injury to our reputation and significant negative media attention;

withdrawal of patients from clinical trials or cancellation of trials;

significant costs to defend the related litigation;

substantial monetary awards;

loss of revenues; and

the inability to commercialize any products that we may develop.

We currently have $20 million in product liability insurance coverage for our clinical trials, which may not be adequate to cover all liabilities that we may incur. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

We may expend our limited resources to pursue a particular product candidate or disease and fail to capitalize on product candidates or diseases that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and managerial resources, we focus our research programs and product candidates for a specific disease. As a result, we may forego or delay pursuit of opportunities with other product candidates or other diseases that may

later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and product candidates for specific diseases may not yield any commercially viable products.

If we do not accurately evaluate the commercial potential for a particular product candidate in the right disease, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been advantageous for us to retain sole development and commercialization rights.

If we do not successfully enter into future collaborations for the development and commercialization of product candidates our business may be harmed.

We may choose to enter into collaboration agreements with third parties with respect to our product candidates, including ALD403 and Clazakizumab, for their development and commercialization in the United States or in international markets. We will have limited control over the amount and timing of resources that any of our future collaborators dedicate to the development or commercialization of our product candidates. Our ability to generate revenues from these arrangements will depend in part on any such collaborators' abilities to successfully perform the functions assigned to them in these arrangements.

Collaborations involving our product candidates are subject to numerous risks, which may include the following:

collaborators have significant discretion in determining the efforts and resources that they will apply to a collaborations;

collaborators may not pursue development and commercialization of our product candidates or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in their strategic focus due to the acquisition of competitive products, availability of funding or other external factors, such as a business combination that diverts resources or creates competing priorities;

collaborators may delay clinical trials, provide insufficient funding for a clinical trial, stop a clinical trial, abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;

collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products or product candidates;

a collaborator with marketing and distribution rights to one or more products may not commit sufficient resources to their marketing and distribution;

collaborators may not properly maintain or defend our intellectual property rights or may use our intellectual property or proprietary information in a way that gives rise to actual or threatened litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential liability;

disputes may arise between us and a collaborator that cause the delay or termination of the research, development or commercialization of our product candidates or that result in costly litigation or arbitration that diverts management attention and resources;

collaborations may be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable product candidates; and

collaborators may own or co-own intellectual property covering our products that results from our collaborating with them, and in such cases, we would not have the exclusive right to commercialize such intellectual property.

Any termination, such as the termination by BMS of our Clazakizumab collaboration agreement, or disruption of any future collaboration could result in delayed development of product candidates, increased cost to develop product candidates or termination of development of a product candidate.

We rely on third parties to conduct and support our clinical trials, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such trials.

We do not independently conduct clinical trials for our product candidates. We rely on third parties, such as contract research organizations, or CROs, clinical data management organizations, medical institutions and clinical investigators, to perform this function. Our reliance on these third parties for clinical development activities reduces our control over these activities but does not relieve us of our responsibilities. Furthermore, some of the sites for our clinical trials are outside the United States. The performance of these sites may be adversely affected by various issues, including less advanced medical infrastructure, lack of familiarity with

conducting clinical trials in accordance with U.S. standards, insufficient training of personnel, communication difficulties or change in local regulations. We remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan and protocols for the study. Moreover, the FDA requires us to comply with standards, commonly referred to as good clinical practices, or GCP, for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of patients in clinical trials are protected. Furthermore, these third parties may also have relationships with other entities, including our competitors. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our clinical trials in accordance with regulatory requirements or our stated protocols, we will not be able to obtain, or may be delayed in obtaining, regulatory approvals for our product candidates and will not be able to, or may be delayed in our efforts to, successfully commercialize our products.

We also rely on other third parties to store and distribute supplies for our clinical trials. Any performance failure on the part of our existing or future distributors could delay clinical development or regulatory approval of our product candidates or commercialization of our products, producing additional losses and depriving us of potential product revenues.

We rely on third-party contract manufacturing organizations, or CMOs, to manufacture and supply ALD403 and expect to rely on CMOs to manufacture and supply Clazakizumab. If one of our suppliers or manufacturers fails to perform adequately or fulfill our needs, we may be required to incur significant costs and devote significant efforts to find new suppliers or manufacturers and may also face delays in the development and commercialization of our product candidates.

We currently do not own manufacturing facilities for clinical-scale manufacturing of our product candidates and we rely upon third-party CMOs to manufacture and supply drug product for our clinical trials. The manufacture of pharmaceutical products in compliance with the FDA’s current good manufacturing practices, or cGMP, requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. Manufacturers of pharmaceutical products often encounter difficulties in production, including difficulties with production costs and yields, quality control, including stability of the product candidate and quality assurance testing, shortages of qualified personnel, as well as compliance with strictly enforced cGMP requirements, other federal and state regulatory requirements and foreign regulations. If our manufacturers were to encounter any of these difficulties or otherwise fail to comply with their obligations to us or under applicable regulations, our ability to provide study drugs in our clinical trials would be jeopardized. Any delay or interruption in the supply of clinical trial materials could delay the completion of our clinical trials, increase the costs associated with maintaining our clinical trial programs and, depending upon the period of delay, require us to commence new trials at significant additional expense or terminate the trials completely.

All manufacturers of our product candidates must comply with cGMP requirements enforced by the FDA through its facilities inspection program. These requirements include, among other things, quality control, quality assurance and the maintenance of records and documentation. Manufacturers of our product candidates may be unable to comply with these cGMP requirements and with other FDA, state and foreign regulatory requirements. The FDA or similar

foreign regulatory agencies may also implement new standards at any time, or change their interpretation and enforcement of existing standards for manufacture, packaging or testing of products. We have little control over our manufacturers' compliance with these regulations and standards. A failure to comply with these requirements may result in fines and civil penalties, suspension of production, suspension or delay in product approval, product seizure or recall or withdrawal of product approval. If the safety of any product supplied is compromised due to our manufacturers' failure to adhere to applicable laws or for other reasons, we may not be able to obtain regulatory approval for or successfully commercialize our products and we may be held liable for any injuries sustained as a result. Any of these factors could cause a delay of clinical trials, regulatory submissions, approvals or commercialization of our product candidates, entail higher costs or impair our reputation.

We currently rely on Fujifilm Diosynth Biotechnologies and Ajinomoto Althea Inc. to manufacture and provide us with clinical supplies of ALD403. Our agreements do not provide for an entire supply of the drug product necessary for all anticipated clinical trials or for full-scale commercialization. If we and our suppliers cannot agree to the terms and conditions for provision of the drug product necessary for our clinical and commercial supply needs, or if either terminates their agreement in response to a breach by us or otherwise becomes unable to fulfill its supply obligations, our clinical trials could be delayed until a qualified alternative supplier is identified, the manufacturing process is qualified and validated and we have agreed on the terms and conditions for such alternative supplier to supply product for us, which would delay the development and impair the commercialization of ALD403 and Clazakizumab. ALD403 and Clazakizumab are biologics and therefore require complex production processes. Transferring the production process to a new manufacturer would be particularly difficult, time-consuming and expensive and may not yield comparable product. Although alternative sources of supply exist, the number of third-party suppliers with the necessary manufacturing and regulatory expertise and facilities necessary to manufacture ALD403, Clazakizumab and any other product candidates we may develop is limited, and may be expensive and take a significant amount of time to arrange for alternative suppliers. New suppliers of any product candidate would be required to qualify under applicable regulatory requirements. Obtaining the

necessary FDA approvals or other qualifications under applicable regulatory requirements could result in a significant interruption of supply and could require the new manufacturer to bear significant additional costs which may be passed on to us.

Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or our guidance.

Our quarterly and annual operating results have fluctuated in the past and may fluctuate significantly in the future, which makes it difficult for us to predict our future operating results. From time to time, we may enter into collaboration agreements with other companies that include development funding and significant upfront and milestone payments, and we expect that amounts earned from our collaboration agreements will continue to be an important source of our revenues. Accordingly, our revenues will depend on development funding and the achievement of development and clinical milestones under any of our future collaboration arrangements, as well as any potential future license agreements and sales of our products, if approved. These upfront and milestone payments may vary significantly from period to period and any such variance could cause a significant fluctuation in our operating results from one period to the next.

Our operating results may fluctuate due to a variety of other factors, many of which are outside of our control and may be difficult to predict, including the following:

the timing and cost of, and level of investment in, research and development activities relating to our product candidates, which may change from time to time;

the cost of manufacturing our product candidates, which may vary depending on the quantity of production and the terms of our agreements with manufacturers;

expenditures that we will or may incur to acquire or develop additional product candidates and technologies;

the level of demand for our product candidates, should they receive approval, which may vary significantly;

future accounting pronouncements or changes in our accounting policies;

the timing and success or failure of clinical trials for our product candidates or competing product candidates, or any other change in the competitive landscape of our industry, including consolidation among our competitors or partners; and

the risk/benefit profile, cost and reimbursement policies with respect to our products candidates, if approved, and existing and potential future drugs that compete with our product candidates.

The cumulative effects of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance. This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenues or operating results fall below the expectations of analysts or investors or below any forecasts we may provide to the market, or if the forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated revenues or earnings guidance we may provide.

Our future success depends on our ability to retain our senior executive officers and other key executives and to attract, retain and motivate qualified personnel.

We are highly dependent on our senior executive officer and the other principal members of our executive and scientific teams, particularly our President and Chief Executive Officer, Randall C. Schatzman, our Chief Scientific Officer, John A. Latham, our Chief Business Officer, Mark J. Litton, our Senior Vice President, Translational Medicine, Jeffrey T.L. Smith, our Senior Vice President, Finance, Larry K. Benedict and our Senior Vice President, Pharmaceutical Operations, Randal A. Hassler. The employment of our executive officers is at-will and our executive officers may terminate their employment with us at any time. The loss of the services of any of our senior executive officers could impede the achievement of our research, development and commercialization objectives. Although we maintain “key person” insurance for Drs. Schatzman, Latham, Litton and Smith, any insurance proceeds we may receive under our “key person” insurance would not adequately compensate us for the loss of their services.

Recruiting and retaining qualified scientific, clinical, manufacturing and sales and marketing personnel is also critical to our success. We may not be able to attract and retain these personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. Although, to date, we have not experienced problems attracting and retaining highly qualified personnel, our industry has experienced a high rate of turnover of management personnel in recent years. In

addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by third parties and have commitments under consulting or advisory contracts with other entities that may limit their availability to us.

We expect to expand our development, regulatory affairs, sales and marketing and other capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

As March 6, 2015, we had 85 employees. Over the next several years, if our product candidates receive marketing approval, we expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of drug development, regulatory affairs, sales and marketing and other functional areas, including finance, accounting and legal. For example, if ALD403 is approved, we plan to build a 75 to 100 person sales force targeting high-prescribing neurologists and headache centers in the United States. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The physical expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could harm our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including chemicals and biological materials. Our operations also produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties.

Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of biological, hazardous materials.

In addition, we may be required to incur substantial costs to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may divert resources away from our research, development or production efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Business disruptions could harm our future revenues and financial condition and increase our costs and expenses.

Our operations could be subject to earthquakes, power shortages, telecommunications failures, floods, hurricanes, fires, extreme weather conditions, medical epidemics and other natural or manmade disasters or business interruptions. The occurrence of any of these business disruptions could harm our operations and financial condition and increase our costs and expenses. Our corporate headquarters is located in Washington and certain clinical sites for our product candidates, operations of our existing and future partners and suppliers are or will be located in Washington near major earthquake faults. The ultimate impact on us, our significant partners, suppliers and our general infrastructure of being located near major earthquake faults and being consolidated in certain geographical areas is unknown, but our operations and financial condition could suffer in the event of a major earthquake or other natural or manmade disaster.

Marketing approval of our product candidates in international markets will subject us to additional costs and a variety of risks associated with international operations.

We intend to pursue marketing approvals for our product candidates in international markets directly or with partners and will be subject to additional costs and additional risks related to international operations, including:

different regulatory requirements for drug approvals in foreign countries;

reduced protection for intellectual property rights;

unexpected changes in tariffs, trade barriers and regulatory requirements;

economic weakness, including inflation or political instability in particular foreign economies and markets;

compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;

foreign taxes, including withholding of payroll taxes;

foreign currency fluctuations, which could result in increased operating expenses and reduced revenues, and other obligations incident to doing business in another country;

workforce uncertainty in countries where labor unrest is more common than in the United States;

production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and

business interruptions resulting from geopolitical actions, including war and terrorism, or natural disasters including earthquakes, typhoons, floods and fires.

Our ability to use our net operating loss and tax credit carryforwards to offset future taxable income may be subject to certain limitations.

As of December 31, 2014, we had U.S. net operating loss carryforwards, or NOLs, of $134.0 million, which may be used to offset future taxable income or offset income taxes due. In addition, we have U.S. research and development tax credit carryforwards of $6.5 million. These NOLs and tax credit carryforwards expire in various years beginning in 2024, if not utilized. Utilization of the NOLs and tax credit carryforwards may be subject to an annual limitation due to historical or future ownership change rules pursuant to Sections 382 and 383 of the Internal Revenue Code. We performed a section 382 ownership analysis through 2009 and determined that an ownership change occurred in 2005. Based on the analysis performed, however, we do not believe that the Section 382 annual limitation will impact our ability to utilize the tax attributes that existed as of the date of the ownership change in a material manner. We have not completed a study to determine the impact of our January 2015 offering, our initial public offering, or IPO, our private placement in 2012 or other transactions which have occurred since the 2009 analysis, on our NOLs and tax credit carryforwards under Sections 382 and 383 of the Code. If we have experienced an ownership change in the past or will experience an ownership change as a result of future changes in our stock ownership, some of which changes are outside our control, the tax benefits related to the NOLs and tax credit carryforwards may be further limited or lost.

Our internal computer systems, or those of our CROs or other contractors or consultants, may fail or suffer security breaches, which could result in a material disruption of our drug development programs.

Despite the implementation of security measures, our internal computer systems and those of our CROs and other contractors and consultants are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. While we have not experienced any such system failure, accident or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our drug development programs. For example, the loss of clinical trial data from completed or ongoing clinical trials for any of our product candidates could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development of our product candidates could be delayed.

We may engage in future acquisitions that increase our capital requirements, dilute our stockholders, cause us to incur debt or assume contingent liabilities and subject us to other risks.

We may evaluate various strategic transactions, including licensing or acquiring complementary products, technologies or businesses. Any potential acquisitions may entail numerous risks, including increased operating expenses and cash requirements, assimilation of operations and products, retention of key employees, diversion of our management’s attention and uncertainties in our ability to maintain key business relationships of the acquired entities. In addition, if we undertake acquisitions, we may issue dilutive securities, assume or incur debt obligations, incur large one-time expenses and acquire intangible assets that could result in significant future amortization expense. Moreover, we may not be able to locate suitable acquisition opportunities and this inability could impair our ability to grow or obtain access to technology or products that may be important to the development of our business.

Risks Related to Intellectual Property

If we fail to comply with our obligations in our intellectual property licenses with third parties, we could lose license rights that are important to our business.

We are a party to intellectual property license agreements with third parties. For example, we have a third-party royalty free license associated with the Keck Graduate Institute for MabXpress, our yeast-based proprietary manufacturing technology. We may enter into additional license agreements in the future. Our existing license agreements impose, and we expect that our future license agreements will impose, various diligence, royalty payment, milestone payment, insurance and other obligations on us. If we fail to comply with these obligations or our other obligations in our license agreements, our licensors may have the right to terminate these agreements, in which event we may not be able to develop and market any product or use any platform technology that is covered by these agreements. Termination of these licenses or reduction or elimination of our licensed rights may result in our having to negotiate new or reinstated licenses with less favorable terms or our not having sufficient intellectual property rights to operate our business. The occurrence of such events could materially harm our business.

Our ability to successfully commercialize our products may be impaired if we are unable to obtain and maintain effective intellectual property rights for our proprietary antibody platform and product candidates.

Our success depends in large part on our and our licensors' ability to obtain and maintain patent and other intellectual property protection in the United States and in other countries with respect to our proprietary antibody platform and products. In some circumstances, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents or enforce the patents, covering technology or products that we license from third parties. Therefore, we cannot be certain that these patents and applications will be prosecuted and enforced in a manner consistent with the best interests of our business. In addition, if third parties who license patents to us fail to maintain such patents, or lose rights to those patents, the rights we have licensed may be reduced or eliminated. Because certain intellectual property rights are shared between us and any of our future collaborators, it is possible that disputes may arise related to the distribution of those rights.

We have sought to protect our proprietary position by filing patent applications in the United States and abroad related to our novel technologies and products that are important to our business. This process is expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. The standards that the United States Patent and Trademark Office, or USPTO, uses to grant patents are not always applied predictably or uniformly and can change. Consequently, we cannot be certain as to whether pending patent applications will be allowed; and if allowed, we cannot be certain as to the type and extent of patent claims that will be issued to us in the future. Our existing patents and any future patents we obtain may not be sufficiently broad to prevent others from using our technologies or from developing competing products and technologies.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain and involves complex legal and factual questions for which legal principles remain unresolved. In recent years patent rights have been the subject of significant litigation. As a result, the issuance, scope, validity, enforceability and commercial value of our and our licensors' patent rights are highly uncertain. Our and our licensors' pending and future patent applications may not result in patents being issued which protect our technology or products or which effectively prevent others from commercializing competitive technologies and products. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection. The laws of foreign countries may not protect our rights to the same extent as the laws of the United States. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot be certain that we or our licensors were the first to make the inventions claimed in our owned and licensed patents or pending patent applications, or that we or our licensors were the first to file for patent protection of such inventions.

In March 2013, the United States converted to a first-to-file patent system under the recently enacted America Invents Act. With this change, the United States patent system was brought into closer conformity with the patent systems of other countries, the vast majority of which operate as first-to-file patent systems. Under the former system, and assuming the other requirements for patentability were met, the first to conceive of the claimed invention was entitled to the patent. A number of our patents and patent applications are subject to the first-to-invent system because they originated prior to the March 2013 cutoff. Under the new United States system, and outside the United States, the first to file a patent application is entitled to the patent, with certain exceptions. A number of our patents and patent applications are subject to the new first-to-file system in the United States because they originated after the March 2013 cutoff. The full effect of these changes remains unclear as the USPTO endeavors to implement various regulations concerning the new system. Furthermore, the courts have yet to address the vast majority of these provisions and the applicability of the America Invents Act and new regulations on specific patents discussed herein have not been determined and would

need to be reviewed. We may become involved in opposition, interference, or derivation proceedings challenging our patent rights or the patent rights of others, and the outcome of any proceedings are highly uncertain. An adverse determination in any such proceeding could reduce the scope of, or invalidate, our patent rights, allow third parties to commercialize our technology or products and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third-party patent rights. Even if our owned and licensed patent applications issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors from competing with us or otherwise provide us with any competitive advantage. Our competitors may be able to circumvent our owned or licensed patents by developing similar or alternative technologies or products in a non-infringing manner. The issuance of a patent is not conclusive as to its scope, validity or enforceability, and our owned and licensed patents may be challenged in the courts or patent offices in the United States and abroad. Such challenges may result in patent claims being narrowed, invalidated or held unenforceable, which could limit our ability to stop or prevent us from stopping others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and products. Given the amount of time required for the development, testing and regulatory review of future product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours or otherwise provide us with a competitive advantage.

We may become involved in lawsuits to protect or enforce our patents, which could be expensive, time-consuming and unsuccessful.

Competitors may infringe our patents. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that a patent of ours is invalid or unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. The standards that courts use to interpret patents are not always applied predictably or uniformly and can change, particularly as new technologies develop. As a result, we cannot predict with certainty how much protection, if any, will be given to our patents if we attempt to enforce them and they are challenged in court. An adverse result in any litigation proceeding could put one or more of our patents at risk of being invalidated or interpreted narrowly. Inequitable conduct is frequently raised as a defense during intellectual property litigation. It is believed that all parties involved in the prosecution of our patent applications have complied with their duties of disclosure in the course of prosecuting our patent applications, however, it is possible that legal claims to the contrary could be asserted if we were engaged in intellectual property litigation, and the results of any such legal claims are uncertain due to the inherent uncertainty of litigation. If a court determines that any party involved in the prosecution of our patents failed to comply with their duty of disclosure, the subject patent would be unenforceable. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation.

Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could harm our business. In addition, we are currently involved in an opposition proceeding involving the granted European patent of one of our potential competitors

Third parties may assert infringement claims against us, or other parties we have agreed to indemnify, based on existing patents or patents that may be granted in the future. We are aware of third-party patents and patent applications containing granted claims relating to CGRP antibodies and the therapeutic use of CGRP antibodies to treat conditions including migraine, including a European patent held by Labrys. In July 2014, we, along with Eli Lilly and Company, filed an opposition to the Labrys European patent requesting that such patent be revoked in its entirety. While, for the reasons set forth in our opposition, we believe this patent should be revoked in its entirety, the ultimate outcome of the opposition remains uncertain. If the European Patent Office decides not to revoke the Labrys European patent in its entirety, or only revokes certain claims of the patent, and any surviving claims are determined to encompass our intended use of ALD403, we may not be able to commercialize ALD403 in the European Union for its intended use, which could materially adversely affect our business, operating results and financial condition. Furthermore, since patent applications are published some time after filing, and because applications can take several years to issue, there may be additional currently pending third-party patent applications that are unknown to us, which may later result in issued patents. We may initiate litigation or other legal proceedings with respect to other patents in the future. Because of the inevitable uncertainty in intellectual property litigation, we could lose a patent infringement action asserted against us or opposition or other legal proceeding regardless of our perception of the merits of the case. If we are found to infringe a third party's intellectual property rights, we could be required to obtain a license from such third party to continue developing and commercializing our products and technology. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we are able to obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. We could be forced, including by court order, to cease commercializing the infringing technology or product. In addition, in any such proceeding or litigation, we could be found liable for monetary damages, including treble damages if we are found to have willfully infringed a patent, and attorneys' fees.

A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations.

We may be unable to protect the confidentiality of our trade secrets, thus harming our business and competitive position.

In addition to our patented technology and products, we rely upon trade secrets, including unpatented know-how, technology and other proprietary information to develop and maintain our competitive position, which we seek to protect, in part, by confidentiality agreements with our employees, collaborators and consultants. We also have agreements with our employees and selected consultants that obligate them to assign their inventions to us. However, it is possible that technology relevant to our business will be independently developed by a person that is not a party to such an agreement. Furthermore, if the employees, consultants or collaborators that are parties to these agreements breach or violate the terms of these agreements, we may not have adequate remedies for any such breach or violation, and we could lose our trade secrets through such breaches or violations. Furthermore, our trade secrets could be disclosed, misappropriated or otherwise become known or be independently discovered by our competitors. Our trade secrets can be lost through their inadvertent or advertent disclosure to others. In addition, intellectual property laws in foreign countries may not protect our intellectual property to the same extent as the laws of the United States. If our trade secrets are disclosed or misappropriated, it would harm our ability to protect our rights and harm our business.

We may be subject to claims that our employees have wrongfully used or disclosed intellectual property of their former employers. Intellectual property litigation or proceedings could cause us to spend substantial resources and distract our personnel from their normal responsibilities.

Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or these employees have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such employee’s former employer. Litigation may be necessary to defend against these claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in defending against such claims, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses, and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce our resources available for development activities. We may not have sufficient financial or other resources to adequately conduct such litigation or proceedings. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their substantially greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other intellectual property related proceedings could impair our ability to compete in the marketplace.

Risks Related to Government Regulation

The regulatory approval process is expensive, time consuming and uncertain and may prevent us or our any of our future collaboration partners from obtaining approvals for the commercialization of some or all of our product candidates.

Among other things, the research, testing, manufacturing, labeling, approval, selling, import, export, marketing and distribution of drug products are subject to extensive regulation by the FDA and other regulatory authorities in the United States and other countries, which regulations differ from country to country. Neither we nor any future collaboration partner is permitted to market our product candidates in the United States until we receive approval of a BLA from the FDA. We have not submitted an application or received marketing approval for any of our product candidates. Obtaining approval of BLA can be a lengthy, expensive and uncertain process. In addition, failure to comply with FDA and other applicable U.S. and foreign regulatory requirements may subject us to administrative or judicially imposed sanctions, including the following:

warning letters;

civil or criminal penalties and fines;

injunctions;

suspension or withdrawal of regulatory approval;

suspension of any ongoing clinical trials;

voluntary or mandatory product recalls and publicity requirements;

refusal to accept or approve applications for marketing approval of new drugs or biologics or supplements to approved applications filed by us;

restrictions on operations, including costly new manufacturing requirements; or

seizure or detention of our products or import bans.

Prior to receiving approval to commercialize any of our product candidates in the United States or abroad, we and any of our future collaboration partners must demonstrate with substantial evidence from well-controlled clinical trials, and to the satisfaction of the FDA and other regulatory authorities abroad, that such product candidates are safe and effective for their intended uses. Results from preclinical studies and clinical trials can be interpreted in different ways. Even if we and any of our future collaboration partners believe the preclinical or clinical data for our product candidates are promising, such data may not be sufficient to support approval by the FDA and other regulatory authorities. Administering any of our product candidates to humans may produce undesirable side-effects, which could interrupt, delay or cause suspension of clinical trials of our product candidates and result in the FDA or other regulatory authorities denying approval of our product candidates for any or all targeted indications.

Regulatory approval of BLA is not guaranteed, and the approval process is expensive and may take several years. The FDA also has substantial discretion in the approval process. Despite the time and expense exerted, failure can occur at any stage, and we could encounter problems that cause us to abandon or repeat clinical trials, or perform additional preclinical studies and clinical trials. The number of preclinical studies and clinical trials that will be required for FDA approval varies depending on the product candidate, the disease or condition that the product candidate is designed to address and the regulations applicable to any particular product candidate.

The FDA can delay, limit or deny approval of a product candidate for many reasons, including, but not limited to, the following:

a product candidate may not be deemed safe or effective;

FDA officials may not find the data from preclinical studies and clinical trials sufficient;

the FDA might not approve our or our third-party manufacturers’ processes or facilities; or

the FDA may change its approval policies or adopt new regulations.

If any of our product candidates fails to demonstrate safety and efficacy in clinical trials or does not gain regulatory approval, our business will be harmed.

Even if we receive regulatory approval for a product candidate, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and subject us to penalties if we fail to comply with applicable regulatory requirements.

Once regulatory approval has been granted, the approved product and its manufacturer are subject to continual review by the FDA and/or non-U.S. regulatory authorities. Any regulatory approval that we or any of our future collaboration partners receive for our product candidates may be subject to limitations on the indicated uses for which the product may be marketed or contain requirements for potentially costly post-marketing follow-up trials to monitor the safety and efficacy of the product. In addition, if the FDA and/or non-U.S. regulatory authorities approve any of our product candidates, we will be subject to extensive and ongoing regulatory requirements by the FDA and other regulatory authorities with regard to the labeling, packaging, adverse event reporting, storage, advertising, promotion and recordkeeping, among other things, for our products. In addition, manufacturers of our drug products are required to comply with cGMP regulations, which include requirements related to quality control and quality assurance as well as the corresponding maintenance of records and documentation. Furthermore, regulatory authorities must approve these manufacturing facilities before they can be used to manufacture our drug products, and these facilities are subject to continual review and periodic inspections by the FDA and other regulatory authorities for compliance with cGMP regulations. If we or a third party discover previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, a regulatory authority may impose restrictions on that product, the manufacturer or us, including requiring withdrawal of the product from the market or suspension of manufacturing. If we, our product candidates or the manufacturing facilities for our product candidates fail to comply with regulatory requirements of the FDA and/or other non-U.S. regulatory authorities, we could be subject to administrative or judicially imposed sanctions, including the following:

warning letters;

civil or criminal penalties and fines;

injunctions;

suspension or withdrawal of regulatory approval;

suspension of any ongoing clinical trials;

voluntary or mandatory product recalls and publicity requirements;

refusal to approve pending applications for marketing approval of new drugs or supplements to approved applications filed by us;

restrictions on operations, including costly new manufacturing requirements; or

seizure or detention of our products or import bans.

The regulatory requirements and policies may change and additional government regulations may be enacted for which we may also be required to comply. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or in other countries. If we are not able to maintain regulatory compliance, we may not be permitted to market our future products and our business may suffer.

Failure to obtain regulatory approvals in foreign jurisdictions will prevent us from marketing our products internationally.

We or a future collaboration partner may market ALD403 and any future products in international markets. In order to market our future products in the European Economic Area, or EEA, and many other foreign jurisdictions, we must obtain separate regulatory approvals. Specifically, in the EEA, medicinal products can only be commercialized after obtaining a Marketing Authorization, or MA.

Before granting the MA, the European Medicines Agency, or EMA, or the competent authorities of the member states of the EEA make an assessment of the risk-benefit balance of the product on the basis of scientific criteria concerning its quality, safety and efficacy.

We have had limited interactions with foreign regulatory authorities, and the approval procedures vary among countries and can involve additional clinical testing, and the time required to obtain approval may differ from that required to obtain FDA approval. Clinical trials conducted in one country may not be accepted by regulatory authorities in other countries. Approval by the FDA does not ensure approval by regulatory authorities in other countries, and approval by one or more foreign regulatory authorities does not ensure approval by regulatory authorities in other foreign countries or by the FDA. However, a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory process in others. The foreign regulatory approval process may include all of the risks associated with obtaining FDA approval. We may not obtain foreign regulatory approvals on a timely basis, if at all. We may not be able to file for regulatory approvals and even if we file we may not receive necessary approvals to commercialize our products in any market.

Healthcare reform measures could hinder or prevent our product candidates' commercial success.

In the United States, there have been and we expect there will continue to be a number of legislative and regulatory changes to the healthcare system in ways that could affect our future revenues and profitability and the future revenues and profitability of our potential customers. Federal and state lawmakers regularly propose and, at times, enact legislation that would result in significant changes to the healthcare system, some of which are intended to contain or reduce the costs of medical products and services. For example, one of the most significant healthcare reform measures in decades, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, collectively, the PPACA, was enacted in 2010. The PPACA contains a number of provisions, including those governing enrollment in federal healthcare programs, reimbursement changes and fraud and abuse measures, all of which will impact existing government healthcare programs and will result in the development of new programs. The PPACA, among other things:

imposes a non-deductible annual fee on pharmaceutical manufacturers or importers who sell "branded prescription drugs";

increases the minimum level of Medicaid rebates payable by manufacturers of brand-name drugs from 15.1% to 23.1%;

requires collection of rebates for drugs paid by Medicaid managed care organizations;

requires manufacturers to participate in a coverage gap discount program, under which they must agree to offer 50% point-of-sale discounts off negotiated prices of applicable branded drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D; and

creates a process for approval of biologic therapies that are similar or identical to approved biologics.

While the U.S. Supreme Court upheld the constitutionality of most elements of the PPACA in June 2012, other legal challenges are still pending final adjudication in several jurisdictions. In addition, Congress has also proposed a number of legislative initiatives, including possible repeal of the PPACA. At this time, it remains unclear whether there will be any changes made to the PPACA, whether to certain provisions or its entirety. We cannot assure that the PPACA, as currently enacted or as amended in the future, will not adversely affect our business and financial results and we cannot predict how future federal or state legislative or administrative changes relating to healthcare reform will affect our business.

In addition, other legislative changes have been proposed and adopted since the PPACA was enacted. For example, the Budget Control Act of 2011, among other things, created the Joint Select Committee on Deficit Reduction to recommend proposals in spending reductions to Congress. The Joint Select Committee did not achieve a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, which triggered the legislation's automatic reduction to several government programs, including aggregate reductions to Medicare payments to providers of up to 2% per fiscal year that went into effect on April 1, 2013 and will remain in effect through 2024 unless additional Congressional action is taken. On January 2, 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, or the ATRA, which, among other things, further reduced Medicare payments to several providers, including hospitals, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

There have been and likely will continue to be legislative and regulatory proposals at the federal and state levels directed at containing or lowering the cost of health care. We cannot predict the initiatives that may be adopted in the future or their full impact. The continuing efforts of the government, insurance companies, managed care organizations and other payors of healthcare services to contain or reduce costs of health care may adversely affect:

our ability to set a price we believe is fair for our products;

our ability to generate revenues and achieve or maintain profitability; and

the availability of capital.

Furthermore, changes in regulatory requirements and guidance may occur and we may need to amend clinical trial protocols to reflect these changes. Amendments may require us to resubmit our clinical trial protocols to Institutional

Review Boards for reexamination, which may impact the costs, timing or successful completion of a clinical trial. In light of widely publicized events concerning the safety risk of certain drug products, regulatory authorities, members of Congress, the Governmental Accounting Office, medical professionals and the general public have raised concerns about potential drug safety issues. These events have resulted in the recall and withdrawal of drug products, revisions to drug labeling that further limit use of the drug products and establishment of risk management programs that may, for instance, restrict distribution of drug products or require safety surveillance and/or patient education. The increased attention to drug safety issues may result in a more cautious approach by the FDA to clinical trials and the drug approval process. Data from clinical trials may receive greater scrutiny with respect to safety, which may make the FDA or other regulatory authorities more likely to terminate or suspend clinical trials before completion, or require longer or additional clinical trials that may result in substantial additional expense and a delay or failure in obtaining approval or approval for a more limited indication than originally sought.

Given the serious public health risks of high profile adverse safety events with certain drug products, the FDA may require, as a condition of approval, costly risk evaluation and mitigation strategies, which may include safety surveillance, restricted distribution and use, patient education, enhanced labeling, special packaging or labeling, expedited reporting of certain adverse events, preapproval of promotional materials and restrictions on direct-to-consumer advertising.

If we fail to comply with healthcare laws, we could face substantial penalties and our business, operations and financial condition could be adversely affected.

Even though we do not and will not control referrals of healthcare services or bill directly to Medicare, Medicaid or other third-party payors, certain federal and state healthcare laws and regulations, including those pertaining to fraud and abuse and patients' rights, are and will be applicable to our business. We could be subject to healthcare regulation by both the federal government and the states in which we conduct our business. The laws that may affect our ability to operate include, without limitation:

the federal healthcare program Anti-Kickback Statute, which prohibits, among other things, any person or entity from knowingly and willfully offering, soliciting, receiving or providing remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual for, or the purchase, order or recommendation of, any good or service for which payment may be made under federal healthcare programs, such as the Medicare and Medicaid programs;

indirectly, to induce either the referral of an individual, for an item or service or the purchasing or ordering of a good or service, for which payment may be made under federal healthcare programs, such as the Medicare and Medicaid programs;

the federal False Claims Act, which prohibits, among other things, individuals or entities from knowingly presenting, or causing to be presented, false claims, or knowingly using false statements, to obtain payment from the federal government, and which may apply to entities like us which provide coding and billing advice to customers;

federal criminal laws that prohibit, among other things, executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters;

the federal transparency requirements under the PPACA require certain manufacturers of drugs, devices, biologics and medical supplies to report to the U.S. Department of Health and Human Services information related to physician payments and other transfers of value and physician ownership and investment interests;

the federal Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act, which governs the conduct of certain electronic healthcare transactions and protects the security and privacy of protected health information; and

state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to items or services reimbursed by any third-party payor, including commercial insurers.

The PPACA, among other things, amends the intent requirement of the Federal Anti-Kickback Statute and criminal healthcare fraud statutes. A person or entity no longer needs to have actual knowledge of this statute or specific intent to violate it. In addition, the PPACA provides that the government may assert that a claim including items or services resulting from a violation of the Federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act.

If our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including administrative, civil and criminal penalties, damages, fines and the curtailment or restructuring of our operations. Any penalties, damages, fines, curtailment or restructuring of our operations could adversely affect our ability to operate our business and our financial results. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management’s attention from the operation of our business. Moreover, achieving and

sustaining compliance with applicable federal and state privacy, security and fraud laws may prove costly.

Risks Related to Ownership of Our Common Stock

Our stock price may be volatile, and purchasers of our common stock could incur substantial losses.

Our stock price has fluctuated in the past and is likely to be volatile in the future. From the date of our IPO through March 6, 2015, the reported sale price of our common stock has fluctuated between $9.50 and $32.30 per share. The stock market in general and the market for biotechnology companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may experience losses on their investment in our common stock. The market price for our common stock may be influenced by many factors, including the following:

the success of competitive products or technologies;

results of clinical trials of our product candidates or those of our competitors;

regulatory or legal developments in the United States and other countries, especially changes in laws or regulations applicable to our product candidates;

introductions and announcements of future product candidates by us, any of our future collaborators, or our competitors, and the timing of these introductions or announcements;

actions taken by regulatory agencies with respect to our product candidates, clinical trials, manufacturing process or sales and marketing terms;

variations in our financial results or those of companies that are perceived to be similar to us;

the success of our efforts to discover, acquire or in-license additional products or product candidates;

developments concerning our future collaborations, including but not limited to those with our sources of manufacturing supply and our future collaborators;

manufacturing disruptions;

announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;

developments or disputes concerning patents or other proprietary rights, including litigation matters and our ability to obtain patent protection for our product candidates;

our ability or inability to raise additional capital and the terms on which we raise it;

the recruitment or departure of key personnel;

changes in the structure of healthcare payment systems;

market conditions in the pharmaceutical and biotechnology sectors;

actual or anticipated changes in earnings estimates or changes in stock market analyst recommendations regarding our common stock, other comparable companies or our industry generally;

trading volume of our common stock;

sales of our common stock by us or our stockholders;

changes in our board of directors or key personnel;

the expiration of contractual lock-up agreements;

changes in our capital structure, such as future issuances of debt or equity securities;

short sales, hedging and other derivative transactions involving our capital stock;

general economic, industry and market conditions in the United States and abroad;

other events or factors, including those resulting from war, incidents of terrorism or responses to these events; and

the other risks described in this “Risk Factors” section.

These broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance. In the past, following periods of volatility in the market, securities class-action litigation has often been instituted against companies. Such litigation, if instituted against us, could result in substantial costs and diversion of management’s attention and resources, which could harm our business.

Substantial future sales of shares of our common stock could cause the market price of our common stock to decline. This could cause the market price of our common stock to drop significantly, even if our business is doing well.

Sales of a substantial number of shares of our common stock into the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. We are unable to predict the effect that such sales may have on the prevailing market price of our common stock. In connection with our January 2015 offering, our officers, directors and certain of our stockholders have signed lock-up agreements with the underwriters under which they have agreed that they will not, for a period ending April 8, 2015, directly or indirectly, offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale, or otherwise dispose of or hedge any of our shares of capital stock, any options or warrants to purchase shares of our capital stock or any securities convertible into, or exchangeable for or that represent the right to receive shares of our capital stock, subject to certain exceptions.

In addition, as of December 31, 2014, we had options outstanding that, if fully exercised, would result in the issuance of 2,485,222 shares of common stock. Following annual automatic increases in the number of reserved shares effective as of January 1, 2015, there were also 4,605,346 shares of common stock reserved for future issuance under our 2014 Equity Incentive Plan and 551,864 shares of common stock reserved for issuance under our 2014 Employee Stock Purchase Plan. The authorized number of shares under both such benefit plans are subject to additional automatic annual increases in the number of shares of common stock reserved for future issuance. All of the shares of common stock issuable pursuant to our equity compensation plans have been

registered for public resale under the Securities Act of 1933, as amended, or the Securities Act. Accordingly, these shares will be able to be freely sold in the public market upon issuance as permitted by any applicable vesting requirements.

Moreover, as of December 31, 2014, holders of an aggregate of up to approximately 18.9 million shares of our common stock have rights, subject to some conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders.

If securities or industry analysts do not publish research, or publish inaccurate or unfavorable research, about our business, our stock price and trading volume could decline.

The trading market for our common stock depends, in part, on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If one or more of the analysts who cover us downgrade our stock or publish inaccurate or unfavorable research about our business, our stock price would likely decline. In addition, if our operating results fail to meet the forecast of analysts, our stock price would likely decline. If one or more of these analysts cease coverage of our company or fail to publish reports on us regularly, demand for our stock could decrease, which might cause our stock price and trading volume to decline.

Our executive officers, directors and principal stockholders have the ability to control or significantly influence all matters submitted to stockholders for approval.

As of January 31, 2015, our executive officers and directors and their respective affiliated stockholders who owned more than 5% of our outstanding common stock, in the aggregate, beneficially owned shares representing approximately 35.1% of our common stock. As a result, if these stockholders were to choose to act together, they would be able to control or significantly influence all matters submitted to our stockholders for approval, as well as our management and affairs. For example, these stockholders, if they choose to act together, will control or significantly influence the election of directors and approval of any merger, consolidation or sale of all or substantially all of our assets. This concentration of voting power could delay or prevent an acquisition of our company on terms that other stockholders may desire, which in turn could depress our stock price and may prevent attempts by our stockholders to replace or remove the board of directors or management.

An active trading market for our common stock may not be maintained.

Our stock is currently traded on the NASDAQ Global Market, but we can provide no assurance that we will be able to maintain an active trading market on the NASDAQ Global Market or any other exchange in the future. The trading

volume of our common stock has been and may continue to be limited. If an active market for our common stock is not maintained, it may be difficult for our stockholders to sell shares purchased without depressing the market price for the shares or at all.

We are an “emerging growth company” and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our common stock less attractive to investors.

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act, or the JOBS Act, which was enacted in April 2012. For as long as we continue to be an emerging growth company, we intend take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could be an emerging growth company for up to five years, although circumstances could cause us to lose that status earlier. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) in 2019, (b) in which we have total annual gross revenue of at least $1.0 billion or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30th, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt securities during the prior three-year period. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may suffer or be more volatile.

Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We have elected to avail ourselves of

this exemption, and, therefore, we are not subject to the same new or revised accounting standards as other public companies that are not “emerging growth companies” until these standards apply to private companies.

Complying with the laws and regulations affecting public companies has increased and will increase our costs and the demands on management and could harm our operating results.

As a public company, we are incurring significant legal, accounting and other expenses that we did not incur as a private company. In addition, the Sarbanes-Oxley Act and rules subsequently implemented by the SEC and NASDAQ impose numerous requirements on public companies, including requiring changes in corporate governance practices. Also, the Exchange Act requires, among other things, that we file annual, quarterly and current reports with respect to our business and operating results. Our management and other personnel will need to devote a substantial amount of time to compliance with these laws and regulations. These burdens may increase as new legislation is passed and implemented, including any new requirements that the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 may impose on public companies. These requirements have increased and will continue to increase our legal, accounting, and financial compliance costs and have made and will continue to make some activities more time consuming and costly. We estimate that we will incur approximately $1.5 million to $2.5 million in incremental costs per year associated with being a publicly traded company, although it is possible that our actual incremental costs will be higher than we currently estimate. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance, and in the future we may be required to accept reduced policy limits and coverage or to incur substantial costs to maintain the same or similar coverage. These rules and regulations could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors or our board committees or as executive officers.

The Sarbanes-Oxley Act requires, among other things, that we assess the effectiveness of our internal control over financial reporting annually and the effectiveness of our disclosure controls and procedures quarterly. Section 404 of the Sarbanes-Oxley Act, or Section 404, requires us to perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on, and our independent registered public accounting firm potentially to attest to, the effectiveness of our internal control over financial reporting. As an “emerging growth company,” we expect to avail ourselves of the exemption from the requirement that our independent registered public accounting firm attest to the effectiveness of our internal control over financial reporting under Section 404. However, we may no longer avail ourselves of this exemption when we cease to be an “emerging growth company.” When our independent registered public accounting firm is required to undertake an assessment of our internal control over financial reporting, the cost of our compliance with Section 404 will correspondingly increase. Our compliance with applicable provisions of Section 404 will require that we incur substantial accounting expense and expend significant management time on compliance-related issues as we implement additional corporate governance practices and comply with reporting requirements. Moreover, if we are not able to comply with the requirements of Section 404 applicable to us in a timely manner, or if we or our independent registered public accounting firm identifies deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, the market price of our stock could decline and we could be subject to sanctions or investigations by the SEC or other regulatory authorities, which would require additional financial and management resources.

Furthermore, investor perceptions of our company may suffer if deficiencies are found, and this could cause a decline in the market price of our stock. Irrespective of compliance with Section 404, any failure of our internal control over financial reporting could have a material adverse effect on our stated operating results and harm our reputation. If we are unable to implement these requirements effectively or efficiently, it could harm our operations, financial reporting, or financial results and could result in an adverse opinion on our internal control over financial reporting from our independent registered public accounting firm.

Provisions in our corporate charter documents could make an acquisition of us more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our corporate charter and our bylaws may discourage, delay or prevent a merger, acquisition or other change in control of us that stockholders may consider favorable, including transactions in which stockholders might otherwise receive a premium for their shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors. Because our board of directors is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our stockholders to replace current members of our management team. Among others, these provisions include the following:

our board of directors is divided into three classes with staggered three-year terms which may delay or prevent a change of our management or a change in control;

our board of directors has the right to elect directors to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;

our stockholders may not act by written consent or call special stockholders' meetings; as a result, a holder, or holders, controlling a majority of our capital stock would not be able to take certain actions other than at annual stockholders' meetings or special stockholders' meetings called by the board of directors, the chairman of the board or the chief executive officer;

our certificate of incorporation does not provide for cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;

stockholders must provide advance notice and additional disclosures in order to nominate individuals for election to the board of directors or to propose matters that can be acted upon at a stockholders' meeting, which may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of our company; and

our board of directors may issue, without stockholder approval, shares of undesignated preferred stock; the ability to issue undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to acquire us.

Provisions under Delaware law and Washington law could make an acquisition of our company more difficult, limit attempts by our stockholders to replace or remove our current management and limit the market price of our common stock.

In addition to provisions in our corporate charter and our bylaws, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which generally prohibits a Delaware corporation from engaging in any of a broad range of business combinations with any holder of at least 15% of our capital stock for a period of three years following the date on which the stockholder became a 15% stockholder. Likewise, because our principal executive offices are located in Washington, the anti-takeover provisions of the Washington Business Corporation Act may apply to us under certain circumstances now or in the future. These provisions prohibit a "target corporation" from engaging in any of a broad range of business combinations with any stockholder constituting an "acquiring person" for a period of five years following the date on which the stockholder became an "acquiring person."

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our corporate headquarters are located in Bothell, Washington, where we lease 36,654 square feet of office and laboratory space pursuant to a lease agreement which expires in February 2017. This facility houses our research, clinical, regulatory, commercial and administrative personnel. We believe that our existing facilities are adequate for our near-term needs. We believe that suitable additional or alternative space would be available if required in the future on commercially reasonable terms.

Item 3. Legal Proceedings

From time to time, we may become involved in litigation relating to claims arising from the ordinary course of business. Our management believes that there are currently no claims or actions pending against us, the ultimate disposition of which could have a material adverse effect on our results of operations, financial condition or cash flows.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholders Matters and Issuer Purchases of Equity Securities

Our common stock is traded on The NASDAQ Global Market under the symbol "ALDR." Trading of our common stock commenced on May 8, 2014 in connection with our initial public offering. The following table sets forth, for the periods indicated, the high and low sales prices for our common stock as reported on The NASDAQ Global Market.

Year ended December 31, 2014	High	Low
Second quarter (beginning May 8, 2014)	$22.95	$9.50
Third quarter	$20.64	$11.19
Fourth quarter	$30.35	$10.52

Holders

As of March 6, 2015, there were approximately 27 holders of record of our common stock. The actual number of stockholders is greater than this number of record holders and includes stockholders who are beneficial owners but whose shares are held in street name by brokers and other nominees.

Dividends

We have never declared or paid, and do not anticipate declaring, or paying in the foreseeable future, any cash dividends on our capital stock. Future determinations as to the declaration and payment of dividends, if any, will be at the discretion of our board of directors and will depend on then existing conditions, including our operating results, financial conditions, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant.

Performance Graph

The following graph compares the performance of our common stock for the periods indicated with the performance of the NASDAQ Composite Index and the NASDAQ Biotechnology Index. This graph assumes an investment of $100 on May 8, 2014 in each of our common stock, the NASDAQ Composite Index and the NASDAQ Biotechnology

Index, and assumes reinvestment of dividends, if any. The stock price performance shown on the graph below is not necessarily indicative of future stock price performance.

This information under “Stock Performance Graph” is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference in any filing of Alder Biopharmaceuticals, Inc. under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date of this Annual Report on Form 10-K and irrespective of any general incorporation language in those filings.

Use of Proceeds

On May 7, 2014, our registration statement on Form S-1 (No. 333-194672) was declared effective for our IPO. There has been no material change in the planned use of proceeds from our IPO from that described in the prospectus filed with the SEC pursuant to Rule 424(b)(4) under the Securities Act on May 8, 2014. As of December 31, 2014, we have used an estimated $24.4 million of the proceeds from our IPO for working capital and other general corporate purposes. As of December 31, 2014, no portion of the proceeds from our initial public offering have been paid by us directly or indirectly to any of our directors or officers (or their associates) or persons owning ten percent or more of any class of our equity securities or to any other affiliates, other than payments in the ordinary course of business to officers for salaries and bonuses, and payments to our directors for service on our Board of Directors. There has been no material change in the planned use of proceeds from our IPO from that described in the prospectus filed with the SEC pursuant to Rule 424(b)(4) under the Securities Act on May 8, 2014.

Item 6. Selected Consolidated Financial Data

The following selected consolidated financial data is derived from our audited financial statements and should be read in conjunction with, and is qualified in its entirety by, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," and Item 8, "Financial Statements and Supplementary Data" contained elsewhere in this Annual Report on Form 10-K. The selected consolidated statements of operations data for the years ended December 31, 2014, 2013 and 2012 and consolidated balance sheet data as of December 31, 2014 and 2013 have been derived from our audited consolidated financial statements appearing elsewhere in this Annual Report on Form 10-K. The selected consolidated statements of operations data for the year ended December 31, 2011 and consolidated balance sheet data as of December 31, 2012 and 2011 were derived from our audited financial statements that are not included in this Annual Report on Form 10-K.

	Years Ended December 31,			
	2014	2013	2012	2011
Consolidated statements of operations data:	(in thousands, except share and per share data)			
Revenues				
Collaboration and license agreements	$54,705	$18,796	$20,067	$21,822
Operating expenses				
Research and development	33,439	31,883	30,669	28,291
General and administrative	12,462	7,674	7,217	6,642
Total operating expenses	45,901	39,557	37,886	34,933
Income (loss) from operations	8,804	(20,761)	(17,819)	(13,111)
Other income (expense)				
Interest income	44	54	101	92
Other income	60	158	—	—
Interest expense	—	—	(88)	(300)
Other expense	—	(64)	—	—
Total other income (expense)	104	148	13	(208)
Net income (loss)	$8,908	$(20,613)	$(17,806)	$(13,319)
Net income (loss) per share - basic	$0.43	$(21.14)	$(19.54)	$(15.09)
Net income (loss) per share - diluted	$0.30	$(21.14)	$(19.54)	$(15.09)
Weighted average number of common shares used in net income (loss) per share - basic	20,506,565	975,158	911,354	882,504
Weighted average number of common shares used in net income (loss) per share - diluted	29,427,287	975,158	911,354	882,504

	As of December 31,			
	2014	2013	2012	2011
Consolidated balance sheet data:	(in thousands)			
Cash, cash equivalents and investments	$55,872	$23,227	$59,373	$52,402
Working capital	55,734	2,457	39,938	29,537
Total assets	64,359	26,739	64,654	59,090
Total liabilities	5,202	58,727	76,664	97,566
Convertible preferred stock	—	111,374	111,374	67,638
Common stock and additional paid in capital	196,085	2,443	1,820	1,283

Accumulated deficit	(136,906)	(145,814)	(125,201)	(107,395)
Total stockholders' equity (deficit)	64,359	(143,362)	(123,384)	(106,114)

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

You should read the following discussion and analysis together with the financial statements and the related notes to those statements included elsewhere in this report. This discussion contains forward-looking statements that involve risks and uncertainties. As a result of many factors, such as those set forth in the section of this report captioned "Risk Factors" and elsewhere in this report, our actual results may differ materially from those anticipated in these forward-looking statements.

Overview

We are a clinical-stage biopharmaceutical company that discovers, develops and seeks to commercialize therapeutic antibodies with the potential to meaningfully transform current treatment paradigms. We have developed a proprietary antibody platform designed to select antibodies that have the potential to maximize efficacy as well as speed of onset and durability of therapeutic response. In addition, we believe our ability to efficiently manufacture antibodies using our yeast-based manufacturing technology, MabXpress, allows us to target diseases that traditionally have not been addressed by antibodies. ALD403 was discovered by Alder scientists, has achieved clinical proof-of-concept and we have initiated a Phase 2b dose-ranging trial for the preventative treatment of chronic migraines in preparation for progression to Phase 3 trials if supported by the data.

ALD403 is our novel monoclonal antibody targeted to calcitonin gene-related peptide, or CGRP, for migraine prevention. We have completed a three month double blind, randomized, placebo-controlled proof-of-concept trial of ALD403 in 163 patients suffering from five to 14 migraine days per month, or high frequency migraine. We have initiated a Phase 2b dose-ranging trial for the preventative treatment of chronic migraines with an intravenous formulation and we plan to initiate a second Phase 2b trial in high frequency migraines in the first half of 2015 with the goal of initiating pivotal Phase 3 trials in 2016.

Clazakizumab, also known as ALD518, is a novel monoclonal antibody that inhibits the pro-inflammatory cytokine interleukin-6, or IL-6, for the treatment of both rheumatoid arthritis, or RA, and psoriatic arthritis, or PsA. In November 2009, we entered into a license and collaboration agreement with BMS, under which we granted BMS worldwide exclusive rights to develop and commercialize Clazakizumab for all indications other than cancer. On August 29, 2014, BMS notified us that it had elected to terminate the license and collaboration agreement effective as of December 29, 2014, or the Termination Date, at which time all rights to Clazakizumab were returned to us. Under the terms of the agreement, BMS continues to be responsible for the costs of ongoing clinical studies, including the Phase 2b dose-ranging trial, through June 29, 2015. We are seeking a new partner to continue the development of Clazakizumab in autoimmune and inflammatory disease.

We recently designated ALD1613 as a product candidate to advance to IND enabling studies for the treatment of Cushing's Disease. ALD1613 is currently at a preclinical stage of development. We are continuing to evaluate other programs disease indications where therapeutic antibodies have not previously played a role. We will continue to enhance our technologies to discover optimized product candidates that can be manufactured efficiently on a very large scale. We may seek to monetize our technology platform by consummating partnerships with leading biotechnology and pharmaceutical companies. We also intend to continue to deploy capital to selectively develop our own portfolio of product candidates.

We were incorporated in 2002 and have not generated any product revenue. Through December 31, 2014, our operations have been primarily funded by $111.4 million in private placements of our convertible preferred stock, $80.3 million of net proceeds in our IPO and $135.0 million in upfront payments, milestones and research and development payments from our collaborators and government grants. In January 2015, we completed an underwritten public offering of 6,900,000 shares of common stock, including 900,000 shares we issued pursuant to the underwriters' exercise of their option to purchase additional shares, at $29.50 per share, for total net proceeds of $190.7 million, after deducing underwriting discounts and commissions of $12.2 million and offering expenses of $0.6 million.

As of December 31, 2014, we had an accumulated deficit of $136.9 million. We expect to experience increasing operating losses for the foreseeable future. We expect our expenses will increase substantially in connection with our ongoing activities, as we:

- conduct clinical trials for ALD403;
- continue to evaluate our preclinical programs and advance at least one additional product candidate into the clinic;
- enhance our proprietary antibody platform and conduct discovery and preclinical activities;
- manufacture antibodies for our preclinical programs and clinical trials;
- seek regulatory approval for our product candidates; and
- operate as a public company.

We will not generate revenues from product sales unless and until we or our future collaborators successfully complete development and obtain regulatory approval for one or more of our product candidates, which we expect will take a number of years and is subject to significant uncertainty. If we obtain regulatory approval for ALD403 or any future product candidate, we expect to incur significant commercialization expenses related to sales, marketing, manufacturing and distribution to the extent that such costs are not paid by future collaborators. We will need to obtain substantial additional sources of funding to develop ALD403 as currently

contemplated. If such additional funding is not available on favorable terms or at all, we may need to delay or reduce the scope of our ALD403 development program or grant rights in the United States, as well as outside the United States, to ALD403 to one or more partners.

Financial Operations Overview

Revenues

Substantially all of our revenues in 2014, 2013 and 2012 were derived from our collaboration with BMS. Upfront fees, milestone payments and reimbursed clinical supply and development costs received under our collaboration agreements are deferred and are recognized as revenues over the performance period using a time-based approach. As a result of the early termination of the agreement with BMS, the performance period was adjusted to reflect the December 29, 2014 termination date, which accelerated the recognition of revenue which had previously been deferred. In 2014, we recognized $54.2 million in revenue which previously had been deferred as of December 31, 2013.

Revenues recognized and cash payments received under these agreements in 2014, 2013 and 2012 were as follows:

	Years Ended December 31,		
	2014	2013	2012
Revenues recognized:	(in thousands)		
Bristol-Myers Squibb:			
Amortization of deferred revenue from upfront payments	$35,403	$12,133	$12,167
Recognition of milestone payments	7,706	2,642	3,690
Recognition of reimbursed clinical supply and development costs	11,431	3,921	4,111
Bristol-Myers Squibb total	54,540	18,696	19,968
Other collaborations	165	100	99
Total revenues recognized	$54,705	$18,796	$20,067
Cash payments received:			
Bristol-Myers Squibb:			
Milestone payments	$—	$—	$3,500
Reimbursed clinical supply and development costs	320	355	2,257
Bristol-Myers Squibb total	320	355	5,757
Other collaborations	265	-	100

Total cash payments received	$585	$355	$5,857

We have not generated any revenues from the sale of products. In the future, we may generate revenues from product sales and from collaboration agreements in the form of license fees, milestone payments, reimbursements for clinical supply and development costs and royalties on product sales. We expect that any revenues we generate will fluctuate from quarter to quarter as a result of the uncertain timing and amount of such payments and sales.

Research and Development Expenses

Research and development expenses represent costs incurred by us for the discovery and development of our product candidates. The following items are included in research and development expenses:

- external costs under agreements with clinical research organizations, or CROs, contract manufacturing organizations, or CMOs, and other significant third-party vendors or consultants used to perform preclinical, clinical and manufacturing activities;
- internal costs including employee-related costs such as salaries, benefits, stock-based compensation expense, travel, laboratory consumables and services for our research and development personnel; and
- allocated facilities, depreciation, and other expenses, which include rent and maintenance of facilities, information technology services and other infrastructure expenses.

We use our employee and infrastructure resources across multiple research and development programs directed toward evaluating our monoclonal antibodies for selecting product candidates. We manage certain activities such as preclinical toxicology studies, clinical trial operations and manufacture of product candidates through third-party CROs, CMOs or other third-party vendors. We track our significant external costs by each product candidate. We also track our human resource efforts on certain programs for purposes of billing our collaborators for time incurred at agreed upon rates. We do not, however, assign or allocate to individual product candidates or development programs our internal costs and we group these internal research and development activities into three categories:

Category	Description
Preclinical discovery and development	Research and development expenses incurred in activities substantially in support of discovery of new targets through the selection of a single product candidate. These activities encompass the discovery and translational medicine functions, including pharmacokinetic and drug metabolism preclinical studies, toxicology and early strain and assay development activities.
Pharmaceutical operations	Research and development expenses incurred related to manufacturing preclinical study and clinical trial materials, including scale-up process development and quality control activities.
Clinical development	Research and development expenses incurred related to Phase 1, Phase 2 and Phase 3 clinical trials, including regulatory affairs activities.

Our research and development expenses during 2014, 2013 and 2012 were as follows:

	Years Ended December 31,		
	2014	2013	2012
	(in thousands)		
External costs:			
ALD403	$14,085	$10,845	$5,471
Clazakizumab	1,055	2,268	5,765
Unallocated internal costs:			
Preclinical discovery and development	11,480	12,057	12,224
Pharmaceutical operations	5,209	4,696	4,924
Clinical development	1,610	2,017	2,285
Total research and development expenses	$33,439	$31,883	$30,669

We plan to increase our research and development expenses for the foreseeable future as we continue the development of ALD403 and evaluate the advancement of future product candidates into clinical development. We intend to seek a new partner for the clinical development of Clazakizumab in autoimmune and inflammatory disease. The timing and amount of research and development expenses incurred will depend largely upon the outcomes of current and future

clinical trials for our product candidates as well as the related regulatory requirements, manufacturing costs and any costs associated with the advancement of our preclinical programs. We cannot determine with certainty the duration and completion costs of the current or future clinical trials of our product candidates. The duration, costs and timing of clinical trials and development of our product candidates will depend on a variety of factors, including:

- the scope, rate of progress, and expense of our ongoing, as well as any additional, clinical trials and other research and development activities;
- future clinical trial results;
- potential changes in government regulation; and
- the timing and receipt of any regulatory approvals.

A change in the outcome of any of these variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development of that product candidate.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related benefits, including stock-based compensation, related to our executive, business development, intellectual property, finance, human resources and support functions. Other general and administrative expenses include allocated facility-related costs not otherwise included in research and development expenses, travel expenses and professional fees for auditing, tax and legal services, including intellectual property related legal services. We have incurred and expect to incur additional expenses as a result of being a public company, including expenses related to compliance with the rules and regulations of the SEC, and those of the NASDAQ Stock Market LLC, or NASDAQ, additional insurance expenses, investor relations activities and other administrative and professional services.

Other Income (Expense)

Other income consists primarily of interest income received on our cash, cash equivalents and investments, and refundable Australian tax credits received by our wholly-owned Australian subsidiary. Other expense consists primarily of interest expense related to a convertible promissory note which was outstanding until April 2012.

Results of Operations

Comparison of the Years Ended December 31, 2014 and 2013

The following table summarizes our results of operations for 2014 and 2013, together with the changes in those items in dollars and as a percentage:

	Years Ended December 31,			
	2014	2013	Dollar change	% change
	(dollars in thousands)			
Revenues:				
Collaboration and license agreements	$54,705	$18,796	$ 35,909	191 %
Operating expenses:				
Research and development	33,439	31,883	1,556	5 %
General and administrative	12,462	7,674	4,788	62 %

Income (loss) from operations	8,804	(20,761)	29,565	142	%
Interest income	44	54	(10)	(19	%)
Other income	60	158	(98)	(62	%)
Other expense	—	(64)	64	100	%
Net income (loss)	$8,908	$(20,613)	$ 29,521	143	%

Revenues

Revenues recognized and cash payments received under our collaboration agreements were as follows:

	Years Ended December 31,			
	2014	2013	Dollar change	% change
	(dollars in thousands)			
Revenues recognized:				
Bristol-Myers Squibb:				
Amortization of deferred revenue from upfront payments	$35,403	$12,133	$ 23,270	192 %
Recognition of milestone payments	7,706	2,642	5,064	192 %
Recognition of reimbursed clinical supply and development costs	11,431	3,921	7,510	192 %
Bristol-Myers Squibb total	54,540	18,696	35,844	192 %
Other collaborations	165	100	65	65 %
Total revenues recognized	$54,705	$18,796	$ 35,909	191 %
Cash payments received:				
Bristol-Myers Squibb:				
Reimbursed clinical supply and development costs	$320	$355	$ (35)	(10 %)
Bristol-Myers Squibb total	320	355	(35)	(10 %)
Other collaborations	265	—	265	—
Total cash payments received	$585	$355	$ 230	65 %

Revenues for 2014 and 2013 were derived primarily from our collaboration agreement with BMS. In 2014, revenues increased by $35.9 million compared to 2013, due primarily to the acceleration of recognition of revenue as a result of the early termination of the BMS agreement. We will not recognize any additional future revenue under the BMS collaboration agreement.

Research and Development Expenses

	Years Ended December 31,			
	2014	2013	Dollar change	% change
	(dollars in thousands)			
External costs:				

ALD403	$14,085	$10,845	$ 3,240	30 %
Clazakizumab	1,055	2,268	(1,213)	(53 %)
Unallocated internal costs:				
Preclinical discovery and development	11,480	12,057	(577)	(5 %)
Pharmaceutical operations	5,209	4,696	513	11 %
Clinical development	1,610	2,017	(407)	(20 %)
Total research and development expenses	$33,439	$31,883	$ 1,556	5 %

Research and development expenses increased by $1.6 million, or 5%, in 2014 compared to 2013. Costs incurred for ALD403 increased by $3.2 million, or 30% as we increased our expenditures for manufacturing drug supply and for conducting clinical trials for the prevention of migraines. In 2013 we decided to discontinue our clinical trial in cancer for Clazakizumab which resulted in a decrease of $1.2 million in the 2014 period. In December 2014, we regained the worldwide rights to Clazakizumab, for all indications other than cancer, from BMS. BMS continues to be responsible until June 29, 2015 for all costs of the clinical trials that were initiated by BMS prior to August 29, 2014. We plan to seek out a new partner to continue the clinical development of Clazakizumab in autoimmune and inflammatory disease and we have the right to purchase all of BMS' existing manufactured drug supply of Clazakizumab.

Unallocated internal costs decreased by $0.5 million due to decreased activities related to our preclinical programs, and decreases in personnel-related and other operating costs.

General and Administrative Expenses

General and administrative expenses increased by $4.8 million, or 62%, for 2014 compared to 2013. The increase was primarily due to increases in legal and other fees related to our patent filings of $1.6 million, increases in other consulting and professional fees to operate as a public company of $1.7 million and other increases in personnel related costs, business insurance and other administrative costs of $1.5 million.

Interest Income

The decrease of $10,000 in interest income for 2014 compared to 2013 was due primarily to a decrease in the average interest rate earned.

Other Income/(Other Expense)

Other income primarily represents incentive payments received by our Australian subsidiary from the Australian government for eligible research and development expenditures in the prior calendar year. We received $45,000 in such incentive payments in 2014 and $158,000 in 2013. The decrease in the incentive payments received in 2014 was due to a lower level of eligible expenditures in Australia in 2013 compared to expenditures in 2012. In 2014 we also recorded a gain on foreign currency of $15,000.

Comparison of the Years Ended December 31, 2013 and 2012

The following table summarizes our results of operations for 2013 and 2012, together with the changes in those items in dollars and as a percentage:

	Years Ended December 31,			
	2013	2012	Dollar change	% change
	(dollars in thousands)			
Revenues:				
Collaboration and license agreements	$18,796	$20,067	$ (1,271)	(6%)
Operating expenses:				
Research and development	31,883	30,669	1,214	4%

General and administrative	7,674	7,217	457	6 %
Income (loss) from operations	(20,761)	(17,819)	(2,942)	(17 %)
Interest income	54	101	(47)	(47 %)
Other income	158	—	158	—
Interest expense	—	(88)	88	100 %
Other expense	(64)	—	(64)	—
Net loss	$(20,613)	$(17,806)	$ (2,807)	(16 %)

Revenues

Revenues recognized and cash payments received under our collaboration agreements were as follows:

	Years Ended December 31,			
	2013	2012	Dollar change	% change
	(dollars in thousands)			
Revenues recognized:				
Bristol-Myers Squibb:				
Amortization of deferred revenue from upfront payments	$12,133	$12,167	$ (34)	— %
Recognition of milestone payments	2,642	3,690	(1,048)	(28 %)
Recognition of reimbursed clinical supply and development costs	3,921	4,111	(190)	(5 %)
Bristol-Myers Squibb total	18,696	19,968	(1,272)	(6 %)
Other collaborations	100	99	1	1 %
Total revenues recognized	$18,796	$20,067	$ (1,271)	(6 %)
Cash payments received:				
Bristol-Myers Squibb:				
Milestone payments	$—	$3,500	(3,500)	(100 %)
Reimbursed clinical supply and development costs	355	2,257	(1,902)	(84 %)
Bristol-Myers Squibb total	355	5,757	(5,402)	(94 %)
Other collaborations	—	100	(100)	(100 %)
Total cash payments received	$355	$5,857	$ (5,502)	(94 %)

Revenues for 2013 and 2012 were primarily associated with payments from BMS under our collaboration agreement. Revenues decreased by $1.3 million, or 6%, from 2012 to 2013 due to a decrease in clinical supply and development costs billed to BMS.

Research and Development Expenses

	Years Ended December 31,			
	2013	2012	Dollar change	% change
	(dollars in thousands)			
External costs:				
ALD403	$10,845	$5,471	$ 5,374	98 %
Clazakizumab	2,268	5,765	(3,497)	(61 %)
Unallocated internal costs:				
Preclinical discovery and development	12,057	12,224	(167)	(1 %)

Pharmaceutical operations	4,696	4,924	(228)	(5%)
Clinical development	2,017	2,285	(268)	(12%)
Total research and development expenses	$31,883	$30,669	$ 1,214	4%

Research and development expenses increased by $1.2 million, or 4%, in 2013 compared to 2012. External costs for ALD403 increased $5.4 million in 2013 compared to 2012, as we completed our Phase 1 clinical trial for ALD403 and transitioned to a larger proof-of-concept clinical trial during 2013. External costs for Clazakizumab decreased by $3.5 million in 2013 compared to 2012 as RA-related development costs decreased by $2.0 million and cancer-related development costs decreased by $1.5 million. We initiated Phase 2 clinical trials in two cancer related indications during 2012 prior to our decision to discontinue the development of Clazakizumab in cancer.

Unallocated internal costs decreased $0.7 million in 2013 compared to 2012. The decrease was primarily attributable to decreased activities related to our preclinical programs of $0.9 million and a decrease in consulting fees of $0.3 million. Unallocated internal costs also reflect an increase in personnel-related costs of $0.6 million.

General and Administrative Expenses

General and administrative expenses increased by $0.5 million, or 6%, to $7.7 million in 2013 compared to $7.2 million in 2012, due to an increase in personnel-related expenses of $0.4 million and an increase in professional fees of $0.1 million.

Interest Income

The decrease of $47,000 in interest income is primarily due to a decrease in average cash, cash equivalents and short-term investments during 2013 compared to 2012.

Other Income

We recorded other income of $158,000 in 2013 related to an incentive payment received by our Australian subsidiary from the Australian government for eligible research and development expenditures in 2012. We did not have any other income in 2012.

Interest Expense

We incurred interest expense of $88,000 related to a convertible promissory note in 2012. In April 2012, the principal amount and accrued interest under the note was converted into Series D preferred stock. We did not incur any interest expense in 2013.

Other Expense

We recorded other expense of $64,000 in 2013 related to a loss on retirement of equipment of $43,000 and a loss on translation of foreign currency of $21,000. We did not incur any other expense in 2012.

Liquidity and Capital Resources

Due to our significant research and development expenditures, we have generated significant operating losses from inception through June 30, 2014, and we expect to incur significant operating losses in the future. We have funded our operations primarily through sales of our convertible preferred stock, payments from our collaboration partners and proceeds from our initial public offering, or IPO, which we completed in May 2014. As of December 31, 2014, we had available cash, cash equivalents and investments of $55.9 million, which consisted of cash, money market funds and negotiable certificates of deposit. Cash in excess of immediate requirements is invested with a view toward liquidity and capital preservation, and we seek to minimize the potential effects of concentration and degrees of risk. In January 2015, we completed an underwritten public offering of 6,900,000 shares of common stock, including 900,000 shares we issued pursuant to the underwriters' exercise of their option to purchase additional shares, at $29.50 per share, for total net proceeds of $190.7 million, after deducing underwriting discounts and commissions of $12.2 million and offering expenses of $0.6 million.

We are currently focusing our resources on development of ALD403 and we are actively seeking a partner for Clazakizumab. We plan to utilize any funds derived from such a partnership to further advance ALD403 and may also consider possible partnerships for ALD403 or sources of equity financing. We believe that our available cash, cash

equivalents and investments including the net proceeds of our January 2015 offering will be sufficient to meet our projected operating requirements through 2016. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we currently expect. Furthermore, our operating plan may change, and we may need additional funds to meet operational needs and capital requirements for product development and commercialization sooner than planned. We currently have no credit facility or committed sources of capital. Because of the numerous risks and uncertainties associated with the development and commercialization of our product candidates and the extent to which we may enter into additional collaborations with third parties to participate in their development and commercialization, we are unable to estimate the amounts of increased capital outlays and operating expenditures associated with our current and anticipated clinical trials. Our future funding requirements will depend on many factors, as we:

initiate or continue clinical trials of ALD403, our novel monoclonal antibody for prevention of migraine;

seek out a new partner to continue the development of Clazakizumab in autoimmune and inflammatory disease;

continue the research and development of our product candidates;

seek to discover additional product candidates;

seek regulatory approvals for our product candidates that successfully complete clinical trials;

establish a sales, marketing and distribution infrastructure and scale-up manufacturing capabilities to commercialize products which receive regulatory approval;

enhance operational, financial and information management systems and hire additional personnel, including personnel to support development of our product candidates and, if a product candidate is approved, our commercialization efforts; and

incur additional costs associated with being a public company.

We plan to continue to fund our operations and capital funding needs through equity, debt financing and/or new collaborations. The sale of additional equity would result in additional dilution to our stockholders. The incurrence of debt financing would result in debt service obligations and the instruments governing such debt could provide for operating and financing covenants that would restrict our operations.

We are seeking a new partner for Clazakizumab and we may also consider partnering ALD403 for further clinical development and commercialization. To the extent that we raise additional capital through marketing and distribution arrangements or other collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our product candidates, future revenue streams, research programs or product candidates or to grant licenses on terms that may not be favorable to us. If we do need to raise additional capital to fund our operations, funding may not be available to us on acceptable terms, or at all. If we are not able to secure adequate additional funding we may be forced to make reductions in spending, extend payment terms with suppliers, liquidate assets where possible, and/or suspend or curtail planned programs. Any of these actions could harm our business, results of operations and future prospects.

Historical Cash Flow Trends

The following table summarizes our cash flows for the periods indicated:

	Years Ended December 31,		
	2014	2013	2012
	(in thousands)		
Net cash used in operating activities	$(47,657)	$(36,132)	$(29,902)
Net cash provided by (used in) investing activities	(9,734)	5,546	(1,507)
Net cash provided by financing activities	80,982	48	37,905

Cash Used in Operating Activities

Net cash used in operating activities includes net income (loss), adjusted for non-cash charges, changes in deferred revenue and changes in components of working capital. In 2014 our net income was $8.9 million, which included recognition of $54.3 million of revenue which had previously been deferred. As a result of the $54.3 million decrease in the deferred revenue balance, other non-cash charges including stock-based compensation of $1.3 million and an increase in prepaid and other assets of $5.2 million, our net cash used in operating activities was $47.7 million in 2014. Net cash used in operating activities was $11.5 million higher in 2014 compared to 2013 in which net cash used

in operating activities was $36.1 million and we had a net loss of $20.6 million. The increase in net cash used in operating activities was due primarily to the amount of deferred revenue recognized.

Net cash used in operating activities was $36.1 million during 2013 compared to $29.9 million during 2012. The increase in net cash used in operating activities in 2013 compared to 2012 was driven primarily by an increase in net loss of $2.8 million and a change in deferred revenue caused by a $3.5 million milestone payment received in 2012. The remaining differences in cash flows from operations primarily resulted from changes in accounts receivable.

Cash Provided by (Used in) Investing Activities

Net cash used in investing activities was $9.7 million in 2014 due primarily to purchases of investments, offset by maturities of investments, and purchases of property and equipment. Net cash provided by investing activities was $5.5 million in 2013 due primarily to the maturity of investments and decrease in restricted cash, offset in part by purchases of property and equipment.

Net cash provided by investing activities was $5.5 million during 2013 compared to cash used in investing activities of $1.5 million during 2012. The net cash provided by investing activities in 2013 was primarily the result of proceeds from maturities of investments. The net cash used in investing activities in 2012 was primarily the result of purchases of $1.0 million of property and equipment and $0.5 million in higher purchases of investments than proceeds from maturities of investments.

Cash Provided by Financing Activities

Net cash provided by financing activities in 2014 was $81.0 million due primarily to our IPO, in which we received proceeds of $80.3 million net of underwriting discounts and commissions and $2.2 million in offering costs. In 2014, we also received $0.8 million from the exercise of stock options and purchases under the employee stock purchase plan. In 2013, cash provided by financing activities of $48,000 was the result of stock option exercises. In 2012, cash provided by financing activities of $37.9 million was primarily the result of proceeds from the issuance of our Series D convertible preferred stock.

Off-Balance Sheet Arrangements

We did not have any off-balance sheet arrangements during 2014, 2013 and 2012.

Contractual Obligations

Our contractual obligations as of December 31, 2014 were as follows:

	Total	Less Than 1 Year	1-3 Years	3-5 Years	More Than 5 Years
	(in thousands)				
Operating lease obligations[1]	$1,311	$ 563	$ 748	$ —	$ —
License agreements[2]	745	55	165	150	375
Purchase obligations[3]	3,979	3,979	—	—	—
Contract manufacturing obligations[4]	3,298	3,130	152	16	—
Total contractual obligations	$9,333	$ 7,727	$ 1,065	$ 166	$ 375

(1) Represents future minimum lease payments under our non-cancelable operating lease. The minimum lease payments above do not include any related common area maintenance charges or real estate taxes.
(2) Some of our licensing agreements obligate us to pay a royalty on net sales of products utilizing licensed technology. Such royalties are dependent on future product sales and are not provided for in the table above as they are not estimable.
(3) We enter into agreements in the normal course of business with contract research organizations for clinical trials and with vendors for preclinical research studies and other services and products for operating purposes which are cancelable at any time by us, generally upon 30 days prior written notice. These payments are not included in this table of contractual obligations.

(4) Represents contractual obligations related to manufacturing our product candidates for use in our clinical trials, including long-term stability studies.

Newly Adopted Accounting Pronouncements

For a discussion of recently issued accounting pronouncements, please see Note 2 to our consolidated financial statements, which are included in this report.

JOBS Act

As an “emerging growth company,” the JOBS Act, allows us to delay adoption of new or revised accounting pronouncements applicable to public companies until such pronouncements are made applicable to private companies. As a result, our financial statements may not be comparable to the financial statements of issuers who are required to comply with the effective date for new or revised accounting standards that are applicable to public companies.

Critical Accounting Policies and Significant Judgments and Estimates

Our management’s discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with United States generally accepted accounting principles, or U.S. GAAP. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenues generated and expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We believe that the accounting policies discussed below are critical to

understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates.

Revenue Recognition

We recognize revenues from collaboration, license or research service contract arrangements when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed or determinable and collectability is reasonably assured.

We evaluate multiple-element arrangements to determine (1) the deliverables included in the arrangement and (2) whether the individual deliverables represent separate units of accounting or whether they must be accounted for as a single unit of accounting. This evaluation involves subjective determinations and requires us to make judgments about the individual deliverables and whether such deliverables are separable from the other aspects of the contractual relationship. Deliverables are considered separate units of accounting provided that the delivered item has value to the customer on a standalone basis, and if the arrangement includes a general right of return with respect to the delivered item, delivery or performance of the undelivered item is considered probable and substantially in our control. In assessing whether an item has standalone value, we consider factors such as the research, development, manufacturing and commercialization capabilities of the collaboration partner and the availability of the associated expertise in the general marketplace. In addition, we consider whether the collaboration partner can use any other deliverable for its intended purpose without the receipt of the remaining deliverable, whether the value of the deliverable is dependent on the undelivered item and whether there are other vendors that can provide the undelivered items. For revenue arrangements entered into prior to January 1, 2011, we were also required to evaluate whether there was fair value of the undelivered elements in the arrangement. The deliverables under our 2009 BMS collaboration agreement did not qualify as separate units of accounting and accordingly are accounted for as a single unit of accounting.

The consideration received under an arrangement which contains separate units of accounting is allocated among the separate units using the relative selling price method. We determine the estimated selling price for units of accounting within each arrangement using vendor-specific objective evidence, or VSOE, of selling price, if available, third-party evidence, or TPE, of selling price if VSOE is not available, or best estimate of selling price, or BESP, if neither VSOE nor TPE is available.

When we have substantive performance obligations under an arrangement accounted for as one unit of accounting, revenues are recognized using either a time-based or proportional performance-based approach. When we cannot estimate the total amount of performance obligations that are to be provided under the arrangement, a time-based method is used. Under the time-based method, revenues are recognized over the arrangement's estimated performance period based on the elapsed time compared to the total estimated performance period. When we are able to estimate the total amount of performance obligations under the arrangement, revenues are recognized using a proportional performance model. Under this approach, revenue recognition is based on costs incurred to date compared to total expected costs to be incurred over the performance period as this is considered to be representative of the delivery of

service under the arrangement. Changes in estimates of total expected performance costs or service obligation time period are accounted for prospectively as a change in estimate. Under both methods, revenues recognized at any point in time are limited to the amount of noncontingent payments received or due.

We may also perform research and development activities on behalf of collaborative partners that are paid for by the collaborators. For research and development activities which are not determined to be separate units of accounting based on the criteria above, revenues for these research and development activities are recognized using the single unit of accounting method for that collaborative arrangement. For research and development activities which are determined to be separate units of accounting, arrangement consideration is allocated and revenues are recognized as services are delivered, assuming the general criteria for revenue recognition noted above have been met. The corresponding research and development costs incurred under these contracts are included in research and development expense in the consolidated statements of operations.

We generally invoice collaborators upon the completion of the effort, based on the terms of each agreement. Amounts earned, but not yet collected from the collaborators, if any, are included in accounts receivable in the accompanying consolidated balance sheets. Deferred revenue arises from payments received in advance of the culmination of the earnings process. Deferred revenue expected to be recognized within the next 12 months is classified as a current liability. Deferred revenue will be recognized as revenue in future periods when the applicable revenue recognition criteria have been met.

Accrued Research and Development Expenses

As part of the process of preparing financial statements, we are required to estimate and accrue expenses, the largest of which are research and development expenses. Costs for certain development activities are recognized based on an evaluation of the progress to completion of specific tasks using information and data provided to us by our vendors and our clinical sites. This process involves the following:

communicating with our applicable personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual cost;

estimating and accruing expenses in our financial statements as of each balance sheet date based on facts and circumstances known to us at the time; and

periodically confirming the accuracy of our estimates with selected service providers and making adjustments, if necessary.

Examples of estimated research and development expenses that we accrue include:

fees paid to CROs in connection with preclinical and toxicology studies and clinical trials;

fees paid to clinical sites in connection with clinical trials.

We base our expense accruals related to clinical trials on our estimates of the services received and efforts expended pursuant to contracts with multiple research institutions and CROs that conduct and manage clinical trials on our behalf. The financial terms of these agreements vary from contract to contract and may result in uneven payment flows. Payments under some of these contracts depend on factors, such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If we do not identify costs that we have begun to incur or if we underestimate or overestimate the level of services performed or the costs of these services, our actual expenses could differ from our estimates. For service contracts entered into that include a nonrefundable prepayment for service the upfront payment is deferred and recognized in the consolidated statement of operations as the services are rendered.

To date, we have not experienced significant changes in our estimates of accrued research and development expenses after a reporting period. However, due to the nature of estimates, we cannot assure you that we will not make changes to our estimates in the future as we become aware of additional information about the status or conduct of our clinical trials and other research activities.

Stock-Based Compensation

Stock-based compensation cost is measured on the grant date, based on the estimated fair value of the award using a Black-Scholes pricing model and recognized as an expense over the employee's requisite service period on a straight-line basis. We recorded stock-based compensation expense of $1.3 million, $0.6 million and $0.5 million for 2014, 2013 and 2012, respectively. At December 31, 2014, we had $4.3 million of total unrecognized stock-based compensation expense, net of estimated forfeitures, related to stock option grants that will be recognized over a weighted-average period of 3.1 years. We expect to continue to grant stock options pursuant to our 2014 Equity Incentive Plan and to allow employees to purchase shares of our common stock pursuant to our 2014 Employee Stock Purchase Plan, and to the extent that we do, our stock-based compensation expense recognized in future periods will likely increase.

We account for stock-based compensation arrangements with non-employees using a fair value approach. The fair value of these options is measured using the Black-Scholes option pricing model reflecting the same assumptions as applied to employee options in each of the reported periods, other than the expected life, which is assumed to be the remaining contractual life of the option. The compensation costs of these arrangements are subject to remeasurement over the vesting terms as earned.

Prior to our IPO, the fair value of our common stock underlying stock options was historically determined by our board of directors, with assistance from management, based upon information available at the time of grant. Given the absence of a public trading market for our common stock, and in accordance with the American Institute of Certified Public Accountants Practice Aid, Valuation of Privately-Held-Company Equity Securities Issued as Compensation, or the Practice Aid, our board of directors exercised reasonable judgment and considered numerous objective and subjective factors to determine the best estimate of the fair value of our common stock at each grant date. Following our IPO, the fair value per share of our common stock for purposes of determining stock-based compensation is the closing price of our common stock as reported on The NASDAQ Stock Market on the applicable grant date.

Key Assumptions

Our Black-Scholes option-pricing model requires the input of highly subjective assumptions, including the expected volatility of the price of our common stock, the expected term of the option, risk-free interest rates, the expected dividend yield of our common stock and, for the period prior to our IPO, the fair value of the underlying common stock. These estimates involve inherent uncertainties and the application of management's judgment. If factors change and different assumptions are used, our stock-based compensation expense could be materially different in the future.

In determining the fair value of stock awards granted, the following weighted-average assumptions were used in the Black-Scholes option pricing model for awards granted in the periods indicated:

	Stock Options			Employee Stock Purchase Plan
	Years Ended December 31,			Year Ended December 31,
	2014	2013	2012	2014
Volatility	66.1%	69.3%	70.8%	59.1%
Expected term (years)	6.1	5.9	6.1	0.6
Risk-free interest rate	1.9%	1.1%	0.9%	0.1%
Dividend rate	0.0%	0.0%	0.0%	0.0%

Income Taxes

We use the asset and liability method of accounting for income taxes. Deferred income tax assets and liabilities are recognized for the future tax consequences attributable to the differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis. Deferred income tax assets and liabilities are measured using enacted tax rates expected to be in effect when such assets and liabilities are recovered or settled. The effect on deferred income tax assets and liabilities of a change in tax rates is recognized in the period that includes the enactment date. We determine deferred income tax assets including net operating losses and liabilities, based on temporary differences between the book and tax bases of assets and liabilities. We believe that it is currently more likely than not that our deferred income tax assets will not be realized, and as such, we have recorded a full valuation allowance.

We utilize a two-step approach for evaluating uncertain tax positions. Step one, recognition, requires us to determine if the weight of available evidence indicates that a tax position is more likely than not to be sustained upon audit, including resolution of related appeals or litigation processes, if any. If a tax position is not considered “more likely than not” to be sustained, no benefits of the position are recognized. If we determine that a position is “more likely than not” to be sustained, then we proceed to step two, measurement, which is based on the largest amount of benefit which is more likely than not to be realized on effective settlement. This process involves estimating our actual current tax exposure, including assessing the risks associated with tax audits, together with assessing temporary differences resulting from the different treatment of items for tax and financial reporting purposes. If actual results differ from our estimates, our net operating loss and credit carryforwards could be materially impacted.

We file U.S. federal income and Australia tax returns. We currently are not subject to any state income tax filings. To date, we have not been audited by the Internal Revenue Service, Australian Tax Office or any state income tax authority.

As of December 31, 2014, our total deferred income tax assets were $51.5 million. Due to our history of losses and evaluation of available positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies, and the ability to carry back losses to prior years, we have determined that it is more likely than not that our deferred income tax assets will not be realized, and therefore, the deferred income tax assets are fully offset by a valuation allowance at December 31, 2014. The deferred income tax assets were primarily comprised of U.S. net operating loss carryforwards, or NOLs, and tax credit carryforwards. As of December 31, 2014, we had U.S. net operating loss carryforwards of $134.0 million and federal tax credit carryforwards of $6.5 million to offset future taxable income or offset income taxes due. These NOLs and tax credit carryforwards expire beginning in 2024 through 2034, if not utilized.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

The primary objective of our investment activities is to preserve our capital to fund our operations. We also seek to maximize income from our investments without assuming significant risk. To achieve our objectives, we maintain a portfolio of cash equivalents and investments in a variety of securities of high credit quality. As of December 31, 2014, we had cash, cash equivalents and investments of $55.9 million consisting of cash and money market accounts in highly rated financial institutions in the United States. A portion of our investments may be subject to interest rate risk and could fall in value if market interest rates increase. However, because our investments are primarily short-term in duration, we believe that our exposure to interest rate risk is not significant and a 1% movement in market interest rates would not have a significant impact on the total value of our portfolio. We actively monitor changes in interest rates.

We contract for the conduct of certain clinical development activities with vendors in Australia and we contract for the conduct of manufacturing activities in the United Kingdom. We made an aggregate of $8.2 million, $0.8 million, and $1.4 million in payments to these foreign vendors during 2014, 2013 and 2012, respectively. We are subject to exposure due to fluctuations in foreign exchange rates in connection with these agreements and with our cash balance held by our Australian subsidiary which is denominated in Australian dollars. We generally transfer funds to our Australian subsidiary to fund operating needs within 30 days of disbursement. For 2014, 2013 and 2012 the effect of the exposure to these fluctuations in foreign exchange rates was not material.

Item 8. Financial Statements and Supplementary Data

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

ALDER BIOPHARMACEUTICALS, INC.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of

Alder BioPharmaceuticals, Inc.

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, of comprehensive income (loss), of changes in convertible preferred stock and stockholders' equity (deficit) and of cash flows present fairly, in all material respects, the financial position of Alder BioPharmaceuticals, Inc. and its subsidiaries (the "Company") at December 31, 2014 and 2013, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2014 in conformity with accounting principles generally accepted in the United States of America. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP

Seattle, Washington

March 13, 2015

Alder BioPharmaceuticals, Inc.

Consolidated Balance Sheets

	December 31, 2014	December 31, 2013
	(in thousands, except share and per share data)	
Assets		
Current assets		
Cash and cash equivalents	$46,795	$23,227
Short-term investments	9,077	—
Accounts receivable	113	316
Prepaid expenses and other assets	4,758	1,982
Total current assets	60,743	25,525
Other assets	2,456	—
Property and equipment, net	1,160	1,214
Total assets	$64,359	$26,739
Liabilities, convertible preferred stock and stockholders' equity (deficit)		
Current liabilities		
Accounts payable	$1,911	$2,223
Accrued liabilities	2,963	2,128
Deferred revenue	—	18,717
Deferred rent	135	—
Total current liabilities	5,009	23,068
Deferred revenue	—	35,607
Deferred rent	193	52
Total liabilities	5,202	58,727
Commitments and contingencies (Note 14)		
Convertible preferred stock; $0.0001 par value; no shares and 116,020,270 shares authorized, respectively; no shares and 20,914,137 shares issued and outstanding, respectively	—	111,374
Stockholders' equity (deficit)		
Common stock; $0.0001 par value; 200,000,000 and 140,000,000 shares authorized, respectively; 30,996,526 and 988,685 shares issued and outstanding, respectively	3	—
Additional paid-in capital	196,082	2,443
Accumulated deficit	(136,906)	(145,814)
Accumulated other comprehensive income (loss)	(22)	9

Total stockholders' equity (deficit)	59,157	(143,362)
Total liabilities, convertible preferred stock and stockholders' equity (deficit)	$64,359	$26,739

The accompanying notes are an integral part of these consolidated financial statements.

Alder BioPharmaceuticals, Inc.

Consolidated Statements of Operations

	Years Ended December 31,		
	2014	2013	2012
	(in thousands, except share and per share data)		
Revenues			
Collaboration and license agreements	$54,705	$18,796	$20,067
Operating expenses			
Research and development	33,439	31,883	30,669
General and administrative	12,462	7,674	7,217
Total operating expenses	45,901	39,557	37,886
Income (loss) from operations	8,804	(20,761)	(17,819)
Other income (expense)			
Interest income	44	54	101
Other income	60	158	—
Interest expense	—	—	(88)
Other expense	—	(64)	—
Total other income	104	148	13
Net income (loss)	$8,908	$(20,613)	$(17,806)
Net income (loss) per share - basic	$0.43	$(21.14)	$(19.54)
Net income (loss) per share - diluted	$0.30	$(21.14)	$(19.54)
Weighted average number of common shares used in net income (loss) per share - basic	20,506,565	975,158	911,354
Weighted average number of common shares used in net income (loss) per share - diluted	29,427,287	975,158	911,354

The accompanying notes are an integral part of these consolidated financial statements.

Alder BioPharmaceuticals, Inc.

Consolidated Statements of Comprehensive Income (Loss)

	Years Ended December 31,		
	2014	2013	2012
	(in thousands)		
Net income (loss)	$8,908	$(20,613)	$(17,806)
Other comprehensive income (loss):			
Unrealized gain (loss) on securities available-for-sale, net of tax	(8)	—	2
Foreign currency translation income (loss), net of tax	(23)	12	(3)
Total other comprehensive income (loss)	(31)	12	(1)
Comprehensive income (loss)	$8,877	$(20,601)	$(17,807)

The accompanying notes are an integral part of these consolidated financial statements.

Alder BioPharmaceuticals, Inc.

Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)

ertible Preferred Stock										Additional	
s A		Series B		Series C		Series D		Common Stock		Paid-in	Accumul
es	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Capital	Deficit
ousands, except for share data)											
0,267	$11,276	4,556,638	$16,242	6,767,673	$40,120	—	$—	907,641	$—	$1,283	$(107,39
	—	—	—	—	—	—	—	—	—	—	(17,806
	—	—	—	—	—	—	—	—	—	—	—
	—	—	—	—	—	779,266	5,879	—	—	—	—
	—	—	—	—	—	5,040,293	37,857	—	—	—	—
	—	—	—	—	—	—	—	48,335	—	48	—
	—	—	—	—	—	—	—	—	—	489	—
0,267	11,276	4,556,638	16,242	6,767,673	40,120	5,819,559	43,736	955,976	—	1,820	(125,20
	—	—	—	—	—	—	—	—	—	—	(20,613
	—	—	—	—	—	—	—	—	—	—	—

	—	—	—	—	—	—	—	32,709	—	48	—
	—	—	—	—	—	—	—	—	—	575	—
0,267	11,276	4,556,638	16,242	6,767,673	40,120	5,819,559	43,736	988,685	—	2,443	(145,81
	—	—	—	—	—	—	—	—	—	—	8,908
	—	—	—	—	—	—	—	—	—	—	—
70,267)	(11,276)	(4,556,638)	(16,242)	(6,767,673)	(40,120)	(5,819,559)	(43,736)	20,914,137	2	111,372	—
	—	—	—	—	—	—	—	8,875,396	1	80,258	—
	—	—	—	—	—	—	—	186,207	—	486	—
								32,101	—	273	—
	—	—	—	—	—	—	—	—	—	1,250	—
	$—	—	$—	—	$—	—	$—	30,996,526	$3	$196,082	$(136,90

The accompanying notes are an integral part of these consolidated financial statements.

Alder BioPharmaceuticals, Inc.

Consolidated Statements of Cash Flows

	Years Ended December 31,		
	2014	2013	2012
	(in thousands)		
Operating activities			
Net income (loss)	$8,908	$(20,613)	$(17,806)
Adjustments to reconcile net income (loss) to net cash used in operating activities			
Depreciation and amortization	701	935	1,042
Loss on retirement of property and equipment	2	43	—
Stock-based compensation	1,250	575	489
Interest expense related to convertible promissory note payable	—	—	88
Changes in operating assets and liabilities			
Accounts receivable	203	(188)	1,181
Prepaid expenses and other assets	(5,196)	1,053	215
Accounts payable	(312)	303	(223)
Accrued liabilities	835	142	650
Deferred rent	276	(129)	(149)
Deferred revenue	(54,324)	(18,253)	(15,389)
Net cash used in operating activities	(47,657)	(36,132)	(29,902)
Investing activities			
Purchases of investments	(11,045)	—	(8,025)
Proceeds from maturities of investments	1,960	5,620	7,549
Purchases of property and equipment	(649)	(193)	(1,031)
Decrease in restricted cash	—	119	—
Net cash provided by (used in) investing activities	(9,734)	5,546	(1,507)
Financing activities			
Proceeds from issuance of convertible preferred stock, net of stock issuance costs	—	—	37,857
Proceeds from issuance of common stock, net of offering costs	80,259	—	—
Deferred offering costs	(36)	—	—
Proceeds from exercise of stock options and purchases under employee stock purchase plan	759	48	48
Net cash provided by financing activities	80,982	48	37,905
Effect of exchange rate changes on cash	(23)	12	(3)
Net increase (decrease) in cash and cash equivalents	23,568	(30,526)	6,493
Cash and cash equivalents			
Beginning of period	23,227	53,753	47,260
End of period	$46,795	$23,227	$53,753
Supplemental disclosures:			
Conversion of promissory note payable and accrued interest into convertible preferred stock	$—	$—	$5,879

Conversion of convertible preferred stock into common stock	$111,374	$—	$—

The accompanying notes are an integral part of these consolidated financial statements.

Alder BioPharmaceuticals, Inc.

Notes to Consolidated Financial Statements

1. Nature of Business

Alder BioPharmaceuticals, Inc. (the "Company") is a clinical-stage biopharmaceutical company that discovers, develops and seeks to commercialize therapeutic antibodies with the potential to meaningfully transform current treatment paradigms. The Company has developed a proprietary antibody platform designed to select and manufacture antibodies that have the potential to maximize efficacy as well as speed of onset and durability of therapeutic response. The Company's pipeline includes three internally discovered humanized monoclonal antibodies, as well as preclinical programs targeting additional indications that are in the discovery phase. The Company was incorporated in Delaware on May 20, 2002 and is located in Bothell, Washington.

Reverse Stock Split

On April 9, 2014, the Company filed a Certificate of Amendment to its Amended and Restated Certificate of Incorporation to effect a 1-for-5.5 reverse stock split of its outstanding common stock and convertible preferred stock. The par value per share and the authorized number of shares of common stock and preferred stock were not adjusted as a result of the reverse stock split. All issued and outstanding shares of common stock and preferred stock, options to purchase common stock and related per share amounts contained in the condensed consolidated financial statements have been retroactively adjusted to reflect the reverse stock split for all periods presented.

Initial Public Offering and January 2015 Stock Offering

In May 2014, the Company completed an initial public offering ("IPO") of its common stock. In connection with its IPO, the Company issued and sold 8,875,396 shares of its common stock, which included 875,396 shares the Company issued pursuant to the underwriters' partial exercise of their over-allotment option, at a price to the public of $10.00 per share. The Company's shares of common stock began trading on the NASDAQ Global Market on May 8, 2014. As a result of the IPO, the Company received approximately $80.3 million in net proceeds, after deducting underwriting discounts and commissions of $6.2 million and offering expenses of $2.2 million. At the closing of the IPO, 20,914,137 shares of outstanding convertible preferred stock were automatically converted into 20,914,137 shares of common stock. Following the IPO, there were no shares of preferred stock outstanding.

In January 2015, the Company completed an underwritten public offering of 6,900,000 shares of common stock, including 900,000 shares we issued pursuant to the underwriters' exercise of their option to purchase additional shares, at $29.50 per share, for total net proceeds of $190.7 million, after deducing underwriting discounts and commissions of $12.2 million and offering expenses of $0.6 million.

Liquidity

The Company had an accumulated deficit as of December 31, 2014. To date, the Company has funded its operations primarily through sales of its convertible preferred stock, payments from its collaboration partners, and proceeds from its IPO, and will require substantial additional capital for research and product development. The Company plans to continue to fund its operations and capital funding needs through equity and/or debt financing, as well as new collaborations. In January 2015, the Company received $190.7 million in net proceeds from an underwritten public offering of its common stock. There are no assurances that the Company will be able to raise sufficient amounts of funding in the future.

2. Summary of Significant Accounting Policies

Principles of Consolidation

The accompanying consolidated financial statements reflect the accounts of Alder BioPharmaceuticals, Inc. and its wholly-owned subsidiaries, Alder BioPharmaceuticals Pty. Ltd. and AlderBio Holdings LLC. All inter-company balances and transactions have been eliminated in consolidation. The consolidated financial statements have been prepared in conformity with United States generally accepted accounting principles ("U.S. GAAP").

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Foreign Currency Translation

The financial statements of the Company's subsidiaries with a functional currency other than the U.S. dollar have been translated into the Company's reporting currency, the U.S. dollar. The functional currency for the Company's Australian subsidiary is the Australian dollar and all assets and liabilities of the Australian subsidiary are translated using year-end exchange rates and revenues and expenses are translated at average exchange rates for the year. Translation adjustments are reflected in the accumulated other comprehensive income (loss) component of stockholders' deficit. The Company generally transfers funds to the Australian subsidiary to fund operating needs within 30 days of disbursement.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with original maturities of three months or less to be cash equivalents. Cash and cash equivalents consist primarily of money market funds and are stated at cost, which approximates fair value.

Investments

Short-term investments consist of negotiable certificates of deposit. The Company classifies its securities as available-for-sale, which are reported at estimated fair value with unrealized gains and losses included in accumulated other comprehensive income (loss) in stockholders' equity (deficit). Investments in securities with maturities of less than one year, or where management's intent is to use the investments to fund current operations, or to make them available for current operations, are classified as short-term investments.

Realized gains and realized losses are included in interest income. Cost of investments for purposes of computing realized and unrealized gains and losses are based on the specific identification method. Interest and dividends earned on all securities are included in interest income.

Restricted Cash

Restricted cash consists of money market funds purchased as a security deposit for a letter of credit issued to the landlord in connection with the Company's office building lease. In September 2013, the Company entered into an amendment for its office building lease and a letter of credit was no longer required under the lease.

Concentration of Credit Risk and Major Collaborators

The Company is exposed to credit risk from its deposits of cash and cash equivalents and restricted cash in excess of amounts insured by the Federal Deposit Insurance Corporation.

One of the Company's collaborators accounted for nearly 100% of total revenues for the years ended December 31, 2014, 2013 and 2012. This collaborator accounted for 100% of total accounts receivable as of December 31, 2014 and 21% of total accounts receivable as of December 31, 2013.

Fair Value of Financial Instruments

The Company holds financial instruments that are measured at fair value which is determined according to a fair value hierarchy that prioritizes the inputs and assumptions used, and the valuation techniques used to measure fair value. The three levels of the fair value hierarchy are described as follows:

Level 1 Inputs are unadjusted quoted prices in active markets for identical assets or liabilities.

Level 2 Inputs are quoted prices for similar assets and liabilities in active markets or quoted prices for identical or similar instruments in markets that are not active and model-derived valuations in which all significant inputs and significant value drivers are observable in active markets.

Level 3 Inputs are unobservable inputs based on the Company's assumptions and valuation techniques used to measure assets and liabilities at fair value. The inputs require significant management judgment or estimation.

The Company's assessment of the significance of a particular input to the fair value measurement requires judgment and may affect the valuation of fair value assets and liabilities and their placement within the fair value hierarchy levels.

The Company established the fair value of its assets and liabilities using the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date and established a fair value hierarchy based on the inputs used to measure fair value.

Property and Equipment

Property and equipment consists of laboratory equipment, computer equipment and software, leasehold improvements, and furniture and fixtures. Property and equipment are stated at cost, net of accumulated depreciation and amortization. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the depreciable assets.

Computer equipment and software	3 - 5 years
Laboratory equipment	4 years
Furniture and fixtures	5 years

Leasehold improvements	Shorter of asset’s useful life or remaining term of lease

Upon retirement or sale, the cost of assets disposed of and the related accumulated depreciation are removed from the accounts and any resulting gain or loss is reflected in the statements of operations in the year of disposition. Additions and improvements that increase the value or extend the life of an asset are capitalized. Repairs and maintenance costs are expensed as incurred.

Rent Expense, Deferred Rent and Leasehold Improvements

Rent expense for leases that provide free rent periods and scheduled rent increases during the lease term is recognized on a straight-line basis over the term of the related lease. Leasehold improvements that are funded by landlord incentives or allowances under operating leases are recorded as a component of deferred rent and are amortized as a reduction of rent expense over the term of the related lease.

Impairment of Long-Lived Assets

The Company evaluates the recoverability of long-lived assets in accordance with authoritative guidance on accounting for the impairment or disposal of long-lived assets. The Company evaluates long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying value of these assets may not be recoverable. Such impairment is recognized in the event the net book value of such assets exceeds their fair value. If the carrying value of the net assets assigned exceeds the fair value of the assets, then the second step of the impairment test is performed in order to determine the implied fair value. No impairment of long-lived assets occurred in the periods presented.

Segment and Geographic Information

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision makers, or decision making group, in making decisions on how to allocate

resources and assess performance. The Company's chief operating decision makers are its chief executive officer and its board of directors. The Company manages its business as one operating segment; however, the Company operates in two geographic regions: United States (Bothell, WA) and Australia. Substantially all of the Company's assets are located in, and revenues are generated in, the United States.

Revenue Recognition

The Company recognizes revenues from collaboration, license or research service contract arrangements when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed or determinable and collectability is reasonably assured.

The Company evaluates multiple-element arrangements to determine (1) the deliverables included in the arrangement and (2) whether the individual deliverables represent separate units of accounting or whether they must be accounted for as a single unit of accounting. This evaluation involves subjective determinations and requires the Company to make judgments about the individual deliverables and whether such deliverables are separable from the other aspects of the contractual relationship. Deliverables are considered separate units of accounting provided that the delivered item has value to the customer on a standalone basis, and if the arrangement includes a general right of return with respect to the delivered item, delivery or performance of the undelivered item is considered probable and substantially in the Company's control. In assessing whether an item has standalone value, the Company considers factors such as the research, development, manufacturing and commercialization capabilities of the collaboration partner and the availability of the associated expertise in the general marketplace. In addition, the Company considers whether the collaboration partner can use any other deliverable for its intended purpose without the receipt of the remaining deliverable, whether the value of the deliverable is dependent on the undelivered item and whether there are other vendors that can provide the undelivered items. For revenue arrangements entered into prior to January 1, 2011, the Company was also required to evaluate whether there was fair value of the undelivered elements in the arrangement. The deliverables under the 2009 Bristol-Myers Squibb ("BMS") collaboration agreement did not qualify as separate units of accounting and accordingly are accounted for as a single unit of accounting.

The consideration received under an arrangement which contains separate units of accounting, is allocated among the separate units using the relative selling price method. The Company determines the estimated selling price for units of accounting within each arrangement using vendor-specific objective evidence, ("VSOE"), of selling price, if available, third-party evidence, ("TPE"), of selling price if VSOE is not available, or best estimate of selling price, ("BESP"), if neither VSOE nor TPE is available.

When the Company has substantive performance obligations under an arrangement accounted for as one unit of accounting, revenues are recognized using either a time-based or proportional performance-based approach. When the Company cannot estimate the total amount of performance obligations that are to be provided under the arrangement, a time-based method is used. Under the time-based method, revenues are recognized over the arrangement's estimated performance period based on the elapsed time compared to the total estimated performance period. When the

Company is able to estimate the total amount of performance obligations under the arrangement, revenues are recognized using a proportional performance model. Under this approach, revenue recognition is based on costs incurred to date compared to total expected costs to be incurred over the performance period as this is considered to be representative of the delivery of service under the arrangement. Changes in estimates of total expected performance costs or service obligation time period are accounted for prospectively as a change in estimate. Under both methods, revenues recognized at any point in time are limited to the amount of noncontingent payments received or due.

The Company may also perform research and development activities on behalf of collaborative partners that are paid for by the collaborators. For research and development activities which are not determined to be separate units of accounting based on the criteria above, revenues for these research and development activities are recognized using the single unit of accounting method for that collaborative arrangement. For research and development activities which are determined to be separate units of accounting, arrangement consideration is allocated and revenues are recognized as services are delivered, assuming the general criteria for revenue recognition noted above have been met. The corresponding research and development costs incurred under these contracts are included in research and development expense in the consolidated statements of operations.

The Company generally invoices its collaborators upon the completion of the effort, based on the terms of each agreement. Amounts earned, but not yet collected from the collaborators, if any, are included in accounts receivable in the accompanying consolidated balance sheets. Deferred revenue arises from payments received in advance of the culmination of the earnings process. Deferred revenue expected to be recognized within the next 12 months is classified as a current liability. Deferred revenue will be recognized as revenue in future periods when the applicable revenue recognition criteria have been met.

Accounts Receivable

Accounts receivable are stated at the amount management expects to collect from customers based on their outstanding invoices. Management reviews accounts receivable regularly to determine if any receivable will potentially be uncollectible. Estimates are used to determine the amount of allowance for doubtful accounts necessary to reduce accounts receivable to its estimated net realizable value. At December 31, 2014 and 2013, no allowance for doubtful accounts was considered necessary.

Research and Development

Research and development expenses consist primarily of salaries and benefits, stock-based compensation, occupancy, materials and supplies, contracted research, consulting arrangements and other expenses incurred to sustain the Company's research and development programs. Research and development costs are expensed as incurred. In-licensing fees and other costs to acquire technologies that are utilized in research and development and that are not expected to have alternative future use are expensed when incurred. For service contracts entered into that include a nonrefundable prepayment for service the upfront payment is deferred and recognized in the consolidated statements of operations as the services are rendered.

Patent Costs

Costs related to filing and pursuing patent applications are expensed as incurred, as recoverability of such expenditures is uncertain. These patent related legal costs are reported as a component of general and administrative expenses.

Income Taxes

The Company accounts for income taxes under the asset and liability method. Under the asset and liability method, deferred income tax assets and liabilities are recognized for the future tax consequences attributable to the differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax basis and are measured using the tax income rates that will be in effect when the differences are expected to reverse. A valuation allowance is recorded when it is more likely than not that some of the net deferred income tax asset will not be realized.

The Company determines whether a tax position is more likely than not to be sustained upon examination based on the technical merits of the position. For tax positions meeting the more-likely-than-not threshold, the tax amount recognized in the financial statements is reduced by the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement with the relevant tax authority.

Stock-Based Compensation

The Company recognizes stock-based compensation expense on stock awards granted to employees and members of the board of directors based on their estimated grant date fair value using the Black-Scholes option pricing model. This Black-Scholes option pricing model uses various inputs to measure fair value, including estimated market value of the Company's underlying common stock at the grant date, expected term, estimated volatility, risk-free interest rate and expected dividend yields of the Company's common stock. The Company recognizes stock-based compensation expense, net of estimated forfeitures, in the consolidated statements of operations on a straight-line basis over the requisite service period. The Company applies an estimated forfeiture rate derived from historical and expected future employee termination behavior. If the actual number of forfeitures differs from those estimated by management, adjustments to compensation expense may be required in future periods.

For stock options granted to non-employees, the fair value of the stock options is estimated using the Black-Scholes option pricing model. This model utilizes the estimated market value of the Company's underlying common stock at the measurement date, the contractual term of the option, estimated volatility, risk-free interest rates and expected dividend yields of the Company's common stock. The Company recognizes stock-based compensation expense, net of estimated forfeitures, in the consolidated statements of operations on a straight-line basis over the requisite service period. Measurement of stock-based compensation is subject to periodic adjustment for changes in the fair value of the award.

Comprehensive Income (Loss)

Comprehensive income (loss) is defined as the change in equity of a business enterprise during a period from transactions, and other events and circumstances from non-owner sources, and currently consists of net loss, changes in unrealized gains and losses on

available-for-sale securities and gains and losses on foreign currency translation related to the Company's wholly-owned subsidiary in Australia.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update (ASU) No. 2014-09, Revenue from Contracts with Customers (Topic 606), which supersedes the revenue recognition requirements in Accounting Standards Codification 605, Revenue Recognition. This ASU stipulates that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The ASU also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. This ASU is effective for annual reporting periods beginning after December 15, 2016, including interim periods within that reporting period. Early adoption is not permitted, and retrospective application is required. The Company is currently evaluating the impact of the adoption of this ASU on its consolidated financial statements.

In June 2014, the FASB issued ASU No. 2014-12, Compensation – Stock Compensation. This ASU requires entities that grant their employees share-based payments in which the terms of the award provide that a performance target that affects vesting and that could be achieved after the requisite service period be treated as a performance condition. The ASU will become effective for annual reporting periods beginning after December 15, 2015. The Company is currently evaluating the impact of the adoption of this ASU on its consolidated financial statements.

In August 2014, the FASB issued ASU No. 2014-15, Presentation of Financial Statements – Going Concern. This ASU requires entities to evaluate for each annual and interim reporting period, whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the entity's ability to continue as a going concern within one year after the date that the financial statements are issued (or within one year after the date that the financial statements are available to be issued when applicable). The ASU will become effective for annual reporting periods beginning after December 15, 2016. The Company is currently evaluating the impact of the adoption of this ASU on its consolidated financial statements.

As an "emerging growth company," the Jumpstart our Business Startups Act, or the JOBS Act, allows the Company to delay adoption of new or revised accounting pronouncements applicable to public companies until such pronouncements are made applicable to private companies. As a result, the Company's financial statements may not be comparable to the financial statements of issuers who are required to comply with the effective date for new or revised accounting standards that are applicable to public companies.

The Company has reviewed other recent accounting pronouncements and concluded that they are either not applicable to the business, or that no material effect is expected on the consolidated financial statements as a result of future adoption.

3. Net Income (Loss) Per Share

Basic net income (loss) per share is calculated by dividing net income (loss) by the weighted average common shares outstanding during the period, without consideration for common stock equivalents. Diluted net income (loss) per share is calculated by adjusting the weighted average common shares outstanding for the dilutive effect of common stock equivalents outstanding for the period, determined using the treasury-stock method.

	Years Ended December 31,		
	2014	2013	2012
Numerator			
Net income (loss) (in thousands)	$8,908	$(20,613)	$(17,806)
Denominator			
Weighted-average common shares outstanding -basic	20,506,565	975,158	911,354
Dilutive effect of common shares from preferred stock	7,276,974	—	—
Dilutive effect of common shares from employee stock purchase plan	7,854	—	—
Dilutive effect of common shares from stock options	1,635,894	—	—
Weighted-average common shares outstanding -diluted	29,427,287	975,158	911,354
Net income (loss) per share-basic	$0.43	$(21.14)	$(19.54)
Net income (loss) per share-diluted	$0.30	$(21.14)	$(19.54)

The following weighted average numbers of convertible preferred stock and outstanding stock options were excluded from the calculation of diluted net loss per share for 2014, 2013 and 2012 because including them would have had an anti-dilutive effect. The convertible preferred stock numbers shown in the table are on a common stock equivalent basis.

	Years Ended December 31,		
	2014	2013	2012
Convertible preferred stock	—	20,914,137	19,228,691
Stock options	209,460	2,161,274	1,953,519
	209,460	23,075,411	21,182,210

4. Fair Value Disclosures

The following table presents the Company's financial instruments by level within the fair value hierarchy:

	Fair Value Measurement Using			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
As of December 31, 2014				
Cash equivalents				
Money market funds	$46,113	—	—	$46,113
Short term investments				
Negotiable certificates of deposit	—	9,077	—	9,077
	$46,113	$9,077	$ —	$55,190
As of December 31, 2013				
Cash equivalents				
Money market funds	$22,238	$—	$ —	$22,238

The Company's negotiable certificates of deposit are valued using fair value measurements that are considered to be Level 2. The investment custodian provides the Company with valuations of its securities portfolio. The primary source for the security valuation is Interactive Data Corporation ("IDC"), which evaluates securities based on market data. IDC utilizes evaluated pricing models that vary by asset class and include available trade, bid, and other market information. Generally, the methodology includes broker quotes, proprietary models, vast descriptive terms and conditions databases, as well as extensive quality control programs. The custodian utilizes proprietary valuation

matrices for valuing all negotiable certificates of deposit.

Accounts receivable, accounts payable and accrued liabilities are carried at cost, which approximates fair value due to the short-term nature of these financial instruments.

5. Short-term Investments

Short-term investments consisted of the following securities available-for-sale for the date indicated:

	Amortized Cost	Gross unrealized gains	Gross unrealized losses	Fair Value
	(in thousands)			
Type of security as of December 31, 2014				
Negotiable certificates of deposit maturing in				
one year or less	$9,085	$ —	$ 8	$9,077
Total available-for-sale securities	$9,085	$ —	$ 8	$9,077

All short-term investments had a contractual maturity of one year or less.

The declines in value of these investments are primarily related to changes in interest rates and are considered to be temporary in nature. The Company evaluates, among other things, the duration and extent to which the fair value of a security is less than its cost, the financial condition of the issuer, and the intent to sell, or whether it is more likely than not that the Company will be required to sell the security before recovery of the amortized cost basis. The Company's realized gains and realized losses on sales of available-for-sale securities were not material for the years ended December 31, 2014, 2013 and 2012. No securities have been in a continuous unrealized loss position for more than 12 months as of December 31, 2014.

6. Prepaid Expenses and Other Assets

Prepaid expenses and other assets consisted of the following for the dates indicated:

	December 31, 2014	December 31, 2013
	(in thousands)	
Current assets:		
Advance payments for research and development	$4,107	$ 1,549
Prepaid insurance and other general and administrative expenses	651	433
	$4,758	$ 1,982
Long-term assets:		
Advance payments for research and development	$2,420	$ —
Deferred offering costs	36	—
	$2,456	$ —

Deferred offering costs represent legal, accounting and other direct costs related to the Company's efforts to raise capital through an issuance of the Company's common stock. These costs have been deferred through the completion of the January 2015 stock offering and were reclassified to additional paid-in capital as a reduction of the proceeds.

7. Property and Equipment

Property and equipment consisted of the following for the dates indicated:

	December 31,	
	2014	2013
	(in thousands)	
Computer equipment and software	$1,062	$833
Laboratory equipment	4,728	4,599
Furniture and fixtures	357	357
Leasehold improvements	1,602	1,321
	7,749	7,110
Less: Accumulated depreciation and amortization	(6,589)	(5,896)
	$1,160	$1,214

Depreciation and amortization expense totaled $0.7 million, $0.9 million and $1.0 million for the years ended December 31, 2014, 2013 and 2012, respectively.

8. Accrued Liabilities

Accrued liabilities consisted of the following for the dates indicated:

	December 31, 2014	December 31, 2013
	(in thousands)	
Compensation and benefits	$2,211	$ 1,564
Contracted research and development	517	492
Professional services and other	235	72
	$2,963	$ 2,128

9. Collaboration and License Agreements

The Company has entered into various collaboration and license agreements with pharmaceutical and biotechnology companies. Revenues recognized and cash payments received under these agreements were as follows:

	Year Ended December 31,		
	2014	2013	2012
Revenues recognized:	(in thousands)		
Bristol-Myers Squibb:			
Amortization of deferred revenue from upfront payments	$35,403	$12,133	$12,167
Recognition of milestone payments	7,706	2,642	3,690
Recognition of reimbursed clinical supply and development costs	11,431	3,921	4,111
Bristol-Myers Squibb total	54,540	18,696	19,968
Other collaborations	165	100	99
Total revenues recognized	$54,705	$18,796	$20,067
Cash payments received:			
Bristol-Myers Squibb:			
Milestone payments	$—	$—	$3,500
Reimbursed clinical supply and development costs	320	355	2,257

Bristol-Myers Squibb total	320	355	5,757
Other collaborations	265	-	100
Total cash payments received	$585	$355	$5,857

Termination of License and Collaboration Agreement with Bristol-Myers Squibb

In November 2009, the Company entered into a license and collaboration agreement with Bristol-Myers Squibb, or BMS, for the development and commercialization of Clazakizumab, an antibody product candidate for the treatment of rheumatoid arthritis, psoriatic arthritis and cancer. Under the terms of the agreement, the Company received a non-refundable upfront payment of $85 million and granted BMS worldwide exclusive rights to develop and commercialize Clazakizumab for all indications other than cancer. On August 29, 2014, the Company received written notice that BMS elected to terminate the license and collaboration agreement effective as of December 29, 2014 (the "Termination Date"), at which time all rights to Clazakizumab were returned to the Company.

In addition to the upfront payment of $85 million, the Company received an aggregate of $18.5 million in milestone payments from BMS and was reimbursed for clinical supply and development costs of $26.9 million. The Company recognized revenue relating to the deliverables in the agreement as a single unit of accounting using a time-based proportional performance model. The proportional performance model results in the recognition of the upfront license fee and other payments received under the arrangement over the estimated performance period based on the passage of time. As a result of the termination of the agreement, the estimated development period was adjusted to conclude as of the Termination Date, which was accounted for prospectively as a

change in accounting estimate. In 2014, the Company recognized revenue related to the BMS agreement in the amount of $54.5 million. The acceleration of revenue recognition as a result of the early termination of the collaboration agreement resulted in the Company reporting net income for 2014.

BMS continues to be responsible until June 29, 2015 for all costs of the clinical trials that were initiated prior to August 29, 2014. On the Termination Date, all rights granted to BMS with respect to Clazakizumab terminated and reverted to the Company, and BMS granted to our wholly owned subsidiary, AlderBio Holdings LLC (“AlderBio”), an exclusive license, with the right to grant sublicenses, under certain BMS intellectual property solely to make, have made, use, import, export, offer for sale, and sell Clazakizumab. BMS is obligated to transfer to the Company the Investigational New Drug Application that BMS filed for Clazakizumab with the U.S. Food and Drug Administration and all material data related to Clazakizumab that has not previously been transferred to the Company. The Company has the right to purchase all of BMS’ existing manufactured drug supply of Clazakizumab at cost and, at the Company’s request, BMS is obligated to use diligent efforts to supply the Company with Clazakizumab until the earlier of 20 months after December 29, 2014, or the date that the Company obtains an alternative source of supply.

The Company will be required to pay a low single-digit royalty to BMS on sales of Clazakizumab unless the regulatory approval of Clazakizumab is not based in whole or in part upon data from BMS’s Phase 2b clinical trial(s) in rheumatoid arthritis and psoriatic arthritis. Aside from those clinical trial expenses that BMS is obligated to pay after the Termination Date, the Company will be solely responsible for performing and funding any new Clazakizumab development and clinical trial activities initiated after the Termination Date, which could significantly delay or result in the discontinuation of the development of Clazakizumab.

Other Collaborations

The Company entered into an agreement with a biotechnology company to provide research services under specified work plans. Payments received under this agreement were deferred and recognized as revenue in accordance with the Company’s revenue recognition policy.

10. Common and Convertible Preferred Stock

There were 30,996,526 and 988,685 shares of common stock issued and outstanding as of December 31, 2014 and 2013, respectively. In connection with the IPO, the Company amended and restated its Amended and Restated Certificate of Incorporation to change the authorized capital stock to 200,000,000 shares designated as common stock and 10,000,000 shares designated as preferred stock, all with a par value of $0.0001 per share.

The Company has reserved for future issuance the following number of shares of common stock:

	December 31, 2014
Stock options outstanding	2,485,222
Stock options available for grant	3,365,485
Reserved for employee stock purchase plan	241,899
	6,092,606

Common Stock

Each share of common stock is entitled to one vote. The holders of common stock are also entitled to receive dividends whenever funds are legally available and when declared by the board of directors, subject to the prior rights of holders of other classes of stock outstanding.

Convertible Preferred Stock

Prior to the completion of the Company's IPO, the Company issued Series A, Series B, Series C and Series D convertible preferred stock (collectively, the "preferred stock"). The preferred stock contained a provision that upon a change of control of the Company, the preferred stock was redeemable at the holder's option and, therefore, the balances were classified outside of stockholders' equity (deficit) in the accompanying consolidated balance sheets. The shares of preferred stock were convertible at the option of the holder at any time, or would automatically convert into shares of common stock at the effective conversion rate upon the

closing of an initial public offering in which the public offering proceeds exceeded $40 million, or upon the affirmative vote by holders of at least two-thirds of the outstanding shares of preferred stock. No dividends were declared or paid.

In April 2012, the Company issued 5,819,559 shares of Series D convertible preferred stock at a price of $7.54 per share, or $43.9 million in the aggregate, which included shares issued upon the conversion of a promissory note payable and accrued interest thereon in the amount of $5.9 million and shares issued to related parties in the aggregate amount of $36.7 million. Cash proceeds, net of issuance costs and the conversion of the promissory note payable, were $37.9 million.

In 2007, the Company issued 6,767,673 shares of Series C convertible preferred stock at a purchase price of $5.94 per share. Cash proceeds, net of issuance costs, were $40.1 million.

In 2006 and 2007, the Company issued 4,556,638 shares of Series B convertible preferred stock at a purchase price of $3.58 per share. Cash proceeds, net of issuance costs, were $16.2 million.

In 2005, the Company issued 3,770,267 shares of Series A convertible preferred stock at a purchase price of $3.16 per share, which included shares issued upon conversion of notes payable and accrued interest thereon in the amount of $3.6 million. Cash proceeds, net of issuance costs and the conversion of the promissory notes payable were $7.7 million.

At the closing of the IPO, 20,914,137 shares of outstanding convertible preferred stock were automatically converted into 20,914,137 shares of common stock. Following the IPO, there were no shares of preferred stock outstanding.

11. Stock-based Compensation

2014 Equity Incentive Plan

In April 2014, the Company’s stockholders approved the 2014 Equity Incentive Plan (the “2014 Plan”), which became effective in May 2014 at which time the 2005 Stock Plan (the “2005 Plan”) was terminated. Until its termination, the 2005 Plan authorized the issuance of up to 2,661,818 shares of the Company’s common stock pursuant to the exercise of stock options and other forms of equity compensation. The 2014 Plan authorizes the grant of stock options, other forms of equity compensation, and performance cash awards. The maximum number of shares of common stock that

may be issued under the 2014 Plan is 3,963,757. In addition, the number of shares of common stock reserved for issuance under the 2014 Plan will automatically increase on January 1 of each year, beginning on January 1, 2015 and ending on and including January 1, 2024, by 4% of the total number of shares of the Company's capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by the Company's board of directors. All options granted under both the 2005 Plan and the 2014 Plan have a maximum 10 year term and generally vest and become exercisable over four years of continued employment or service as defined in each option agreement. A majority of the unvested stock options will vest upon the sale of all or substantially all of the stock or assets of the Company. The board of directors determines the option exercise price and may designate stock options granted as either incentive or nonstatutory stock options. The Company generally grants stock options with exercise prices that equal or exceed the fair value of the common stock on the date of grant.

At December 31, 2014, options to purchase up to 2,485,222 shares of common stock were outstanding and 3,365,485 shares were reserved for future grants under the 2014 Plan. On January 1, 2015, an additional 1,239,861 shares of common stock became available for future grants under the 2014 Plan.

Employee Stock Purchase Plan

In April 2014, the Company's stockholders approved the 2014 Employee Stock Purchase Plan (the "ESPP") which became effective in May 2014. Under the ESPP, eligible employees can authorize payroll deductions for amounts up to the lesser of 15% of their qualifying wages or the statutory limit under the U.S. Internal Revenue Code. The ESPP provides for offering periods of up to 27 months in duration. Each offering period is comprised of four consecutive purchase periods. The first offering period commenced on May 7, 2014 with four purchase periods ending on the last trading days of November and May through May 2016. Subsequent offering periods and purchase periods will begin on December 1 and June 1 of each year. Participants enrolled in an offering period will continue in that offering period until the earlier of the end of the offering period or the reset of the offering period. A reset occurs if the fair market value of the Company's common shares on any purchase date is less than it was on the first day of the offering period. Participants in an offering period will be granted the right to purchase common shares at a price per share that is 85% of the lesser of the fair market value of the shares at (i) the first day of the offering period or (ii) the end of each purchase period within the offering period. A maximum of 2,000 shares of common stock may be purchased by each participant at each of four purchase dates during the offering period. The fair value of the ESPP options granted is determined using a Black-Scholes model and is amortized on a straight-line basis. The initial number of shares of common stock that may be issued under the ESPP is 274,000 shares and the

number of shares reserved for the ESPP will increase automatically each year, beginning on January 1, 2015 and continuing through and including January 1, 2024, by the lesser of (1) 1% of the total number of shares of common stock outstanding on December 31 of the preceding calendar year; (2) 750,000 shares of common stock; or (3) such lesser number as determined by the Company's board of directors. In November 2014, we issued 32,101 shares of common stock under the ESPP at a purchase price of $8.50 per share. As of December 31, 2014, 241,899 shares of common stock were reserved for future grants under the ESPP. On January 1, 2015, an additional 309,965 shares of common stock became available for future grants under the ESPP.

The Company uses the Black-Scholes option pricing model to estimate the fair value of stock awards using various assumptions that require management to apply judgment and make estimates, including:

Volatility

The expected volatility has been determined using a weighted-average of the historical volatilities of a representative group of publicly traded biopharmaceutical companies for a period equal to the expected term of the option grant.

Expected Term

For purposes of determining the expected term of the options in the absence of sufficient historical data relating to stock-option exercises, the Company uses the "simplified method" as prescribed by the Securities and Exchange Commission to estimate the expected term of stock option grants. Under this approach, the weighted-average expected life is presumed to be the average of the contractual term (10 years) and the vesting term (generally four years) of the Company's stock options, taking into consideration multiple vesting tranches and expectations of the future employee behavior.

Risk-free Rate

The risk-free interest rates used in the Black-Scholes option pricing model are based on the implied yield currently available for U.S. Treasury securities with maturities similar to the expected term of the stock options being valued.

Dividends

The Company has not declared or paid any dividends and does not currently expect to do so in the foreseeable future, and therefore uses an expected dividend yield of zero in the Black-Scholes option pricing model.

In determining the fair value of stock awards granted, the following weighted-average assumptions were used in the Black-Scholes option pricing model for awards granted in the periods indicated:

	Stock Options			Employee Stock Purchase Plan
	Years Ended			Year Ended
	December 31,			December 31,
	2014	2013	2012	2014
Volatility	66.1%	69.3%	70.8%	59.1%
Expected term (years)	6.1	5.9	6.1	0.6
Risk-free interest rate	1.9%	1.1%	0.9%	0.1%
Dividend rate	0.0%	0.0%	0.0%	0.0%

Stock Compensation

The Company recognizes compensation expense for stock options granted to employees and directors for only the portion of awards expected to vest, on a straight-line basis over the requisite service period. Management has applied an estimated forfeiture rate that was derived from historical employee termination behavior. If the actual number of forfeitures differs from these estimates, additional adjustments to compensation expense may be required in future periods.

The Company records stock-based compensation for awards to non-employees using a fair value measured determined using the Black-Scholes option pricing model which reflects the same assumptions as applied to employee options in each of the reported periods, except for the expected term, for which it uses the remaining contractual life of the option. Stock-based compensation expense for non-employee awards is subject to remeasurement as the underlying equity instruments vest and is recognized as an

expense over the period during which services are received. In 2014 and 2013 the Company recognized $0.2 million and $28,000 of expense, respectively, relating to stock options granted to non-employees.

The following table presents stock-based compensation expense included in the Company's consolidated statements of operations:

	Years Ended December 31,		
	2014	2013	2012
	(in thousands)		
Research and development	$701	$286	$254
General and administrative	549	289	235
	$1,250	$575	$489

As of December 31, 2014, the total unrecognized compensation cost relating to stock options was $4.3 million and will be recognized on a straight-line basis over the weighted-average remaining service period of 3.1 years.

Stock option activity

A summary of the Company's stock option activity and related information follows:

	Shares	Weighted-average exercise price per share	Weighted-average remaining contractual life (years)	Aggregate intrinsic value (in thousands)
Outstanding at December 31, 2013	2,111,576	$ 2.17	5.6	$ 8,766
Granted	561,557	12.00		
Exercised	(186,207)	2.61		
Forfeited	(1,704)	5.31		
Outstanding at December 31, 2014	2,485,222	$ 4.36	5.6	$ 61,462
Exercisable at December 31, 2014	1,696,471	$ 1.94	4.1	$ 46,056
Vested and expected to vest at December 31, 2014	2,429,897	$ 4.22	5.5	$ 60,440

The following table summarizes the Company's stock option values:

	Years Ended December 31,		
	2014	2013	2012
	(in thousands, except per share data)		
Weighted-average fair value of option shares granted during the period	$7.25	$2.39	$2.18
Total intrinsic value of stock options exercised	2,590	90	120
Total fair value of stock options vested	683	702	345

12. Income Taxes

Loss before income taxes consisted of the following:

	Years Ended December 31,		
	2014	2013	2012
	(in thousands)		
Domestic	$8,826	$(20,766)	$(16,401)
Foreign	82	153	(1,405)
Income (loss) before income taxes	$8,908	$(20,613)	$(17,806)

The effective income tax rate of the Company's provision for income taxes differed from the federal statutory rate of 34% as follows:

	Years Ended December 31,		
	2014	2013	2012
Federal statutory income tax rate	34.0 %	34.0 %	34.0 %
Foreign income tax rate differential	0.0 %	0.0 %	(0.3 %)
Stock-based compensation	0.9 %	(0.7 %)	(0.7 %)
Research and development credits	(13.6%)	7.3 %	0.5 %
Other	0.9 %	0.0 %	(0.2 %)
Change in valuation allowance	(22.2%)	(40.6%)	(33.3%)
Effective tax rate	0.0 %	0.0 %	0.0 %

The Company's net deferred income tax assets and liabilities are as follows:

	December 31,	
	2014	2013
	(in thousands)	
Deferred income tax assets:		
Net operating loss carryforwards	$44,906	$29,871
Deferred revenue	—	18,419
Research and development credits	5,873	4,689
Other	671	449
Total deferred income tax assets	51,450	53,428

Less: Valuation allowance	(51,450)	(53,428)
Net deferred income tax assets	$—	$—

At December 31, 2014, the Company had U.S. net operating loss carryforwards of $134.0 million, which may be used to offset future taxable income. Of this amount, $1.9 million are related to excess tax benefits associated with stock option exercises which are recorded directly to stockholder's equity only when realized. The net operating loss carryforwards expire from 2025 to 2034 if not utilized. In addition, the Company has U.S. research and development tax credit carryforwards of $6.5 million, which will expire from 2024 to 2034. The Company establishes reserves or reduces deferred tax assets to address potential uncertain tax positions that it believes could be challenged by taxing authorities even though the Company believes the positions it has taken are appropriate. The Company reviews the uncertain tax positions as circumstances warrant and adjusts them as events occur that affect the potential liability for additional taxes. It is often difficult to predict the final outcome or timing of resolution of any particular tax matter. Various events, some of which cannot be predicted, such as clarification of tax law by administrative or judicial means, may occur and would require the Company to increase or decrease its uncertain tax positions and effective income tax rate.

In certain circumstances, where there is a change in control, utilization of net operating losses and tax credit carryforwards are subject to certain limitations under Section 382 and 383 of the Internal Revenue Code of 1986, as amended. A change in control is generally defined as a cumulative change of 50% or more in the ownership positions of certain stockholders during a rolling three year period. The Company performed a Section 382 analysis through 2009 and determined that an ownership change occurred in 2005.

Based on the analysis performed, however, the Company does not believe that the Section 382 annual limitation will impact the Company's ability to utilize the tax attributes that existed as of the date of the ownership change in a material manner. Although a formal Section 382 analysis has not been performed after 2009, the Company continues to monitor ownership change for purposes of Section 382. As of December 31, 2014, the Company does not believe that another change in control has occurred since the ownership change in 2005. If it is determined that an additional Section 382 ownership change has occurred, the net operating losses and tax credit carryforwards may be subject to an additional limitation such that a portion may not be utilizable.

The Company records a valuation allowance to reduce deferred tax assets to the extent it believes more likely than not that a portion of such assets will not be realized. In making such determinations, the Company considers all available positive and negative evidence, including scheduled reversals of deferred tax liabilities, projected future taxable income, tax planning strategies, and the ability to carry back losses to prior years. Currently the Company believes that it is not more likely than not that it will realize its current and long-term deferred tax assets. Accordingly, a valuation allowance has been recorded against the full value of the deferred income tax assets.

The table below summarizes changes in the deferred tax valuation allowance:

	Balance at Beginning of Year	Charged to Costs and Expenses	Write-offs	Balance at End of Year
	(in thousands)			
Deferred income tax valuation allowance:				
For year ended December 31, 2012	$39,132	$ 5,936	$ —	$45,068
For year ended December 31, 2013	45,068	8,360	—	53,428
For year ended December 31, 2014	53,428	(1,978)	—	51,450

The Company determines whether a tax position is more likely than not to be sustained upon examination based on the technical merits of the position in accordance with ASC 740. For tax positions meeting the more likely than not threshold, the tax amount recognized in the financial statements is reduced by the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement with the relevant taxing authority.

The total balance of unrecognized gross tax benefits was as follows:

	Years Ended December 31,		
	2014	2013	2012
	(in thousands)		

Unrecognized tax benefits at beginning of year	$383	$126	$126
Additions based on tax positions taken in prior years	43	—	—
Additions based on tax positions taken in the current year	166	257	—
Unrecognized tax benefits at end of year	$592	$383	$126

In addition to any uncertain tax positions, it is the Company's policy to recognize potential accrued interest and/or penalties related to such positions within income tax expense. For 2014, 2013 and 2012, the Company has not recognized any liability related to uncertain tax positions and does not anticipate that the amount of existing unrecognized tax benefits will significantly change within the next 12 months.

The Company is subject to U.S. federal income tax audit for tax years after 2010. However, carryforward attributes that were generated prior to 2011 may still be adjusted by the taxing authority upon examination if the attributes have been or will be used in a future period. The Company is also subject to examination of foreign returns tax years 2012 to present as the statute of limitations is still open.

13. Defined Contribution Plan

The Company sponsors a defined contribution plan (the "401(k) Plan") for its full time employees, with eligibility commencing on the month following an employee's date of hire. Employee contributions to the 401(k) Plan are based on a percentage of the employee's gross compensation, limited by Internal Revenue Service guidelines for such plans. The 401(k) Plan provides for

matching and discretionary contributions by the Company, which were $0.3 million for each of the years ended December 31, 2014, 2013 and 2012.

14. Commitments and Contingencies

The Company had contract manufacturing and purchase obligations totaling $7.3 million at December 31, 2014 related to manufacturing its product candidates for use in clinical trials, including long-term stability studies.

The Company leases office space in two adjacent buildings in Bothell, Washington, for its research and development and administrative activities. In September 2013, the Company and the landlord entered into an amendment to the lease under which, among other things, the lease term was extended to February 28, 2017, the Company was given an option to lease additional space and the Company was given an option to renew the lease for an additional three-year term at the market rates prevailing at the time of renewal. Rent expense totaled $0.8 million for each of the years ended December 31, 2014, 2013 and 2012.

Future aggregate minimum payments under noncancelable operating leases as of the date indicated are as follows:

	December 31, 2014 (in thousands)
Years Ending	
2015	563
2016	639
2017	109
Total minimum lease payments	$ 1,311

From time to time, the Company may become involved in litigation relating to claims arising from the ordinary course of business. Management believes that there are currently no claims or actions pending against the Company, the ultimate disposition of which could have a material adverse effect on the Company’s results of operations, financial condition or cash flows.

15. Condensed Quarterly Financial Data (unaudited)

The following table contains selected unaudited financial data for each quarter of 2014 and 2013. The unaudited information should be read in conjunction with the Company’s financial statements and related notes included elsewhere in this report. The Company believes that the following unaudited information reflects all normal recurring

adjustments necessary for a fair presentation of the information for the periods presented. The operating results for any quarter are not necessarily indicative of results for any future period.

	Three months ended			
	March 31,	June 30,	September 30,	December 31,
	(in thousands, except per share data)			
2014				
Total revenues	$4,782	$4,703	$ 38,784	$ 6,436
Net income (loss)	(5,395)	(7,401)	28,646	(6,942)
Net income (loss) per share - basic	$(5.38)	$(0.40)	$ 0.93	$ (0.22)
Net income (loss) per share - diluted	$(5.38)	$(0.40)	$ 0.88	$ (0.22)
2013				
Total revenues	$4,599	$4,663	$ 4,710	$ 4,824
Net loss	(5,682)	(5,147)	(5,909)	(3,875)
Net loss per share - basic	$(5.89)	$(5.27)	$ (6.05)	$ (3.94)
Net loss per share - diluted	$(5.89)	$(5.27)	$ (6.05)	$ (3.94)

16. Subsequent Events

In January 2015, the Company completed a underwritten public offering of offering of 6,900,000 shares of common stock, including 900,000 shares we issued pursuant to the underwriters' exercise of their option to purchase additional shares, at $29.50 per share, for total net proceeds of $190.7 million, after deducing underwriting discounts and commissions of $12.2 million and offering expenses of $0.6 million.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of disclosure controls and procedures. Our management, with the participation of our Chief Executive Officer and our Senior Vice President, Finance, our principal financial officer, have evaluated our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) prior to the filing of this Annual Report on Form 10-K. Based on that evaluation, our Chief Executive Officer and our Senior Vice President, Finance, have concluded that, as of the end of the period covered by this Annual Report on Form 10-K, our disclosure controls and procedures were, in design and operation, effective.

Internal Control over Financial Reporting. This Annual Report on Form 10-K does not include a report of management's assessment regarding internal control over financial reporting or an attestation report of our registered public accounting firm due to a transition period established by the rules of the SEC for newly public companies.

Changes in internal control over financial reporting. There were no changes in our internal control over financial reporting during the quarter ended December 31, 2014 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Inherent limitation on the effectiveness of internal control. The effectiveness of any system of internal control over financial reporting, including ours, is subject to inherent limitations, including the exercise of judgment in designing, implementing, operating, and evaluating the controls and procedures, and the inability to eliminate misconduct completely. Accordingly, any system of internal control over financial reporting, including ours, no matter how well designed and operated, can only provide reasonable, not absolute assurances. In addition, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. We intend to continue to monitor and upgrade our internal controls as necessary or appropriate for our business, but cannot assure you that such improvements will be sufficient to provide us with effective internal control over financial reporting.

Item 9B. Other Information

Not applicable.

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PART III

Item 10. Directors, Executive Officers and Corporate Governance

(1) The information required by this Item concerning our executive officers and our directors and nominees for director may be found under the section entitled “Proposal No. 1—Election of Directors,” “Information Regarding the Board of Directors and Corporate Governance,” “Information Regarding Committees of the Board of Directors” and “Executive Officers” appearing in the 2015 Proxy Statement. Such information is incorporated herein by reference.

(2) The information required by this Item concerning our code of ethics may be found under the section entitled “Information Regarding the Board of Directors and Corporate Governance ” appearing in the 2015 Proxy Statement. Such information is incorporated herein by reference.

(3) The information required by this Item concerning compliance with Section 16(a) of the Securities Exchange Act of 1934 may be found in the section entitled “Section 16(a) Beneficial Ownership Reporting Compliance” appearing in the 2015 Proxy Statement. Such information is incorporated herein by reference.

Item 11. Executive Compensation

The information required by this Item may be found under the sections entitled “Director Compensation” and “Executive Compensation” and “Equity Compensation Plan Information” appearing in the 2015 Proxy Statement. Such information is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

(1) The information required by this Item with respect to security ownership of certain beneficial owners and management may be found under the section entitled “Security Ownership of Certain Beneficial Owners and Management” appearing in the 2015 Proxy Statement. Such information is incorporated herein by reference.

(2) The information required by this Item with respect to securities authorized for issuance under our equity compensation plans may be found under the sections entitled “Equity Compensation Plan Information” appearing in the 2015 Proxy Statement. Such information is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

(1) The information required by this Item concerning related party transactions may be found under the section entitled “Transactions with Related Persons” appearing in the 2015 Proxy Statement. Such information is incorporated herein by reference.

(2) The information required by this Item concerning director independence may be found under the sections entitled “Information Regarding the Board of Directors and Corporate Governance— Independence of the Board of Directors” and “Information Regarding Committees of the Board of Directors” appearing in the 2015 Proxy Statement. Such information is incorporated herein by reference.

Item 14. Principal Accountant Fees and Services

The information required by this Item may be found under the section entitled “Proposal No. 2—Ratification of Selection of Independent Registered Public Accounting Firm” appearing in the 2015 Proxy Statement. Such information is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a)(1) Financial Statements—The financial statements filed as part of this Annual Report on Form 10-K are listed on the Index to Consolidated Financial Statements in Item 8.

(a)(2) Financial Statement Schedules

All schedules are omitted because they are not applicable or the required information is shown in the financial statements or the notes thereto.

(a)(3) Exhibits

The exhibits required by Item 601 of Regulation S-K are listed in paragraph (b) below.

(b) Exhibits.

The exhibits listed on the Exhibit Index (following the Signatures section of this report) are filed herewith or are incorporated by reference to exhibits previously filed with the SEC.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ALDER BIOPHARMACEUTICALS, INC.

By: /s/ Randall C. Schatzman
Randall C. Schatzman, Ph.D.
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1934, this Annual Report on Form 10-K has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Randall C. Schatzman Randall C. Schatzman, Ph.D.	President, Chief Executive Officer and Director (Principal Executive Officer)	March 13, 2015
/s/ Larry K. Benedict Larry K. Benedict	Senior Vice President, Finance (Principal Financial and Accounting Officer)	March 13, 2015
/s/ Stephen M. Dow Stephen M. Dow	Chairman of the Board of Directors	March 13, 2015
/s/ Peter Bisgaard Peter Bisgaard	Director	March 13, 2015
/s/ Gary Bridger Gary Bridger, Ph.D.	Director	March 13, 2015
/s/ Aaron Davidson Aaron Davidson	Director	March 13, 2015

/s/ A. Bruce Montgomery A. Bruce Montgomery, M.D.	Director	March 13, 2015
/s/ Deepa R. Pakianathan Deepa R. Pakianathan, Ph.D.	Director	March 13, 2015
/s/ Heather Preston Heather Preston, M.D.	Director	March 13, 2015
/s/ Clay B. Siegall Clay B. Siegall, Ph.D.	Director	March 13, 2015

EXHIBIT INDEX

Exhibit		Incorporated by Reference				Filed
Number	Description	Form	File No.	Exhibit	Filing Date	Herewith
3.1	Amended and Restated Certificate of Incorporation.	8-K	001-36431	3.1	May 13, 2014	
3.2	Amended and Restated Bylaws.	S-1	333-194672	3.5	April 25, 2014	
4.1	Amended and Restated Investors' Rights Agreement, dated as of April 16, 2012, by and among Alder BioPharmaceuticals, Inc. and certain of its stockholders.	S-1	333-194672	4.1	March 19, 2014	
4.2	Amendment No. 1 to Amended and Restated Investors' Rights Agreement, dated as of April 7, 2014, by and among Alder BioPharmaceuticals, Inc. and certain of its stockholders.	S-1	333-194672	4.2	April 25, 2014	
4.3	Form of Common Stock Certificate.	S-1	333-201201	4.3	December 22, 2014	
10.1	Form of Indemnity Agreement between the Alder BioPharmaceuticals, Inc. and its directors and officers.	S-1	333-194672		April 25, 2014	
10.2+	2005 Stock Plan, as amended.	S-1	333-194672	10.2	March 19, 2014	
10.3+	Forms of Notice of Stock Option Grant, Stock Option Agreement and Exercise Notice and Restricted Stock Purchase Agreement for 2005 Stock Plan.	S-1	333-194672	10.3	March 19, 2014	
10.4+	2014 Equity Incentive Plan.	S-1	333-194672	10.4	April 25, 2014	
10.5 +	Form of Stock Option Grant Notice and Option Agreement for the 2014 Equity Incentive Plan.	S-1	333-194672	10.5	April 25, 2014	
10.6+	2014 Employee Stock Purchase Plan.	S-1	333-194672	10.6	May 1, 2014	
10.7+	Form of Executive Severance Benefit Plan.	S-1	333-194672	10.7	April 25, 2014	
10.8†	Collaboration and License Agreement by and among AlderBio Holdings LLC, Alder BioPharmaceuticals, Inc. and Bristol-Myers Squibb Company, dated November 6, 2009.	S-1	333-194672	10.8	May 1, 2014	
10.9†	Addendum No. 1 to Collaboration and License Agreement by and among AlderBio Holdings LLC, Alder BioPharmaceuticals, Inc. and Bristol-Myers Squibb Company, dated January 21, 2011.	S-1	333-194672	10.9	May 1, 2014	
10.10†	Master Services Agreement by and between Alder BioPharmaceuticals, Inc. and FUJIFILM Diosynth Biotechnologies U.S.A., Inc., dated October 14, 2013.	S-1	333-194672	10.10	May 1, 2014	

10.11†	License Agreement by and between Alder BioPharmaceuticals, Inc. and the Keck Graduate Institute of Applied Life Sciences, dated October 15, 2004.	S-1	333-194672	10.11	May 1, 2014
10.12	Lease by and between Alder BioPharmaceuticals, Inc. and RREEF American REIT II Corp. KK, dated August 5, 2005.	S-1	333-194672	10.12	March 19, 2014
10.13	First Amendment to Lease by and between Alder BioPharmaceuticals, Inc. and RREEF American Reit II Corp. KK, dated February 1, 2008.	S-1	333-194672	10.13	March 19, 2014
10.14	Second Amendment to Lease by and between Alder BioPharmaceuticals, Inc. and KBS North Creek, LLC, as successor-in-interest to RREEF American REIT II Corp. KK, dated September 23, 2010.	S-1	333-194672	10.14	March 19, 2014
10.15	Third Amendment to Lease by and between Alder BioPharmaceuticals, Inc. and KBS North Creek, LLC, as successor-in-interest to RREEF American REIT II Corp. KK, dated August 21, 2013.	S-1	333-194672	10.15	March 19, 2014
10.16+	Amended and Restated Offer Letter by and between Alder BioPharmaceuticals, Inc. and Randall C. Schatzman, Ph.D. dated as of July 19, 2005.	S-1	333-194672	10.16+	March 19, 2014

Exhibit		Incorporated by Reference				
Number	Description	Form	File No.	Exhibit	Filing Date	Filed Herewith
10.17+	Amendment to Amended and Restated Offer Letter by and between Alder BioPharmaceuticals, Inc. and Randall C. Schatzman, Ph.D. dated as of April 13, 2012.	S-1	333-194672	10.17+	March 19, 2014	
10.18+	Amended and Restated Offer Letter by and between Alder BioPharmaceuticals, Inc. and John A. Latham, Ph.D., dated as of July 19, 2005.	S-1	333-194672	10.18+	March 19, 2014	
10.19+	Amendment to Amended and Restated Offer Letter by and between Alder BioPharmaceuticals, Inc. and John A. Latham, Ph.D., dated as of April 13, 2012.	S-1	333-194672	10.19+	March 19, 2014	
10.20+	Amended and Restated Offer Letter by and between Alder BioPharmaceuticals, Inc. and Mark J. Litton, Ph.D., MBA, dated as of July 19, 2005.	S-1	333-194672	10.20+	March 19, 2014	
10.21+	Amendment to Amended and Restated Offer Letter by and between Alder BioPharmaceuticals, Inc. and Mark J. Litton, Ph.D., MBA, dated as of April 13, 2012.	S-1	333-194672	10.21+	March 19, 2014	
10.22+	Amended and Restated Offer Letter by and between Alder BioPharmaceuticals, Inc. and Jeffrey T.L. Smith, M.D., FRCP, dated as of July 19, 2005.	S-1	333-194672	10.22+	March 19, 2014	
10.23+	Amendment to Amended and Restated Offer Letter by and between Alder BioPharmaceuticals, Inc. and Jeffrey T.L. Smith, M.D., FRCP, dated as of April 13, 2012.	S-1	333-194672	10.23+	March 19, 2014	
10.24†	Master Product Development and Clinical Supply Agreement by and between Alder BioPharmaceuticals, Inc. and Althea Technologies, dated March 21, 2011.	S-1	333-194672	10.24	May 1, 2014	
10.25	First Amendment to Master Product Development and Clinical Supply Agreement between Alder BioPharmaceuticals, Inc. and Althea Technologies, Inc., dated March 15, 2013	S-1	333-194672	10.25	May 1, 2014	
21.1	List of subsidiaries of the Registrant.	S-1	333-194672	21.1	March 19, 2014	
23.1	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm.					X
31.1	Certification of Principal Executive Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.					X
31.2	Certification of Principal Financial Officer Required Under Rule 13a-14(a) and 15d-14(a) of the Securities Exchange Act of 1934, as amended.					X
32.1*	Certification of Principal Executive Officer and Principal Financial Officer Required Under Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. §1350.					X

101.INS	XBRL Instance Document.	X
101.SCH	XBRL Taxonomy Extension Schema Document.	X
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.	X
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document	X
101.LAB	XBRL Taxonomy Extension Label Linkbase Document	X
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document	X

+ Indicates a management contract or compensatory plan.

† Pursuant to a request for confidential treatment, portions of this exhibit have been redacted from the publicly filed document and have been furnished separately to the Securities and Exchange Commission as required by Rule 24b-2 under the Securities Exchange Act of 1934..

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* Document has been furnished, is not deemed filed and is not to be incorporated by reference into any of the Company's filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, irrespective of any general incorporation language contained in any such filing.

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