

ALDER BIOPHARMACEUTICALS INC

Form 424B5

April 07, 2016

Table of Contents

Filed Pursuant to Rule 424(b)(5)
Registration Numbers 333-204648
and 333-210634

Prospectus supplement

(To prospectus dated June 2, 2015)

5,376,344 shares

Common stock

We are offering 5,376,344 shares of our common stock.

Our common stock is listed on the NASDAQ Global Market under the symbol ALDR. On April 6, 2016, the last reported sale price of our common stock on the NASDAQ Global Market was \$25.92 per share.

| | Per share | Total |
|--|------------------|----------------|
| Public offering price | \$ 23.250 | \$ 124,999,998 |
| Underwriting discounts and commissions(1) | \$ 1.395 | \$ 7,500,000 |
| Proceeds to Alder BioPharmaceuticals, Inc. before expenses | \$ 21.855 | \$ 117,499,998 |

(1) We have agreed to reimburse the underwriters for certain FINRA-related expenses. See Underwriting.

We have granted the underwriters an option for a period of 30 days to purchase up to 806,451 additional shares of our common stock.

Investing in our common stock involves a high degree of risk. See Risk factors beginning on page S-13 of this prospectus supplement.

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

The underwriters expect to deliver the shares to purchasers on or about April 12, 2016.

J.P. Morgan

April 6, 2016

Leerink Partners

Wells Fargo Securities

Table of Contents

Table of contents

Prospectus supplement

| | |
|--|------|
| <u>About this prospectus supplement</u> | S-ii |
| <u>Prospectus supplement summary</u> | S-1 |
| <u>The offering</u> | S-12 |
| <u>Risk factors</u> | S-13 |
| <u>Special note regarding forward-looking statements</u> | S-45 |
| <u>Use of proceeds</u> | S-47 |
| <u>Market price of common stock</u> | S-48 |
| <u>Dividend policy</u> | S-48 |
| <u>Capitalization</u> | S-49 |
| <u>Dilution</u> | S-50 |
| <u>Material U.S. federal income tax consequences to non-U.S. holders</u> | S-51 |
| <u>Underwriting</u> | S-55 |
| <u>Legal matters</u> | S-61 |
| <u>Experts</u> | S-61 |
| <u>Where you can find more information</u> | S-61 |
| <u>Incorporation of certain information by reference</u> | S-62 |

Prospectus

| | |
|--|----|
| <u>About this prospectus</u> | i |
| <u>The company</u> | 1 |
| <u>Risk factors</u> | 2 |
| <u>Special note regarding forward-looking statements</u> | 2 |
| <u>Use of proceeds</u> | 4 |
| <u>Description of capital stock</u> | 5 |
| <u>Plan of distribution</u> | 10 |
| <u>Legal matters</u> | 12 |
| <u>Experts</u> | 12 |
| <u>Where you can find more information</u> | 12 |
| <u>Incorporation of certain information by reference</u> | 12 |

Table of Contents

You should rely only on the information contained in or incorporated by reference in this prospectus supplement, the accompanying prospectus and in any free writing prospectus that we have authorized for use in connection with this offering. We have not, and the underwriters have not, authorized anyone to provide you with information that is different. We and the underwriters are offering to sell shares of common stock and seeking offers to buy shares of common stock only in jurisdictions where offers and sales are permitted. The information appearing in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and in any free writing prospectus that we have authorized for use in connection with this offering, is accurate only as of the date of those respective documents, regardless of the time of delivery of those respective documents or sale of our common stock.

For investors outside the United States: we have not, and the underwriters have not, done anything that would permit this offering or possession or distribution of this prospectus supplement, the accompanying prospectus and in any free writing prospectus that we have authorized for use in connection with this offering in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus supplement, the accompanying prospectus and any free writing prospectus that we have authorized for use in connection with this offering must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus supplement, the accompanying prospectus and any free writing prospectus that we have authorized for use in connection with this offering outside the United States.

About this prospectus supplement

This document consists of two parts. The first part is this prospectus supplement, which describes the terms of this offering of common stock and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into this prospectus supplement. The second part is the accompanying prospectus dated June 2, 2015, which includes the documents incorporated by reference therein and provides more general information. To the extent the information contained in this prospectus supplement differs or varies from the information contained in the accompanying prospectus or the documents incorporated by reference herein or therein, you should rely on the information in this prospectus supplement. Generally, when we refer to the prospectus, we are referring to this prospectus supplement and the accompanying prospectus combined. You should read both this prospectus supplement and the accompanying prospectus, together with additional information described under the heading **Where you can find more information**.

Table of Contents

Prospectus supplement summary

*This summary highlights certain information about us, this offering and selected information contained elsewhere in or incorporated by reference into this prospectus supplement. This summary provides an overview of selected information and does not contain all of the information you should consider before deciding whether to invest in our common stock. Therefore, you should read the entire prospectus supplement and the accompanying prospectus carefully (including the documents incorporated by reference herein and therein), especially the **Risk factors** section beginning on page S-13 and in the documents incorporated by reference and our consolidated financial statements (which we refer to as our **Financial Statements**) and the related notes incorporated by reference in this prospectus supplement and the accompanying prospectus, before deciding to invest in our common stock. Unless the context otherwise requires, we use the terms **Alder, Company, we, us and our** in this prospectus supplement and the accompanying prospectus to refer to Alder BioPharmaceuticals, Inc. and, where appropriate, our consolidated subsidiaries.*

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.

We believe the clinical data obtained to date in our development program for ALD403, our wholly-owned lead product candidate, exhibits the potential to transform the way physicians treat migraine prevention. ALD403 was discovered by Alder scientists and has achieved clinical proof-of-concept for patients experiencing migraine on 5-14 days per month (frequent episodic migraine). On March 28, 2016, we announced positive top-line data from our Phase 2b clinical trial of patients experiencing 15 or more headache days per month of which at least 8 days per month are migraine (chronic migraine). The data demonstrated that ALD403 acted rapidly and prevented migraine over the entire 12 week study period, meeting both primary and secondary efficacy endpoints. We also announced on March 28, 2016 positive Phase 1 clinical trial data demonstrating that the pharmacokinetics and pharmacodynamics by intravenous (IV), subcutaneous (SC) or intramuscular (IM) injection of ALD403 support a quarterly single injection dosing strategy.

We have additional ongoing trials with ALD403, including our first pivotal trial, **PRevention Of M**igraine via **I**ntravenous ALD403 **S**afety and **E**fficacy 1 (PROMISE 1), which commenced in October 2015. If approved, we intend to commercialize ALD403 on our own in the United States.

ALD403 is a genetically engineered monoclonal antibody for the prevention of migraine that blocks the calcitonin gene-related peptide (CGRP). Efficacy data from our Phase 2 proof-of-concept trial in patients with frequent episodic migraine and from our Phase 2b clinical trial in patients with chronic migraine established that ALD403 significantly reduced the number of days on which a migraine patient experiences migraines. In our Phase 2 proof-of-concept trial, 27-41% of patients experienced complete migraine-free relief ($p < 0.05$), that is 100% suppression of migraine occurrence, in any given month and migraines were completely prevented in 16% of patients for the entire three month study period ($p < 0.001$). The top-line 12-week data from our Phase 2b clinical trial confirmed the ability of ALD403 to deliver a high level of efficacy. In that trial, 33% and 31% of chronic migraine patients dosed with 300 mg and 100 mg, respectively, of ALD403 experienced a 75% decrease in their migraines from an average of 16 or more migraine days per month ($p < 0.05$).

Table of Contents

Ongoing and future clinical trials are aimed at supporting our objective of regulatory approval of ALD403 at the earliest opportunity for the prevention of migraine in the subpopulation of migraineurs (approximately 13 million patients) who are believed to be candidates for a preventative migraine therapy. Assuming regulatory approval, we plan to commercialize ALD403 independently in the United States employing a specialty sales force and to seek one or more strategic arrangements for commercialization of ALD403 outside the United States.

We are also focusing our development efforts on ALD1613, a wholly-owned therapeutic antibody which targets adrenocorticotrophic hormone (ACTH). We believe ALD1613 has the potential to treat patients with Congenital Adrenal Hyperplasia and Cushing's Disease. ALD1613 is undergoing Investigational New Drug (IND)-enabling preclinical studies, and we plan to submit an IND application with the United States Food and Drug Administration (FDA) for ALD1613 in 2016. Our third wholly-owned product candidate, clazakizumab, is designed to block the pro-inflammatory cytokine IL-6. Clazakizumab successfully completed two Phase 2b clinical trials establishing proof-of-concept in patients with rheumatoid arthritis. 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. In late 2014, all rights to clazakizumab were returned to us from Bristol-Myers Squibb Company, or BMS, following the termination of a license and collaboration agreement. We are actively pursuing strategic alternatives for the further development of clazakizumab to leverage its ability to effectively inhibit IL-6.

Our strategy

Our goal is to build an enduring biopharmaceutical company that leverages our expertise in the discovery, development and commercialization of monoclonal antibody therapeutics to transform treatment paradigms and offer patients innovative therapies in indications that are underserved by current treatment options. Key elements of our strategy include:

Continue to prioritize the advancing clinical development of ALD403 for the prevention of migraine. A primary corporate priority is continuing to efficiently progress the clinical development of infusion and self-injected formulations of ALD403 as a preventative treatment for migraine to an FDA approval.

Leverage the commercial potential of ALD403 by independently commercializing it for the prevention of migraine in the U.S. We intend to independently commercialize both infusion and self-injected formulations of ALD403 in the United States to prevent migraine, subject to FDA approval. We plan to build a 75 to 100 person sales force targeting neurologists and headache centers in the United States and to seek one or more strategic arrangements to commercialize ALD403 outside the United States.

Advance the development of ALD1613 for the treatment of Congenital Adrenal Hyperplasia and Cushing's Disease. In 2015, we designated ALD1613 as a candidate to advance to IND-enabling studies for the treatment of Congenital Adrenal Hyperplasia and Cushing's Disease. We plan to advance ALD1613 through IND-enabling toxicology studies and file an IND with the FDA in 2016.

Seek strategic alternatives to advance and commercialize clazakizumab as a therapeutic option in autoimmune and inflammatory disease. We are seeking strategic alternatives to continue the development of clazakizumab as an option for autoimmune and inflammatory disease therapy.

Leverage our technology platform to discover future product candidates for areas of unmet need. We have multiple discovery programs underway targeting unmet medical needs. We are advancing these programs with a goal of designating a candidate for development in 2016.

Table of Contents

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.

Our pipeline

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, our lead pivotal-stage product candidate, is a genetically engineered monoclonal antibody that inhibits CGRP for prevention of migraine. CGRP is a small protein with a well-established role in the initiation, mediation, transmission and heightened sensitivity to pain experienced in migraine. Migraine is a common neurological disorder that results in suffering caused by intense sharp or throbbing pain in the head, commonly accompanied by nausea, vomiting and high sensitivity to light and sound.

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 significant bed rest to resolve them. This makes 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.

Approximately 33 million American adults live with migraine. We have conducted extensive research of this population and estimate that approximately 13 million patients may be candidates for preventative therapy. Of this 13 million, we estimate that approximately three million have chronic migraine, representing the most

Table of Contents

disabled segment of the migraine patient population. The scale of the need is put into perspective when considering that the 13 million patients estimated to be candidates for a preventative migraine therapy represent a patient population greater than 5.5 times larger than the patient population for rheumatoid arthritis. We believe this represents an area of high unmet medical need and that patients and physicians are highly motivated to seek new preventative treatment options providing benefits over current options, which have safety, tolerability and/or efficacy limitations. Our research suggests that a new preventative treatment option providing improved safety and tolerability, better efficacy as measured by a material reduction in the number of migraine days experienced, rapidity of migraine prevention, and infrequent dosing, represents a significant opportunity to improve disease management in a substantial number of patients.

Clinical trials

We believe the clinical data obtained to date in our development program for ALD403 exhibits the potential of ALD403 to transform the preventative treatment of patients with migraine. ALD403 has been evaluated in four completed clinical trials. Two clinical trials are ongoing and additional trials are planned in furtherance of our strategy of pursuing both an infusion and a self-injectable formulation. ALD403 has a favorable emerging safety profile, demonstrating a similar level of safety to placebo and being well-tolerated in studies to date.

Completed proof-of-concept trial in frequent episodic migraine patients. In our completed Phase 2 proof-of-concept trial, 27-41% of patients with frequent episodic migraine receiving ALD403 experienced complete migraine-free relief, defined as 100% suppression of migraine occurrence, in any given month and migraines were completely prevented in 16% of patients for the entire three month study period.

| Time period | % reduction migraine days | Placebo | ALD403 | p-value |
|--------------------|--------------------------------------|-----------------------------------|--|----------------|
| | | IV Percentage n=82 | 1000mg IV Percentage n=81 | |
| Week 1-4 | 100% | 5.0% | 27.6% | p<0.0001 |
| Week 5-8 | 100 | 15.0 | 26.9 | p=0.0493 |
| Week 9-12 | 100 | 16.7 | 41.1 | p=0.0008 |
| Week 1-12 | 100 | 0 | 16.2 | p<0.001 |

This trial was a double-blind, randomized, placebo-controlled proof-of-concept trial of ALD403 in 163 patients suffering from frequent episodic migraine. In this trial, a single IV dose of ALD403 completely prevented migraines in 16% of patients over the entire three month period versus 0% 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.

Table of Contents

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

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. As shown in the figure above, ALD403 provided a statistically significant reduction versus placebo in migraines at all response levels in these patients.

When compared with the data for AMG334, a product candidate being developed by Amgen in Phase 3 stage of development, and LY-2951742, a product candidate being developed by Lilly (Arteaus) in the Phase 2b stage of development, ALD403 is already at peak effect by week four versus week eight for LY-2951742 and week 12 for AMG334. Similarly, TEV-48125, a product candidate being developed by Teva (Labrys), while studied in patients with a higher mean baseline of migraine days (11.4) compared to ALD403 (8.6), required 12 weeks to reach peak effect, with a magnitude of change as a percentage of baseline that was less than ALD403.

These comparisons are not based on data resulting from a head-to-head trial and are 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.

Ongoing Phase 2b clinical trial in chronic migraine patients. On March 28, 2016, we reported top-line 12-week data from our Phase 2b clinical trial in chronic migraine patients. This trial is a double-blind, placebo-controlled, randomized, single IV infusion, dose-ranging study in patients with chronic migraine. Patients were randomized to receive a single IV infusion of 10 mg, 30 mg, 100 mg or 300 mg of ALD403 or placebo (approximately 120 patients per group). The primary efficacy endpoint of the study is the change in migraine days between ALD403 and placebo as determined by the 75% responder rates over a 12-week period. Endpoints will also be evaluated at week 24 (expected Q3 2016) and at week 48 (end of study).

Table of Contents

The 300 mg and 100 mg dose levels of ALD403 met the primary efficacy endpoint of the study, a 75% reduction in migraine days over the entire 12 weeks in 33% and 31% of patients, respectively ($p < 0.05$), as described in the table below:

| Time period | % Reduction in migraine days per month | 300 mg IV n=114 | 100 mg IV n=118 | 30 mg IV n=117 | 10 mg IV n=123 | Placebo IV n=116 |
|--------------------|---|----------------------------|----------------------------|---------------------------|---------------------------|-----------------------------|
| Weeks | 50% | 65(57%)** | 64(54%)* | 64(55%)* | 54(44%) | 47(41%) |
| | 75% | 38(33%)* | 37(31%)* | 33(28%) | 33(27%) | 24(21%) |
| 1-12 | 100% | 9(8%) | 6(5%) | 5(4%) | 10(8%) | 3(3%) |

* ($p = < 0.05$) **($p = < 0.01$)

The trial also met the secondary endpoint of mean change from baseline for migraine days for weeks 1-12, as illustrated in the graph below:

Table of Contents

ALD403 demonstrated a rapid onset of therapeutic effect with patients experiencing a decrease from an average of 16 migraine days per month by -7.8, -7.4, -8.0, -6.4 and -4.9 migraine days for the 300 mg, 100 mg, 30 mg, 10 mg and placebo groups, respectively, during the first 4 weeks following drug treatment.

In summary, the top-line data Phase 2b study demonstrated:

A single administration of ALD403 resulted in a rapid and durable mean reduction in migraine days from baseline throughout the 12 weeks at the 300 mg ($p < 0.01$), 100 mg ($p < 0.05$), and 30 mg ($p < 0.01$) dose levels, meeting the secondary efficacy endpoint.

A single administration of ALD403 at 300 mg, 100 mg or 30 mg dose levels demonstrated a durable reduction in migraine days for the entire 12 weeks, supporting a quarterly dosing strategy.

The 10 mg dose of ALD403 was identified as sub-therapeutic.

The safety profile was consistent with that observed in earlier ALD403 clinical trials. Additional results of this trial, including future analysis of additional secondary endpoints, are expected to be presented at upcoming medical meetings and published in peer-reviewed medical journals.

Phase 1 Clinical Trial Evaluating Multiple Doses of ALD403 in Healthy Volunteers. This Phase 1 clinical trial is a placebo-controlled, randomized, multi-dose, double dummy, quarterly-dosing study comparing the intravenous, subcutaneous and intramuscular routes of administration in healthy volunteers. Sixty healthy volunteers, 12 in each group, were randomized as follows:

100 mg ALD403 IM, placebo SC, placebo IV

100 mg ALD403 SC, placebo IM, placebo IV

100 mg ALD403 IV, placebo IM, placebo SC

Table of Contents

300 mg ALD403 IM, placebo SC, placebo IV

Placebo IM, placebo SC, placebo IV

Individuals were dosed on Day 1 and at Week 12. The study evaluated pharmacokinetic and pharmacodynamic endpoints for the administration of ALD403 delivered via each of the three routes of administration.

The top-line data for the Phase 1 trial consisted of the following:

ALD403 provided a comparable level of suppression of peripheral CGRP biology for a full 3 months when administered via a single intravenous (100 mg), subcutaneous (100 mg) or intramuscular injection (100 mg or 300 mg).

ALD403 administered via subcutaneous or intramuscular routes of administration had an approximately 80% bioavailability relative to an intravenous infusion.

Local tolerability via all modes of administration was excellent.

The safety profile was consistent with that observed in earlier ALD403 clinical trials.

The data support a quarterly dosing strategy as a single injection by all modes of administration.

We believe that the results of this Phase 1 trial provide an important bridge between pharmacodynamic monitoring via peripheral CGRP blockade and migraine prevention: doses (100 mg and 300 mg) that provided for a full 3 months of migraine prevention in the Phase 2b study of chronic migraine patients also provided 3 months of suppression of peripheral CGRP biology independent of route of administration.

Additional results from this trial are expected to be presented at upcoming medical meetings and published in peer-reviewed medical journals.

Pivotal trials. We have received preliminary input from the FDA on a development path forward to support a Biologics License Application, or BLA, submission for our infusion formulation of ALD403. In October 2015, we initiated a PROMISE 1, a double-blind, placebo-controlled, randomized, dose-ranging pivotal clinical trial (three dose levels and placebo with 150 patients per group; n=600) using an infusion formulation of ALD403 administered quarterly for the treatment of frequent episodic migraine. We anticipate obtaining primary endpoint data from the PROMISE 1 trial in the first half of 2017. We plan to initiate PROMISE 2, a double-blind, placebo-controlled, randomized, dose-ranging pivotal clinical trial using an infusion formulation of ALD403 administered quarterly for the treatment of chronic migraine, in the second half of 2016. Data from these clinical trials will be used for a BLA submission if supported by the data. We are developing both an infusion and self-injectable formulation in order to provide options for less frequent dosing of the therapy and accommodate patients' preferred method of administration.

Commercial strategy

In the United States, due to the severity of the disease, patients with frequent episodic or chronic migraine typically seek preventive treatment from neurologists and pain specialists. By the time a frequent episodic or chronic migraine patient begins prevention therapy, the patient may have experienced any or all of: increased headache frequency; loss of response 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. 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

Table of Contents

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 commercialize ALD403 outside the United States.

We intend to commercialize both an infusion and a self-injectable formulation in order to optimize rapidity of onset, sustained delivery of efficacy and patient choice, and which will also support patient convenience and compliance. We are currently evaluating the timing of studies for these formulations as part of our Phase 3 pivotal trial strategy. Our current strategy is to provide significant options for both the patient and physician. Self-administration is convenient and offers better patient-mediated disease control. Infusion may provide less frequent dosing options and higher compliance due to infrequent physician delivery. An infusion formulation also may be preferable for neurologists for a number of reasons, including enabling better monitoring of treatment. Our research has indicated that 70% of neurologists have access to IV delivery infrastructure, including infusion centers, which they currently use to deliver therapies for diseases such as multiple sclerosis.

ALD1613

ALD1613 is a preclinical genetically engineered monoclonal antibody discovered and developed by us for treatment of conditions relating to overexposure of Adrenocorticotrophic Hormone (ACTH), in particular, Congenital Adrenal Hyperplasia (CAH) and Cushing's Disease. This program is in active pre-IND enabling studies with a goal of achieving an IND filing in 2016 for use in CAH.

CAH is a disease resulting from a mutation in cortisol synthetic enzymes that ultimately results in overproduction of ACTH due to the loss of natural feedback regulation. Cushing's Disease is driven by long-term exposure to cortisol as a result of increased expression of ACTH produced by a pituitary tumor. We believe a novel, mechanism-based approach to address ACTH-driven diseases could provide a significant advantage over the current standard of care and provide an important new therapeutic option to both patients and physicians.

We have established and manufactured ALD1613 under GMP conditions to support clinical studies. In addition, we have completed acute and 28-day dose escalating toxicology studies to support our first-in-man transition. Our current plan is built on an anticipated mid-2016 pre-IND dialog with the FDA and an IND filing by the end of 2016.

Clazakizumab

Clazakizumab is a novel monoclonal antibody that inhibits the pro-inflammatory cytokine interleukin-6 (IL-6), an important driver of the inflammatory response. IL-6 is also implicated in the transition from acute to chronic inflammation. Chronic inflammation is a notable feature of several diseases, including rheumatoid arthritis (RA) and psoriatic arthritis. Clazakizumab successfully completed two Phase 2b clinical studies establishing proof-of-concept for RA. 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, at which time all rights to clazakizumab were returned to us. 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. We are actively pursuing strategic alternatives for the further development of clazakizumab to leverage its ability to effectively inhibit IL-6.

Table of Contents

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 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 was the case with our ALD403 program for migraine prevention.

Technology platform

We built and use a proprietary antibody platform to discover and develop monoclonal antibody therapeutics that enables us to engineer our candidates to have properties that we believe optimize the therapeutic potential for patients. Since the unique structure, including sequence, of an antibody determines how it functions and behaves, we specifically engineer our candidates to have properties aligned with the desired therapeutic profile. Leveraging this proprietary platform, we select for properties that we consider important in order to optimize safety, tolerability and efficacy. We further select for properties that support reduced dosing volumes and frequency, time to onset of therapeutic effect, route of administration flexibility, reduced immunogenicity compared to other monoclonal antibody therapeutics, and other benefits including manufacturing. The specific monoclonal antibody properties that we consider important to optimize in the selection and development of our candidates to support best-in-class target therapeutic profiles include:

Bioavailability

Binding affinity and specificity

Half-life

Immunogenicity

Manufacturing efficiency

Formulation properties

Our proprietary platform consists of three components that we believe together allows us to optimize the discovery and selection of monoclonal antibody product candidates with the specific, pre-defined, properties that confer best-in-class therapeutic potential for patients:

Antibody selection (ABS): our proprietary antibody selection platform that provides access to diverse antibody collections that meet our therapeutic target profile and provides access to optimal properties of high affinity and selectivity.

A pioneering process we developed that humanizes rabbit antibodies to produce therapeutic antibodies that are greater than 95% human. Unlike fully-human antibodies, our antibodies are designed 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.

Edgar Filing: ALDER BIOPHARMACEUTICALS INC - Form 424B5

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.

S-10

Table of Contents

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 them to a cancer cell. The combined cancer and B cell, or hybridoma, is able to live longer from this host than normal B cells would alone. Generally, this process has trouble recovering an antibody with the desired properties due to its low overall 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 our ABS technology. 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.

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 on, or that can be accessed through, our website is not part of, and is not incorporated by reference into this prospectus supplement and should not be considered to be part of this prospectus supplement.

Alder and the Alder logo are the property of Alder BioPharmaceuticals, Inc. This prospectus supplement and the accompanying prospectus contain references to our trademarks and to trademarks belonging to other entities. 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.

Table of Contents

The offering

| | |
|--|--|
| Common stock offered by us | 5,376,344 shares |
| Common stock to be outstanding immediately after this offering | 49,083,133 shares |
| Option to purchase additional shares | The underwriters have a 30-day option to purchase up to an additional 806,451 shares of common stock. |
| Use of proceeds | We estimate the net proceeds from this offering to be approximately \$117.0 million, after deducting underwriting discounts and commissions and estimated offering expense payable by us. We expect to use the proceeds of this offering for our ongoing and future clinical program for ALD403, for the development of ALD1613 and for working capital and other general corporate purposes, which may include the acquisition or licensing of other products, businesses or technologies. See the section of this prospectus supplement titled "Use of proceeds" for a more complete description of the intended use of proceeds from this offering. |
| Risk factors | See "Risk factors" beginning on page S-13 and other information included and incorporated by reference in this prospectus supplement and the accompanying prospectus for a discussion of factors that you should carefully consider before deciding to invest in our common stock. |
| NASDAQ symbol | ALDR |
| The number of shares of our common stock to be outstanding after this offering is based on 43,706,789 shares of our common stock outstanding as of December 31, 2015 and excludes: | |
| 2,961,107 shares of common stock issuable upon the exercise of outstanding stock options as of December 31, 2015, at a weighted-average exercise price of \$14.29 per share; | |
| 3,027,092 shares of common stock reserved for future issuance under our 2014 Equity Incentive Plan, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this benefit plan; and | |
| 458,631 shares of common stock reserved for issuance under our 2014 Employee Stock Purchase Plan, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this benefit plan. | |
| Unless otherwise indicated, all information in this prospectus supplement assumes no exercise of the underwriters' option to purchase additional shares of common stock. | |

Table of Contents

Risk factors

Investing in our common stock involves high degrees of significant risk. You should carefully consider the following risks, as well as other information in this prospectus supplement and the accompanying prospectus, including information incorporated by reference herein and therein, and any free writing prospectus that we have authorized for use in connection with this offering, before you invest in our common stock. If any of these risks actually materializes, our operating results, financial condition and liquidity could be materially adversely affected. As a result, the trading price of our common stock could decline, and you may lose all or part of your investment.

Risks related to our need for additional financing and our financial results

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. For the year ended December 31, 2015, our net loss was \$85.5 million and as of December 31, 2015 we had an accumulated deficit of \$222.4 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 ALD403 and our other 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 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

Table of Contents

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 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.

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 ALD1613 and 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, 2015, we had \$381.0 million in cash, cash equivalents and investments. We believe that our available cash, cash equivalents and investments will be sufficient to fund our anticipated level of operations, including our ALD403 development program, for at least the next 12 months. 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;

Table of Contents

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.

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, 2015, we had U.S. net operating loss carryforwards, or NOLs, of \$229.8 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 \$8.9 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, or the Code. We performed a section 382 ownership analysis through 2015 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. If we have experienced an ownership change in

Table of Contents

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.

Risks related to ALD403 and our other product candidates

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

ALD403 is our only product candidate we currently have in clinical trials. We have invested a significant portion of our efforts and financial resources into the development of ALD403 to prevent migraines. 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 ALD403. The success of ALD403 and our other product candidates will depend on several factors, including the following:

successful enrollment in, and completion of, clinical trials, including our PROMISE 1 and PROMISE 2 trials;

our ability to reach agreements with the FDA and other regulatory authorities on the appropriate regulatory path for approval for ALD403;

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; and

obtaining, maintaining, enforcing and defending intellectual property rights and claims, including intellectual property we license from third parties.

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 ALD403 or any of our other 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 ALD403 or any of our other 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

Edgar Filing: ALDER BIOPHARMACEUTICALS INC - Form 424B5

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.

S-16

Table of Contents

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

S-17

Table of Contents

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 development and commercialization of biologic products is subject to extensive regulation, and we may not obtain regulatory approvals for ALD403 or any of our other product candidates.

The clinical development, manufacturing, labeling, packaging, storage, recordkeeping, advertising, promotion, export, import, marketing and distribution and other possible activities relating to ALD403 and any other product candidate that we may develop in the future are subject to extensive regulation in the United States. Biologics, like ALD403, 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

Table of Contents

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.

The results of clinical trials conducted at sites outside the United States may not be accepted by the FDA and the results of 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. 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 our collaborators' international clinical trials, or if international regulatory authorities do not accept the data from our or our collaborators' 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.

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 ALD403 and our other 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. 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 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 frequent episodic and chronic migraines. Most of the medications used today are generics that are prescribed for abortive treatment of migraines. Medications commonly used for prevention of frequent episodic and chronic migraine include beta blockers such as propranolol, marketed by Wyeth, and other treatments such as topiramate, marketed by Johnson & Johnson, and sodium valproate, marketed by Divalproex. In addition, Botox, marketed by Allergan, is approved for the prevention of chronic migraine and commonly prescribed for frequent episodic migraine. There are also several other companies, including Amgen, Lilly and Teva (Labrys), that have ongoing clinical trials for CGRP blocking therapies using monoclonal antibodies similar to ALD403.

Table of Contents

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 initiated a Phase 3 clinical trial for its CGRP therapy in 2015.

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 ALD403 or any of our other 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 ongoing PROMISE 1 trial for ALD403 for the treatment of frequent episodic migraine sufferers is expected to enroll approximately 600 patients. We have never previously conducted trials of the magnitude of this ongoing trial and our other planned trials 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 ongoing and 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 prior ALD403 clinical trials. However, there can be no assurance that those forecasts will be accurate or that we will complete, following collection of six month data, our ongoing and planned ALD403 trials on schedule. We anticipate obtaining primary endpoint data from the PROMISE 1 trial in the first half of 2017. During the initial months of this pivotal trial and our other clinical trials, 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 trials within our anticipated time frame. If we experience delays in enrollment, our ability to complete the trials could be materially adversely affected.

Table of Contents

If serious adverse side-effects, or SAEs, are identified during the development of ALD403 or any of our product candidates, we or any of our future collaborators may need to abandon development of that product candidate.

Our lead product candidate, ALD403 is still in clinical development and its risk of failure is high. It is impossible to predict when or if ALD403 or any of our existing or future 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. The relevant clinical investigators 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.

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

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.

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

Table of Contents

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 ALD403 and ALD1613, 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 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 ALD1613 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 two third-party contract manufacturers using a small-scale process that would not support commercialization of ALD403. We expect to enter into agreements with one or more other manufacturers for larger scale commercial production. Scaling up a biologic manufacturing process is a difficult and uncertain task, and we may not be successful in transferring our production system or a 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 a 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 manufacturer, we will still need to negotiate with such manufacturer 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.

We rely on third-party contract manufacturing organizations, or CMOs, to manufacture and supply ALD403. 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

Table of Contents

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, and we expect to enter into agreements with one or more other manufacturers for larger scale commercial production. Our current agreements do not, and our future agreements may 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 a manufacturer terminates their agreement in response to a breach by us or otherwise becomes unable to fulfill its supply obligations, our clinical trials and commercialization efforts 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 have an adverse impact on our business and prospects.

ALD403 is a biologic and therefore requires 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 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.

Table of Contents

Even if ALD403 or any of our other 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 ALD403 or any of our other 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 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.

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.

Table of Contents

If we are able to commercialize ALD403 or any other product candidates, the products may become subject to unfavorable pricing regulations or third-party reimbursement practices, thereby harming our business.

The regulations that govern 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 product candidates successfully also will depend in significant 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. A primary focus in the U.S. healthcare industry and elsewhere is cost containment. 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 coverage will be available for any product that we or any of our future collaborators commercialize and, if coverage is available, what the level of reimbursement will be. Further, one payor's determination to provide coverage for a product does not assure that other payors will also provide coverage for the product. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

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 newly 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.

Table of Contents

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.

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;

Edgar Filing: ALDER BIOPHARMACEUTICALS INC - Form 424B5

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.

S-26

Table of Contents

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.

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 lead product candidate, ALD403, as well as ALD1613 and clazakizumab 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.

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, 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 may have significant discretion in determining the efforts and resources that they will apply to 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;

Table of Contents

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 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 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

Table of Contents

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;

Edgar Filing: ALDER BIOPHARMACEUTICALS INC - Form 424B5

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.

S-29

Table of Contents

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.

Table of Contents

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, improve quality of care, and expand access to coverage. 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 ACA, was enacted in 2010. The ACA 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 ACA, among other provisions that may have a significant impact on our business:

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

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

imposes a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated;

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;

Table of Contents

expands the eligibility criteria for Medicaid programs; 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 certain elements of the ACA in June 2012, we expect judicial and Congressional challenges. At this time, it remains unclear whether there will be any changes made to the ACA, whether to certain provisions or its entirety. We cannot assure that the ACA, 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 ACA 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, following passage of the Bipartisan Budget Act of 2015, and will remain in effect through 2025 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. For example, there has been increasing legislative and enforcement interest in the United States with respect to specialty drug pricing practices. Specifically, there have been several recent U.S. Congressional inquiries and proposed bills designed to, among other things, bring more transparency to drug pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drugs. 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 for our business.

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

Table of Contents

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 healthcare laws and regulations that may affect our ability to operate include, without limitation:

the federal 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;

federal false claims laws, including the federal civil False Claims Act, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment that are false or fraudulent, or knowingly making false statements to avoid, decrease, or conceal an obligation to pay money to the federal government;

the federal Health Insurance Portability and Accountability Act of 1996 (HIPAA), which imposes criminal and civil liability for, among other things, executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters;

the federal Physician Payments Sunshine Act under the ACA, which requires certain manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid, or the Children's Health Insurance Program to report to the U.S. Department of Health and Human Services' Centers for Medicare & Medicaid Services, or CMS, information related to physician and physician family members' payments and other transfers of value and physician ownership and investment interests;

HIPPA, as amended by the Health Information Technology for Economic and Clinical Health Act, which imposes requirements on certain types of entities and individuals regarding the conduct of certain electronic healthcare transactions and 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; state laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government; state laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; and state and foreign laws governing the privacy and security of health information in some circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Table of Contents

The ACA, 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 order to commit a violation. In addition, the ACA 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, disgorgement, imprisonment, exclusion from participation in federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, 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 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

Table of Contents

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 invent 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, post-grant 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

Table of Contents

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. 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 patents held by others. For example, in July 2014, we and Eli Lilly and Company each filed an opposition to a European patent issued to Teva (Labrys) 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. Because of the inevitable uncertainty in intellectual property litigation, we could lose a patent infringement action or opposition or other legal proceeding regardless of our perception of the merits of the case. If we lose such a proceeding or are found to infringe a third party's intellectual property rights in any jurisdiction, we may not be able to commercialize our product or technology for its intended use in such jurisdiction without obtaining a license from such third party. 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

Table of Contents

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 our operations and personnel

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

Table of Contents

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.

Over the next several years, if any of 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

Table of Contents

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.

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.

Risks related to ownership of our common stock

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.

Table of Contents

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 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. Since January 1, 2015, the reported sale price of our common stock has fluctuated between \$15.82 and \$54.90 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;

Edgar Filing: ALDER BIOPHARMACEUTICALS INC - Form 424B5

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;

S-40

Table of Contents

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

Table of Contents

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 addition, as of December 31, 2015, we had options outstanding that, if fully exercised, would result in the issuance of 2,961,107 shares of common stock and as of January 1, 2016, there were also 4,775,363 shares of common stock reserved for future issuance under our 2014 Equity Incentive Plan and 895,698 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, 2015, holders of an aggregate of up to approximately 4.4 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. These rights have been waived in connection with this offering.

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.

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 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 expect these rules and regulations may make it difficult and 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

Table of Contents

independent registered public accounting firm potentially to attest to, the effectiveness of our internal control over financial reporting. Our compliance with applicable provisions of Section 404 subjects us to substantial accounting expense and to expend significant management time on compliance-related issues. 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.

Table of Contents

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.

Additional risks related to this offering

We have broad discretion in the use of the net proceeds from this offering and may not use them effectively.

Our management will have broad discretion in the application of the balance of the net proceeds from this offering and could spend the proceeds in ways that do not improve our business, financial condition or results of operations or enhance the value of our common stock. We intend to use the proceeds from this offering to: (1) fund our ongoing and future clinical program for ALD403; (2) fund the clinical development of ALD1613; and (3) fund working capital, and other general corporate purposes, which may include the acquisition or licensing of other products, business or technologies.

The failure by our management to apply these funds effectively could result in financial losses that could harm our business, cause the price of our common stock to decline and delay the development of our product candidates. Pending their use, we may invest the net proceeds from this offering in a manner that does not produce income or that loses value.

Purchasers in this offering will experience immediate and substantial dilution in the tangible net book value of their investment.

If you purchase our common stock in this offering, you will incur an immediate dilution of \$12.97 in net tangible book value per share from the price you paid, based on the public offering price of \$23.25 per share. The exercise of outstanding options will result in further dilution. For a further description of the dilution that you will experience immediately after this offering, see the section of this prospectus supplement titled Dilution.

Table of Contents

Special note regarding forward-looking statements

This prospectus supplement, the accompanying prospectus, the documents incorporated by reference into this prospectus supplement and the accompanying prospectus and any free writing prospectus that we have authorized for use in connection with this offering and therein contain forward-looking statements that are based on our beliefs and assumptions and on information currently available to our management. Discussions containing these forward-looking statements may be found, among other places, in this prospectus supplement, the accompanying prospectus in any free writing prospectus we may authorize for use in connection with this offering, in the sections titled "Business," and "Management's Discussion and Analysis of Financial Condition and Results of Operations" incorporated by reference from our most recent Annual Report on Form 10-K, as well as any amendments thereto reflected in subsequent filings with the Securities and Exchange Commission, or SEC. Forward-looking statements include, but are not limited to, statements about:

our ability to obtain and maintain regulatory approval of our product candidates;

our ability to successfully commercialize any of our products that are approved;

the rate and degree of market acceptance of our products;

our estimates of our expenses, ongoing losses, future revenues, capital requirements and our needs for or ability to obtain additional financing;

our expected uses of the net proceeds to us from this offering;

our ability to obtain and maintain intellectual property protection for our products and product candidates;

the ability to scale up manufacturing of our product candidates to commercial scale;

our reliance on our future collaboration partners' performance, over which we do not have control;

the actual receipt and timing of any milestone payments or royalties from our collaborators;

our ability to successfully establish and successfully maintain appropriate collaborations and derive significant revenues from those collaborations;

our reliance on third parties to conduct our clinical studies;

our reliance on third-party contract manufacturers to manufacture and supply our product candidates for us;

our ability to identify and develop new products and product candidates;

our ability to enroll patients in our clinical studies at the pace that we project;

our ability to retain and recruit key personnel;

our financial performance; and

developments and projections relating to our competitors or our industry.

In some cases, you can identify forward-looking statements by terms such as may, will, should, could, would, expects, plans, anticipates, believes, estimates, projects, predicts, potential and similar expressions intended to identify forward-looking statements. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance time frames or achievements to be materially different from any future results, performance, time frames or achievements expressed or implied by the forward-looking statements. We discuss many of these risks, uncertainties and

S-45

Table of Contents

other factors in greater detail under the section titled "Risk factors" contained in this prospectus supplement and in our most recent Annual Report on Form 10-K. Given these risks, uncertainties and other factors, you should not place undue reliance on these forward-looking statements. Also, these forward-looking statements represent our estimates and assumptions only as of the date such forward-looking statements are made. You should read carefully this prospectus supplement, the accompanying prospectus and any related free writing prospectuses that we have authorized for use in connection with this offering, together with the information incorporated herein and therein by reference as described in the section titled "Where you can find more information," completely and with the understanding that our actual future results may be materially different from what we expect. We hereby qualify all of our forward-looking statements by these cautionary statements. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

Table of Contents

Use of proceeds

We estimate that we will receive net proceeds from the sale of shares of common stock in this offering of approximately \$117.0 million, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters exercise in full their option to purchase additional shares, we estimate that the net proceeds will be approximately \$134.6 million, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

As of December 31, 2015, we had cash, cash equivalents and investments of \$381.0 million. We currently estimate that we will use the net proceeds from this offering, together with our cash, cash equivalents and investments, as follows:

for the development of ALD403, including Phase 3 trials to support a BLA filing for our infusion formulation and further development of our self-injectable formulation, manufacturing drug supply and related activities, and activities in support of the potential commercialization of ALD403;

for the development of ALD1613, including IND-enabling activities and Phase 1 clinical development; and

for working capital and other general corporate purposes, which may include the acquisition or licensing of other products, businesses or technologies.

The expected uses of the net proceeds from this offering and our existing cash, cash equivalents and investments represent our intentions based upon our current plans and business conditions. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our development and commercialization efforts and the status of and results from clinical trials, as well as any collaborations that we may enter into with third parties for our product candidates and any unforeseen cash needs. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering. We have no current understandings, agreements or commitments for any material acquisitions or licenses of any products, businesses or technologies.

Based on our planned use of the net proceeds from this offering and our existing cash, cash equivalents and investments described above, we expect that such funds will be sufficient to enable us to complete the ongoing and proposed Phase 3 trials of ALD403 and one Phase 1 trial of ALD1613. However, we may not achieve the progress that we expect because the actual costs and timing of drug development, particularly clinical trials, are difficult to predict, subject to substantial risks and delays and often vary depending on the particular disease and development strategy.

Pending our use of the net proceeds from this offering, we intend to invest the net proceeds with a view toward liquidity and capital preservation.

Table of Contents**Market price of common stock**

Our common stock began trading on the NASDAQ Global Market under the symbol ALDR on May 8, 2014. Prior to that date, there was no public trading of our common stock. The following table sets forth, for the periods indicated, the high and low sales prices per share of our common stock as reported on the NASDAQ Global Market.

| | | |
|--|-------------|------------|
| Year Ended December 31, 2014: | High | Low |
| Second quarter (from May 8, 2014) | \$ 22.95 | \$ 9.50 |
| Third quarter | 20.64 | 11.19 |
| Fourth quarter | 30.35 | 10.52 |
| Year Ended December 31, 2015: | High | Low |
| First quarter | \$ 32.30 | \$ 23.81 |
| Second quarter | 53.14 | 22.23 |
| Third quarter | 54.90 | 28.67 |
| Fourth quarter | 39.43 | 26.21 |
| Year Ended December 31, 2016: | High | Low |
| First quarter | \$ 32.96 | \$ 15.82 |
| Second quarter (through April 6, 2016) | 26.34 | 23.70 |

On April 6, 2016, the last reported sale price of our common stock on the NASDAQ Global Market was \$25.92 per share. As of March 31, 2016, we had 18 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. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

Dividend policy

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.

Table of Contents**Capitalization**

The following table sets forth our cash, cash equivalents and investments and capitalization as of December 31, 2015:

on an actual basis; and

on an as adjusted basis to reflect the sale by us of 5,376,344 shares of common stock in this offering at the public offering price of \$23.25 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

The following information should be read in conjunction with the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and financial statements and related notes in our most recent Annual Report on Form 10-K and other documents incorporated by reference in this prospectus supplement and the accompanying prospectus. For more details on how you can obtain our periodic reports and other information, see "Where you can find more information" in this prospectus supplement.

| (In thousands, except share and per share data) | As of December 31, 2015 | |
|--|--------------------------------|--------------------|
| | Actual | As Adjusted |
| Cash, cash equivalents and investments | \$ 381,012 | \$ 498,012 |
| Stockholders' equity: | | |
| Preferred stock, \$0.0001 par value, 10,000,000 shares authorized, no shares issued and outstanding, actual and as adjusted | \$ | \$ |
| Common stock par value \$0.0001 per share; 200,000,000 shares authorized, 43,706,789 shares issued and outstanding, actual; 200,000,000 shares authorized, 49,083,133 shares issued and outstanding, as adjusted | 4 | 5 |
| Additional paid-in capital | 610,390 | 727,389 |
| Accumulated other comprehensive loss | (501) | (501) |
| Accumulated deficit | (222,376) | (222,376) |
| Total stockholders' equity | 387,517 | 504,517 |
| Total capitalization | \$ 387,517 | \$ 504,517 |

The outstanding share information in the table above is based on 43,706,789 shares of common stock outstanding as of December 31, 2015 and excludes:

2,961,107 shares of common stock issuable upon the exercise of outstanding stock options as of December 31, 2015, at a weighted-average exercise price of \$14.29 per share;

3,027,092 shares of common stock reserved for future issuance under our 2014 Equity Incentive Plan, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this benefit plan; and

458,631 shares of common stock reserved for issuance under our 2014 Employee Stock Purchase Plan, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this benefit plan.

Table of Contents**Dilution**

Dilution is the amount by which the price paid by the purchasers of the shares of common stock sold in the offering exceeds the net tangible book value per share of common stock after the offering. Net tangible book value per share is determined by subtracting our total liabilities from the total book value of our tangible assets and dividing the difference by the number of shares of common stock deemed to be outstanding at that date.

Our historical net tangible book value as of December 31, 2015 was \$387.5 million, or \$8.87 per share.

After giving effect to the sale of 5,376,344 shares of common stock in this offering at the public offering price of \$23.25 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of December 31, 2015, would have been \$504.5 million, or \$10.28 per share. This represents an immediate increase in as adjusted net tangible book value of \$1.41 per share to our existing stockholders and immediate dilution of \$12.97 per share to new investors purchasing common stock in this offering.

The following table illustrates this dilution on a per share basis to new investors:

| | |
|--|----------|
| Public offering price per share | \$ 23.25 |
| Historical net tangible book value per share at December 31, 2015 | \$ 8.87 |
| Increase per share attributable to new investors | 1.41 |
| As adjusted net tangible book value per share after giving effect to this offering | 10.28 |
| Dilution in adjusted net tangible book value per share to new investors | \$ 12.97 |

If the underwriters exercise in full their option to purchase an additional 806,451 shares of our common stock at the public offering price of \$23.25 per share, the as adjusted net tangible book value per share after giving effect to this offering would be \$10.47 per share, representing an immediate increase to existing stockholders of \$1.60 per share, and immediate dilution to new investors in this offering of \$12.78 per share.

The outstanding share information in the table above is based on 43,706,789 shares of common stock outstanding as of December 31, 2015 and excludes:

2,961,107 shares of common stock issuable upon the exercise of outstanding stock options as of December 31, 2015, at a weighted-average exercise price of \$14.29 per share;

3,027,092 shares of common stock reserved for future issuance under our 2014 Equity Incentive Plan, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this benefit plan; and

458,631 shares of common stock reserved for issuance under our 2014 Employee Stock Purchase Plan, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this benefit plan.

To the extent that options are exercised, new options are issued under our equity incentive plans, or we issue additional shares of common stock in the future, there will be further dilution to investors participating in this offering.

Table of Contents

Material U.S. federal income tax consequences to non-U.S. holders

The following summary describes the material U.S. federal income tax consequences of the acquisition, ownership and disposition of our common stock acquired in this offering by Non-U.S. Holders (as defined below). This discussion does not address all aspects of U.S. federal income taxes and does not deal with foreign, state and local consequences that may be relevant to Non-U.S. Holders in light of their particular circumstances, nor does it address U.S. federal tax consequences other than income taxes (not addressed, for instance, are gift and except to the limited extent set forth below, estate taxes). Special rules different from those described below may apply to certain Non-U.S. Holders that are subject to special treatment under the Code, such as financial institutions, insurance companies, tax-exempt organizations, broker-dealers and traders in securities, U.S. expatriates, controlled foreign corporations, passive foreign investment companies, corporations that accumulate earnings to avoid U.S. federal income tax, persons that hold our common stock as part of a straddle, hedge, conversion transaction, synthetic security or integrated investment or other risk reduction strategy, persons subject to the alternative minimum tax or federal Medicare contribution tax on net investment income, partnerships and other pass-through entities, and investors in such pass-through entities. Such Non-U.S. Holders are urged to consult their own tax advisors to determine the U.S. federal, state, local and other tax consequences that may be relevant to them. Furthermore, the discussion below is based upon the provisions of the Code, and Treasury regulations, rulings and judicial decisions thereunder as of the date hereof, and such authorities may be repealed, revoked or modified, perhaps retroactively, so as to result in U.S. federal income tax consequences different from those discussed below. We have not requested a ruling from the U.S. Internal Revenue Service, or IRS, with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions. This discussion assumes that the Non-U.S. Holder holds our common stock as a capital asset within the meaning of Section 1221 of the Code (generally, property held for investment).

Persons considering the purchase of our common stock pursuant to this offering should consult their own tax advisors concerning the U.S. federal income, estate, and other tax consequences of acquiring, owning and disposing of our common stock in light of their particular situations as well as any consequences arising under the laws of any other taxing jurisdiction, including any state, local or foreign tax consequences.

For the purposes of this discussion, a Non-U.S. Holder is, for U.S. federal income tax purposes, a beneficial owner of common stock that is neither a U.S. Holder, nor a partnership (or other entity treated as a partnership for U.S. federal income tax purposes regardless of its place of organization or formation). A U.S. Holder means a beneficial owner of our common stock that is for U.S. federal income tax purposes (1) an individual who is a citizen or resident of the U.S., (2) a corporation or other entity treated as a corporation created or organized in or under the laws of the U.S., any state thereof or the District of Columbia, (3) an estate the income of which is subject to U.S. federal income taxation regardless of its source or (4) a trust if it (a) is subject to the primary supervision of a court within the U.S. and one or more U.S. persons have the authority to control all substantial decisions of the trust or (b) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

Distributions

Distributions, if any, made on our common stock to a Non-U.S. Holder of our common stock to the extent made out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles) generally will constitute dividends for U.S. tax purposes and will be subject to withholding tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. To obtain a reduced rate of withholding under a treaty, a Non-U.S. Holder generally will be required to provide us with a properly executed IRS Form W-8BEN (in the case of individuals), IRS Form W-8BEN-E (in the case of entities), or other appropriate form,

Table of Contents

including a U.S. taxpayer identification number, and certifying the Non-U.S. Holder's entitlement to benefits under that treaty. This certification must be provided to us or our paying agent prior to the payment of dividends and must be updated periodically. In the case of a Non-U.S. Holder that is an entity, Treasury Regulations and the relevant tax treaty provide rules to determine whether, for purposes of determining the applicability of a tax treaty, dividends will be treated as paid to the entity or to those holding an interest in that entity. If a Non-U.S. Holder holds stock through a financial institution or other agent acting on the holder's behalf, the holder will be required to provide appropriate documentation to such agent. The holder's agent will then be required to provide certification to us or our paying agent, either directly or through other intermediaries. If you are eligible for a reduced rate of U.S. federal withholding tax under an income tax treaty and you do not timely provide the required certification, you may be able to obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for a refund with the IRS.

We generally are not required to withhold tax on dividends paid to a Non-U.S. Holder that are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the U.S. (and, if required by an applicable income tax treaty, are attributable to a permanent establishment that such holder maintains in the U.S.) if a properly executed IRS Form W-8ECI, stating that the dividends are so connected, is furnished to us (or, if stock is held through a financial institution or other agent, to such agent). In general, such effectively connected dividends will be subject to U.S. federal income tax, on a net income basis at the regular graduated rates applicable to U.S. residents. A corporate Non-U.S. Holder receiving effectively connected dividends may also be subject to an additional branch profits tax, which is imposed, under certain circumstances, at a rate of 30% (or such lower rate as may be specified by an applicable treaty) on the corporate Non-U.S. Holder's effectively connected earnings and profits, subject to certain adjustments. Non-U.S. Holders should consult their tax advisors regarding any applicable income tax treaties that may provide for different rules.

To the extent distributions on our common stock, if any, exceed our current and accumulated earnings and profits, they will first reduce the Non-U.S. Holder's adjusted basis in our common stock, but not below zero, and then will be treated as gain to the extent of any excess, and taxed in the same manner as gain realized from a sale or other disposition of common stock as described in the next section.

Gain on disposition of our common stock

Subject to the discussion below regarding backup withholding and foreign accounts, a Non-U.S. Holder generally will not be subject to U.S. federal income tax with respect to gain realized on a sale or other disposition of our common stock unless (1) the gain is effectively connected with a trade or business of such holder in the U.S. (and, if required by an applicable income tax treaty, is attributable to a permanent establishment that such holder maintains in the U.S.), (2) the Non-U.S. Holder is a nonresident alien individual and is present in the U.S. for 183 or more days in the taxable year of the disposition and certain other conditions are met or (3) we are or have been a United States real property holding corporation within the meaning of Code Section 897(c)(2) at any time within the shorter of the five-year period preceding such disposition or such holder's holding period. In general, we would be a U.S. real property holding corporation if interests in U.S. real estate comprised (by fair market value) at least half of our business assets. We believe that we are not, and do not anticipate becoming, a U.S. real property holding corporation. However, because the determination of whether we are a U.S. real property holding corporation depends on the fair market value of our U.S. real property relative to the fair market value of our other business assets, there can be no assurance that we will not become a U.S. real property holding corporation in the future. Even if we are treated as a U.S. real property holding corporation, gain realized by a Non-U.S. Holder on a disposition of our common stock will not be subject to U.S. federal income tax so long as (a) the Non-U.S. Holder owned, directly, indirectly and constructively, no more than five percent of our common stock at all times within the shorter of (i) the five-year period preceding the disposition or (ii) the holder's holding period and (b) our common stock is regularly traded

Table of Contents

on an established securities market. There can be no assurance that our common stock will qualify as regularly traded on an established securities market. If any gain on your disposition is taxable because we are a United States real property holding corporation and your ownership of our common stock exceeds 5%, you will be taxed on such disposition generally in the manner applicable to U.S. persons and in addition, a purchaser of your common stock may be required to withhold tax with respect to that obligation.

If you are a Non-U.S. Holder described in (1) above, you will be required to pay tax on the net gain derived from the sale at regular graduated U.S. federal income tax rates, and corporate Non-U.S. Holders described in (a) above may be subject to the additional branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. If you are an individual Non-U.S. Holder described in (2) above, you will be required to pay a flat 30% tax on the gain derived from the sale, which gain may be offset by U.S. source capital losses if you timely file U.S. tax returns reporting the losses (even though you are not considered a resident of the U.S.).

Information reporting requirements and backup withholding

Generally, we must report information to the IRS with respect to any dividends we pay on our common stock (even if the payments are not subject to withholding) including the amount of any such dividends, the name and address of the recipient, and the amount, if any, of tax withheld. A similar report is sent to the holder to whom any such dividends are paid. Pursuant to tax treaties or certain other agreements, the IRS may make its reports available to tax authorities in the recipient's country of residence.

Dividends paid by us (or our paying agents) to a Non-U.S. Holder may also be subject to U.S. backup withholding. U.S. backup withholding generally will not apply to a Non-U.S. Holder who provides a properly executed IRS Form W-8BEN (in the case of individuals) or IRS Form W-8BEN-E (in the case of entities), IRS Form W-8ECI or otherwise establishes an exemption. Notwithstanding the foregoing, backup withholding may apply if the payor has actual knowledge, or reason to know, that the holder is a U.S. person who is not an exempt recipient.

Under current U.S. federal income tax law, U.S. information reporting and backup withholding requirements generally will apply to the proceeds of a disposition of our common stock effected by or through a U.S. office of any broker, U.S. or foreign, except that information reporting and such requirements may be avoided if the holder provides a properly executed IRS Form W-8BEN (in the case of individuals) or IRS Form W-8BEN-E (in the case of entities) or otherwise meets documentary evidence requirements for establishing Non-U.S. Holder status or otherwise establishes an exemption. Generally, U.S. information reporting and backup withholding requirements will not apply to a payment of disposition proceeds to a Non-U.S. Holder where the transaction is effected outside the U.S. through a non-U.S. office of a non-U.S. broker. Information reporting and backup withholding requirements may, however, apply to a payment of disposition proceeds if the broker has actual knowledge, or reason to know, that the holder is, in fact, a U.S. person. For information reporting purposes, certain brokers with substantial U.S. ownership or operations will generally be treated in a manner similar to U.S. brokers.

Any amounts of tax withheld under the backup withholding rules may be credited against the tax liability of persons subject to backup withholding, provided that the required information is timely furnished to the IRS.

Foreign accounts

A U.S. federal withholding tax of 30% may apply to dividends on and the gross proceeds of a disposition of our common stock paid to a foreign financial institution (as specifically defined by applicable rules) unless such institution enters into an agreement with the U.S. government to withhold on certain payments and to collect

Table of Contents

and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which includes certain equity holders of such institution, as well as certain account holders that are foreign entities with U.S. owners). This U.S. federal withholding tax of 30% will also apply to dividends on and the gross proceeds of a disposition of our common stock to a non-financial foreign entity unless such entity provides the withholding agent with either a certification that it does not have any substantial direct or indirect U.S. owners or provides information regarding substantial direct and indirect U.S. owners of the entity. The withholding tax described above will not apply if the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from the rules. Under certain circumstances, a Non-U.S. Holder might be eligible for refunds or credits of such taxes. Holders are encouraged to consult with their own tax advisors regarding the possible implications of these rules to their investment in our common stock.

The withholding provisions described above apply currently to payments of dividends and will apply to payments of gross proceeds from a sale or other disposition of common stock on or after January 1, 2019.

Federal estate tax

If an individual Non-U.S. Holder is treated as the owner of, or has made certain lifetime transfers of, an interest in our common stock, that person's gross estate will include the value thereof for U.S. federal estate tax purposes, and may be subject to U.S. federal estate tax unless an applicable estate tax treaty provides otherwise, even though such individual was not a citizen or resident of the U.S. at the time of his or her death.

EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAW.

Table of Contents**Underwriting**

We are offering the shares of common stock described in this prospectus supplement through a number of underwriters. J.P. Morgan Securities LLC, Leerink Partners LLC and Wells Fargo Securities, LLC are acting as representatives of the underwriters. We have entered into an underwriting agreement with the underwriters. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters, and each underwriter has severally agreed to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus supplement, the number of shares of common stock listed next to its name in the following table:

| Name | Number of Shares |
|-----------------------------|---------------------|
| J.P. Morgan Securities LLC | 2,688,172 |
| Leerink Partners LLC | 1,612,903 |
| Wells Fargo Securities, LLC | 1,075,269 |
| Total | 5,376,344 |

The underwriters are committed to purchase all the common shares offered by us if they purchase any shares. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

The underwriters propose to offer the common shares directly to the public at the initial public offering price set forth on the cover page of this prospectus supplement and to certain dealers at that price less a concession not in excess of \$ 0.837 per share. After the initial public offering of the shares, the offering price and other selling terms may be changed by the underwriters.

The underwriters have an option to buy up to 806,451 additional shares of common stock from us to cover sales of shares by the underwriters which exceed the number of shares specified in the table above. The underwriters have 30 days from the date of this prospectus supplement to exercise this option to purchase additional shares. If any shares are purchased with this option to purchase additional shares, the underwriters will purchase shares in approximately the same proportion as shown in the table above. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

The underwriting fee is equal to the public offering price per share of common stock less the amount paid by the underwriters to us per share of common stock. The underwriting fee is \$ 1.395 per share. The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

| | Without option exercise | With full option exercise |
|-----------|-------------------------------|---------------------------------|
| Per Share | \$ 1.395 | \$ 1.395 |
| Total | \$ 7,500,000 | \$ 8,624,999 |

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the underwriting discounts and commissions, will be

Table of Contents

approximately \$0.5 million. We have agreed to reimburse the underwriters for all expenses and fees related to the review of this offering by the Financial Industry Regulatory Authority up to \$5,000.

A prospectus in electronic format may be made available on the web sites maintained by one or more underwriters, or selling group members, if any, participating in the offering. The underwriters may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters and selling group members that may make Internet distributions on the same basis as other allocations.

We have agreed that we will not offer, sell, contract to sell, pledge or otherwise dispose of, directly or indirectly, or file with the SEC a registration statement under the Securities Act relating to, any shares of our common stock or securities convertible into or exchangeable or exercisable for any shares of our common stock, or publicly disclose the intention to make any offer, sale, pledge, disposition or filing, without the prior written consent of J.P. Morgan Securities LLC for a period of 90 days after the date of this prospectus supplement, except for issuances of (1) the securities to be sold to the underwriters in this offering, (2) any securities issued upon the exercise of options or warrants or the conversion of a security outstanding on the date of this prospectus supplement and described herein, (3) the grant of options or the issuance of securities by us to employees, officers, directors, advisors or consultants pursuant to employee benefit plans in effect on the date of this prospectus supplement and described herein and in the accompanying prospectus; (4) our filing of a registration statement on Form S-8 with the SEC or an amendment to any such registration statement on file with the SEC in respect of any securities issued under or the grant of any award pursuant to an employee benefit plan in effect on the date of this prospectus supplement and described herein or (5) the sale or issuance of or entry into an agreement to sell or issue securities in connection with any (a) mergers, (b) acquisition of securities, businesses, properties or other assets, (c) joint ventures, or (d) strategic alliances; provided, that the aggregate number of securities or securities convertible into or exercisable for such securities that we may sell or issue or agree to sell or issue shall not exceed 5% of the total number of shares of our securities issued and outstanding immediately following the completion of this offering; and provided further, that each recipient of securities or securities convertible into or exercisable for such securities executes and delivers a lock-up agreement in a form satisfactory to the representatives.

Our officers, directors and certain of our stockholders affiliated with members of our board of directors have agreed, subject to certain exceptions, that they will not offer, sell, contract to sell, pledge or otherwise dispose of, directly or indirectly, any shares of our common stock or securities convertible into or exchangeable or exercisable for any shares of our common stock, enter into a transaction that would have the same effect, or enter into any swap, hedge or other arrangement that transfers, in whole or in part, any of the economic consequences of ownership of our common stock, whether any of these transactions are to be settled by delivery of our common stock or other securities, in cash or otherwise, or publicly disclose the intention to make any offer, sale, pledge or disposition, or to enter into any transaction, swap, hedge or other arrangement, or make any demand for or exercise any right with respect to the registration of our common stock, without, in each case, the prior written consent of J.P. Morgan Securities LLC for a period of 60 days after the date of this prospectus supplement.

The foregoing restrictions do not apply to: (1) the sale and transfer of securities to the underwriters, if any; (2) sales of securities acquired in open market transactions after the completion of this offering or in this offering, provided that no filing under Section 16(a) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, or other public announcement is required or voluntarily made in connection with such sales (3) transfers of securities (a) by bona fide gift, (b) to the spouse, domestic partner, parent, child or grandchild of the officer, director or security holder or to a trust formed for the benefit of such persons or the officer, director or security holder, (c) by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the officer, director or security holder,

Table of Contents

(d) if the security holder is an individual, solely by operation of law, such as pursuant to a qualified domestic order or in connection with a divorce settlement, (e) to us either (i) pursuant to any contractual arrangement in effect on the date of the agreement that provides for the repurchase of the securities of the officer, director or security holder by us or (ii) in connection with the termination of such person's employment with us; (f) in connection with a merger or sale of all or substantially all of our company, regardless of how such a transaction is structured, (g) if the security holder is a corporation, partnership or other business entity (i) to another corporation, partnership or other business entity that controls, is controlled by or is under common control with the security holder or (ii) as part of a disposition, transfer or distribution without consideration by the security holder to its equity holders, general partners or limited partners or (h) if the security holder is a trust, to a trustee or beneficiary of the trust; provided that each transferee, donee or distributee executes and delivers a lock-up agreement in a form satisfactory to the representatives; and provided, further, that no filing under Section 16(a) of the Exchange Act, as amended, or the Exchange Act, or other public announcement is required or voluntarily made during the applicable restricted period; (4) the transfer of securities to us upon a vesting event of the securities or upon the exercise of options to purchase securities, in each case on a cashless or net exercise basis or to cover tax withholding obligations of the officer, director or security holder in connection with such vesting or exercise; provided that no filing under Section 16(a) of the Exchange Act or other public announcement is required or voluntarily made in connection with such vesting or exercise; (5) the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of securities; provided that such plan does not provide for the transfer of securities during the applicable restricted period and no public announcement or filing under the Exchange Act regarding the establishment of such plan is required or made voluntarily by or on behalf of the officer, director, security holder or us; or (6) the transfer of securities under a trading plan pursuant to Rule 10b5-1 that has previously been established, provided that any public announcement or filing shall include a statement to the effect that the sale occurred pursuant to such trading plan pursuant to Rule 10b5-1.

J.P. Morgan Securities LLC on behalf of the underwriters, in its sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time with or without notice.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act of 1933.

Our common stock is listed on the NASDAQ Global Market under the symbol ALDR.

In connection with this offering, the underwriters may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of common stock in the open market for the purpose of preventing or retarding a decline in the market price of the common stock while this offering is in progress. These stabilizing transactions may include making short sales of the common stock, which involves the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be covered shorts, which are short positions in an amount not greater than the underwriters' option to purchase additional shares referred to above, or may be naked shorts, which are short positions in excess of that amount. The underwriters may close out any covered short position either by exercising their option to purchase additional shares, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in the open market compared to the price at which the underwriters may purchase shares through the option to purchase additional shares. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares in the open market to cover the position.

Table of Contents

The underwriters have advised us that, pursuant to Regulation M of the Securities Act of 1933, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the common stock, including the imposition of penalty bids. This means that if the representatives of the underwriters purchase common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares as part of this offering to repay the underwriting discount received by them.

These activities may have the effect of raising or maintaining the market price of the common stock or preventing or retarding a decline in the market price of the common stock, and, as a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on The NASDAQ Global Market, in the over-the-counter market or otherwise.

In addition, in connection with this offering certain of the underwriters (and selling group members) may engage in passive market making transactions in our common stock on The NASDAQ Global Market prior to the pricing and completion of this offering. Passive market making consists of displaying bids on The NASDAQ Global Market no higher than the bid prices of independent market makers and making purchases at prices no higher than these independent bids and effected in response to order flow. Net purchases by a passive market maker on each day are generally limited to a specified percentage of the passive market maker's average daily trading volume in the common stock during a specified period and must be discontinued when such limit is reached. Passive market making may cause the price of our common stock to be higher than the price that otherwise would exist in the open market in the absence of these transactions. If passive market making is commenced, it may be discontinued at any time.

Certain of the underwriters and their affiliates have provided in the past to us and our affiliates and may provide from time to time in the future certain commercial banking, financial advisory, investment banking and other services for us and such affiliates in the ordinary course of their business, for which they have received and may continue to receive customary fees and commissions. In addition, from time to time, certain of the underwriters and their affiliates may effect transactions for their own account or the account of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans, and may do so in the future.

Selling Restrictions

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

Canada

The shares of our common stock may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument

Table of Contents

31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares of our common stock must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 (or, in the case of securities issued or guaranteed by the government of a non-Canadian jurisdiction, section 3A.4) of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

United Kingdom

In the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are qualified investors (as defined in the Prospectus Directive) (i) who have professional experience in matters relating to investments falling within Article 19 (5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the Order) and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as relevant persons).

Any person in the United Kingdom that is not a relevant person should not act or rely on the information included in this document or use it as basis for taking any action. In the United Kingdom, any investment or investment activity that this document relates to may be made or taken exclusively by relevant persons. Any person in the United Kingdom that is not a relevant person should not act or rely on this document or any of its contents.

European Economic Area

In relation to each Member State of the European Economic Area (each, a Relevant Member State), no offer of shares may be made to the public in that Relevant Member State other than:

- A. to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- B. to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives; or
- C. in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of shares shall require the Company or the representatives to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

Each person in a Relevant Member State who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed that it is a qualified investor within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive. In the case of

Table of Contents

any shares being offered to a financial intermediary as that term is used in Article 3(2) of the Prospectus Directive, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Relevant Member State to qualified investors as so defined or in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

The Company, the representatives and their affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

This prospectus supplement has been prepared on the basis that any offer of shares in any Relevant Member State will be made pursuant to an exemption under the Prospectus Directive from the requirement to publish a prospectus for offers of shares. Accordingly any person making or intending to make an offer in that Relevant Member State of shares which are the subject of the offering contemplated in this prospectus supplement may only do so in circumstances in which no obligation arises for the Company or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Directive in relation to such offer. Neither the Company nor the underwriters have authorized, nor do they authorize, the making of any offer of shares in circumstances in which an obligation arises for the Company or the underwriters to publish a prospectus for such offer.

For the purpose of the above provisions, the expression "an offer to the public" in relation to any shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in the Relevant Member State by any measure implementing the Prospectus Directive in the Relevant Member State and the expression "Prospectus Directive" means Directive 2003/71/EC (including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member States) and includes any relevant implementing measure in the Relevant Member State and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

Table of Contents

Legal matters

Cooley LLP, Seattle, Washington will pass upon the validity of the shares of common stock offered hereby. As of the date of this prospectus supplement, an individual attorney at Cooley LLP beneficially owned 4,998 shares of our common stock. Wilson Sonsini Goodrich & Rosati, Professional Corporation, Seattle, Washington, is representing the underwriters in connection with the offering.

Experts

The consolidated financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this prospectus supplement by reference to the Annual Report on Form 10-K for the year ended December 31, 2015 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

Where you can find more information

We file annual, quarterly and other reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>. You may also read and copy any document we file at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. You may obtain information on the operation of the public reference rooms by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website that contains reports, proxy statements, and other information about issuers, like us, that file electronically with the SEC. The address of that website is www.sec.gov.

Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, including any amendments to those reports, and other information that we file with or furnish to the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act can also be accessed free of charge on the Investor section of our website, which is located at investor.alderbio.com. These filings will be available as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. The information contained in, or that can be accessed through, our website is not incorporated by reference into this prospectus supplement.

Table of Contents

Incorporation of certain information by reference

The SEC allows us to incorporate by reference information from other documents that we file with it, which means that we can disclose important information to you by referring you to those documents instead of having to repeat the information in this prospectus supplement or the accompanying prospectus. The information incorporated by reference is considered to be part of this prospectus supplement and the accompanying prospectus, and later information that we file with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings we will make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, after the date of the prospectus supplement (other than information furnished under Item 2.02 or Item 7.01 of Form 8-K) and before the sale of all the securities covered by this prospectus supplement:

our Annual Report on Form 10-K for the year ended December 31, 2015, filed with the SEC on February 23, 2016;

our Current Reports on Form 8-K filed with the SEC on February 3, 2016 and March 28, 2016 (as amended on March 29, 2016); and

the description of our common stock in our registration statement on Form 8-A, filed with the SEC on April 29, 2014, including any amendments or reports filed for the purposes of updating such description.

We will provide to each person, including any beneficial owner, to whom a prospectus supplement or the underlying prospectus is delivered, without charge upon the written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus supplement but not delivered with the prospectus, including exhibits that are specifically incorporated by reference into such documents. Requests for such copies should be directed to us at the following address:

Alder BioPharmaceuticals, Inc.

Attn: Investor Relations

11804 North Creek Parkway South

Bothell, WA 98011 (425) 205-2900

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this prospectus supplement and the accompanying prospectus.

S-62

Table of Contents

PROSPECTUS

\$350,000,000

Common Stock

We may, from time to time, offer and sell up to \$350,000,000 of shares of our common stock in amounts, at prices and on terms described in one or more supplements to this prospectus. We may also authorize one or more free writing prospectuses to be provided to you in connection with these offerings.

This prospectus describes some of the general terms that may apply to an offering of our common stock. The specific terms and any other information relating to a specific offering will be set forth in a supplement to this prospectus or in a free writing prospectus, or may be set forth in one or more documents incorporated by reference in this prospectus. You should read this prospectus, the information incorporated by reference into this prospectus and any applicable prospectus supplement or free writing prospectus carefully before you invest.

Shares of our common stock may be sold by us to or through underwriters or dealers, directly to purchasers or through agents designated from time to time. For additional information on the methods of sale, you should refer to the section titled **Plan of Distribution** in this prospectus and in any applicable prospectus supplement. If any underwriters are involved in the sale of any common stock with respect to which this prospectus is being delivered, the names of such underwriters and any applicable discounts or commissions and options to purchase additional shares will be set forth in a prospectus supplement. The price to the public of such securities and the net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

Our common stock is listed on The NASDAQ Global Market under the symbol **ALDR**. On June 1, 2015, the last reported sale price of our common stock on The NASDAQ Global Market was \$41.85 per share.

Investing in our common stock involves a high degree of risk. See Risk Factors on page 2 of this prospectus and any similar sections contained in an applicable prospectus summary and as updated in our future filings made with the Securities and Exchange Commission that are incorporated by reference into this prospectus for factors you should consider before investing in our common stock.

This prospectus may not be used to offer or sell any securities unless accompanied by a prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is June 2, 2015.

Table of Contents

TABLE OF CONTENTS

| | Page |
|--|-------------|
| <u>About this Prospectus</u> | i |
| <u>The Company</u> | 1 |
| <u>Risk Factors</u> | 2 |
| <u>Special Note Regarding Forward-Looking Statements</u> | 2 |
| <u>Use of Proceeds</u> | 4 |
| <u>Description of Capital Stock</u> | 5 |
| <u>Plan of Distribution</u> | 10 |
| <u>Legal Matters</u> | 12 |
| <u>Experts</u> | 12 |
| <u>Where You Can Find More Information</u> | 12 |
| <u>Incorporation of Certain Information by Reference</u> | 12 |

We have not authorized anyone to provide you with information other than the information contained in or incorporated by reference into this prospectus or any applicable prospectus supplement or free writing prospectus that we may authorize in connection with an offering of our common stock. We are not making an offer to sell or seeking an offer to buy shares of our common stock under this prospectus or any applicable prospectus supplement or free writing prospectus in any jurisdiction where the offer or sale is not permitted. The information contained in this prospectus, any applicable prospectus supplement or free writing prospectus, and the documents incorporated by reference herein and therein are accurate only as of their respective dates, regardless of the time of delivery of this prospectus or any sale of a security.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or SEC, using a shelf registration process as a well-known seasoned issuer, as defined in Rule 405 under the Securities Act of 1933, as amended, or the Securities Act. Under this shelf registration statement, we may sell from time to time in one or more offerings the common stock described in this prospectus.

Each time we sell any common stock under this prospectus, we will provide a prospectus supplement that will contain more specific information about the terms of that offering. We may also authorize one or more free writing prospectuses to be provided to you that may contain material information relating to an offering of our common stock. The prospectus supplement, or information incorporated by reference in this prospectus or any prospectus supplement that is of a more recent date, may also add, update or change information contained in this prospectus. To the extent that any statement that we make in a prospectus supplement is inconsistent with statements made in this prospectus, the statements made in this prospectus will be deemed modified or superseded by those made in the prospectus supplement. You should read both this prospectus and any applicable prospectus supplement, together with the additional information described below under the heading *Where You Can Find More Information*. This prospectus may not be used to consummate a sale of our common stock unless it is accompanied by a prospectus supplement.

Table of Contents

THE COMPANY

Company Overview

Alder BioPharmaceuticals is 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. We intend to initiate additional clinical trials in both frequent episodic and chronic migraine 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 trial and is currently in a second Phase 2b clinical trial. 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. 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.

Company 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 on, or that can be accessed through, our website is not part of, and is not incorporated by reference into this prospectus and should not be considered to be part of this prospectus.

Unless the context otherwise requires, we use the terms Alder, company, we, us and our in this prospectus to refer to Alder BioPharmaceuticals, Inc. and, where appropriate, our consolidated subsidiaries. Alder and the Alder logo are the property of Alder BioPharmaceuticals, Inc. All other trademarks or trade names referred to in this prospectus and any prospectus supplement are the property of their respective owners.

Table of Contents

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before deciding whether to invest in our common stock, you should consider carefully the risks and uncertainties described under the heading **Risk Factors** contained in the applicable prospectus supplement and any related free writing prospectus, and discussed under the section titled **Risk Factors** contained in our most recent annual report on Form 10-K and in our most recent quarterly report on Form 10-Q, as well as any amendments thereto reflected in subsequent filings with the SEC, which are incorporated by reference into this prospectus in their entirety, together with other information in this prospectus, the documents incorporated by reference and any free writing prospectus that we may authorize for use in connection with a specific offering. The risks described in these documents are not the only ones we face, but those that we consider to be material. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. Past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment. Please also carefully read the section below under the heading **Special Note Regarding Forward-Looking Statements**.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference contain forward-looking statements that are based on our beliefs and assumptions and on information currently available to our management. Discussions containing these forward-looking statements may be found, among other places, in the applicable prospectus supplement, in any free writing prospectus we may authorize for use in connection with a specific offering, in the sections titled **Business**, **Risk Factors** and **Management's Discussion and Analysis of Financial Condition and Results of Operations** incorporated by reference from our most recent annual report on Form 10-K and in our most recent quarterly report on Form 10-Q, as well as any amendments thereto reflected in subsequent filings with the SEC. Forward-looking statements include, but are not limited to, statements about:

our ability to obtain and maintain regulatory approval of our product candidates;

our ability to successfully commercialize any of our products that are approved;

the rate and degree of market acceptance of our products;

our estimates of our expenses, ongoing losses, future revenues, capital requirements and our needs for or ability to obtain additional financing;

our ability to obtain and maintain intellectual property protection for our products and product candidates;

the ability to scale up manufacturing of our product candidates to commercial scale;

our reliance on our future collaboration partners' performance, over which we do not have control;

the actual receipt and timing of any milestone payments or royalties from our collaborators;

our ability to successfully establish and successfully maintain appropriate collaborations and derive significant revenues from those collaborations;

our reliance on third parties to conduct our clinical studies;

our reliance on third-party contract manufacturers to manufacture and supply our product candidates for us;

our ability to identify and develop new products and product candidates;

our ability to enroll patients in our clinical studies at the pace that we project;

Table of Contents

our ability to retain and recruit key personnel;

our financial performance; and

developments and projections relating to our competitors or our industry.

In some cases, you can identify forward-looking statements by terms such as may, will, should, could, would, plans, anticipates, believes, estimates, projects, predicts, potential and similar expressions intended to identify forward-looking statements. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance time frames or achievements to be materially different from any future results, performance, time frames or achievements expressed or implied by the forward-looking statements. We discuss many of these risks, uncertainties and other factors in greater detail under the section titled Risk Factors contained in the applicable prospectus supplement, in any related free writing prospectuses that we have authorized for use in connection with a specific offering, and in our most recent annual report on Form 10-K and in our most recent quarterly report on Form 10-Q, as well as any amendments thereto reflected in subsequent filings with the SEC. Given these risks, uncertainties and other factors, you should not place undue reliance on these forward-looking statements. Also, these forward-looking statements represent our estimates and assumptions only as of the date such forward-looking statements are made. You should read carefully this prospectus, any applicable prospectus supplement and any related free writing prospectuses that we have authorized for use in connection with a specific offering, together with the information incorporated herein by reference as described in the section titled Where You Can Find More Information, completely and with the understanding that our actual future results may be materially different from what we expect. We hereby qualify all of our forward-looking statements by these cautionary statements. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons actual results could differ materially from those anticipated in these forward-looking statements, even if new information becomes available in the future.

Table of Contents

USE OF PROCEEDS

Except as described in any prospectus supplement or in any related free writing prospectus that we have authorized for use in connection with a specific offering, we anticipate using the net proceeds to us from the sale of our common stock for clinical and preclinical development and manufacturing of our product candidates, discovery and development of additional product opportunities, capital expenditures and working capital and other general corporate purposes. Although we currently have no commitments or agreements to acquire or invest in complementary businesses, technologies, product candidates or other intellectual property, our management will have broad discretion as to the allocation of the net proceeds received in any offering and may use these proceeds for that purpose in the future. Pending use of the net proceeds, we intend to invest the net proceeds in interest-bearing, investment-grade securities.

Table of Contents

DESCRIPTION OF CAPITAL STOCK

General

As of the date of this prospectus, our amended and restated certificate of incorporation authorizes us to issue up to 200,000,000 shares of common stock, \$0.0001 par value per share, and 10,000,000 shares of preferred stock, \$0.0001 par value per share. As of March 31, 2015, 37,939,438 shares of common stock were outstanding and no shares of preferred stock were outstanding.

The following summary description of our common stock and preferred stock is based on the provisions of our certificate of incorporation, amended and restated bylaws, the applicable provisions of the Delaware General Corporation Law and the applicable provisions of the Washington Business Corporation Act. This information may not be complete in all respects and is qualified entirely by reference to the provisions of our certificate of incorporation, our bylaws, the Delaware General Corporation Law and the applicable provisions of the Washington Business Corporation Act. For information on how to obtain copies of our certificate of incorporation and our bylaws, which are exhibits to the registration statement of which this prospectus forms a part, see [Where You Can Find More Information](#).

Common Stock

Voting Rights

Each holder of our common stock is entitled to one vote for each share of common stock held on all matters submitted to a vote of stockholders. Cumulative voting for the election of directors is not provided for in our certificate of incorporation, which means that the holders of a majority of our shares of common stock can elect all of the directors then standing for election.

Dividends and Distributions

Subject to preferences that may apply to any shares of preferred stock outstanding at the time, the holders of outstanding shares of our common stock are entitled to receive dividends out of funds legally available at the times and in the amounts that our board of directors may determine.

Liquidation Rights

Upon our liquidation, dissolution or winding-up, the assets legally available for distribution to our stockholders would be distributable ratably among the holders of our common stock and any participating preferred stock outstanding at that time, after payment of liquidation preferences on any outstanding shares of preferred stock and payment of other claims of creditors.

The rights, preferences, and privileges of holders of our common stock are subject to, and may be adversely affected by, the rights of holders of shares of any series of preferred stock that we may designate and issue in the future.

Preemptive or Similar Rights

Our common stock is not entitled to preemptive rights and is not subject to conversion or redemption.

Preferred Stock

Our board of directors may, without further action by our stockholders, fix the rights, preferences, privileges and restrictions of up to an aggregate of 10,000,000 shares of preferred stock in one or more series and authorize their issuance. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting any series

Table of Contents

or the designation of such series, any or all of which may be greater than the rights of our common stock. The issuance of our preferred stock could adversely affect the voting power of holders of our common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change of control or other corporate action. There are currently no shares of preferred stock outstanding, and we have no present plan to issue any shares of preferred stock.

Employee Benefit Plans

As of March 31, 2015, options to purchase an aggregate of 3,118,890 shares of common stock were outstanding under our 2005 Stock Plan and 2014 Equity Incentive Plan, 3,882,134 additional shares of common stock were available for future grant under our 2014 Equity Incentive Plan and 551,864 shares of our common stock were reserved for issuance under our 2014 Employee Stock Purchase Plan.

Registration Rights

We are party to an investor rights agreement which provides certain of our stockholders registration rights, as set forth below. This investor rights agreement was originally entered into in July 2005 and was amended and/or restated from time to time in connection with our preferred stock financings. The registration of shares of our common stock pursuant to the exercise of registration rights described below would enable the holders to sell these shares without restriction under the Securities Act, when the applicable registration statement is declared effective. We will pay the registration expenses, other than underwriting discounts and commissions, of the shares registered pursuant to the demand, piggyback and Form S-3 registrations described below.

Generally, in an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions, to limit the number of shares such holders may include. The demand, piggyback and Form S-3 registration rights described below will expire the later of (1) May 7, 2019 and (2) with respect to each stockholder, at such time as our capital stock is publicly traded and (a) such stockholder is entitled to sell all of its shares pursuant to Rule 144 of the Securities Act or (b) when such stockholder holds less than 1% of our outstanding common stock and is able to sell all its shares in any three-month period without registration in compliance with Rule 144 of the Securities Act.

Demand Registration Rights

As of the date of this prospectus, the holders of an aggregate of approximately 15.3 million shares of our common stock are entitled to certain demand registration rights. The holders of a majority of these shares may, on not more than two occasions, request that we file a registration statement having an aggregate offering price to the public of not less than \$7,500,000 to register all or a portion of their shares.

Piggyback Registration Rights

In connection with the filing of the registration statement of which this prospectus forms a part, the holders of an aggregate of approximately 15.6 million shares of our common stock were entitled to, and the necessary percentage of holders waived, their rights to include their shares of registrable securities in the registration statement of which this prospectus forms a part. If we propose to register any of our securities under the Securities Act either for our own account or for the account of other security holders, the holders of these shares are entitled to certain piggyback registration rights allowing them to include their shares in such registration, subject to certain marketing and other limitations. As a result, whenever we propose to file a registration statement under the Securities Act including a registration statement on Form S-3 as discussed below, other than with respect to a demand registration or a

registration statement on Forms S-4 or S-8, the holders of these shares are entitled to notice of the registration and have the right, subject to limitations that the underwriters may impose on the number of shares included in the registration, to include their shares in the registration.

Table of Contents

Form S-3 Registration Rights

The holders of an aggregate of approximately 15.3 million shares of our common stock are entitled to certain Form S-3 registration rights. Such holders may make a request that we register their shares on Form S-3 if we are qualified to file a registration statement on Form S-3. Such request for registration on Form S-3 must cover securities the aggregate offering price of which, before payment of underwriting discounts and commissions, is at least \$500,000.

Anti-takeover Provisions

Certificate of Incorporation and Bylaws

Our certificate of incorporation provides for our board of directors to be divided into three classes with staggered three-year terms. Only one class of directors is elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Because our stockholders do not have cumulative voting rights, our stockholders holding a majority of the voting power of our shares of common stock outstanding are able to elect all of our directors. The directors may be removed by the stockholders only for cause upon the vote of holders of 66 $\frac{2}{3}$ % of the shares then entitled to vote at an election of directors. Furthermore, the authorized number of directors may be changed only by resolution of our board of directors, and vacancies and newly created directorships on our board of directors may, except as otherwise required by law or determined by our board of directors, only be filled by a majority vote of the directors then serving on the board, even though less than a quorum. Our certificate of incorporation and bylaws provide that all stockholder actions must be effected at a duly called meeting of stockholders and not by a consent in writing. A special meeting of stockholders may be called only by a majority of our whole board of directors, the chair of our board of directors or our chief executive officer. Our bylaws also provide that stockholders seeking to present proposals before a meeting of stockholders to nominate candidates for election as directors at a meeting of stockholders must provide timely advance notice in writing, and specify requirements as to the form and content of a stockholder's notice.

Our certificate of incorporation further provides that the affirmative vote of holders of at least 66 $\frac{2}{3}$ % of the voting power of all of the then outstanding shares of voting stock, voting as a single class, is required to amend certain provisions of our certificate of incorporation, including provisions relating to the structure of our board of directors, the size of the board, removal of directors, and actions by written consent. The affirmative vote of holders of at least 66 $\frac{2}{3}$ % of the voting power of all of the then outstanding shares of voting stock, voting as a single class, is required for our stockholders to amend or repeal our bylaws, although our bylaws may also be amended by a simple majority vote of our whole board of directors.

The foregoing provisions make it more difficult for our existing stockholders to replace our board of directors as well as for another party to obtain control of our company by replacing our board of directors. Because our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of 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 change the control of our company.

These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage certain types of transactions that may involve an actual or threatened acquisition of our company. These provisions are also designed to reduce our vulnerability to an unsolicited acquisition proposal and to discourage certain tactics that may be used in proxy rights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of

detering hostile takeovers or delaying changes in control of our company or our management. As a consequence, these provisions also may inhibit fluctuations in the market price of our stock that could result from actual or rumored takeover attempts.

Table of Contents

Section 203 of the Delaware General Corporation Law

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;

upon closing of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned by (1) persons who are directors and also officers and (2) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines business combination to include the following:

any merger or consolidation involving the corporation and the interested stockholder;

any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;

subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;

any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or

the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines an interested stockholder as an entity or person who, together with the person's affiliates and associates, beneficially owns, or within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

Washington Business Corporation Act

The laws of Washington, where our principal executive offices are located, impose restrictions on certain transactions between certain foreign corporations and significant stockholders. In particular, the Washington Business Corporation Act, or WBCA, prohibits a target corporation, with certain exceptions, from engaging in certain significant business transactions with a person or group of persons which beneficially owns 10% or more of the voting securities of the target corporation, an acquiring person, for a period of five years after such acquisition, unless the transaction or acquisition of shares is approved by a majority of the members of the target corporation's board of directors prior to the time of acquisition. Such prohibited transactions may include, among other things:

any merger or consolidation with, disposition of assets to, or issuance or redemption of stock to or from, the acquiring person;

any termination of 5% or more of the employees of the target corporation as a result of the acquiring person's acquisition of 10% or more of the shares; and

allowing the acquiring person to receive any disproportionate benefit as a stockholder.

Table of Contents

After the five-year period, a significant business transaction may take place as long as it complies with certain fair price provisions of the statute or is approved at an annual or special meeting of stockholders.

We will be considered a target corporation so long as our principal executive office is located in Washington, and: (1) a majority of our employees are residents of the state of Washington or we employ more than 1,000 residents of the state of Washington; (2) a majority of our tangible assets, measured by market value, are located in the state of Washington or we have more than \$50 million worth of tangible assets located in the state of Washington; and (3) any one of the following: (a) more than 10% of our stockholders of record are resident in the state of Washington; (b) more than 10% of our shares are owned of record by residents of the state of Washington; or (c) 1,000 or more of our stockholders of record are resident in the state of Washington.

If we meet the definition of a target corporation, the WBCA may have the effect of delaying, deferring or preventing a change of control.

Listing

Our common stock is listed on The NASDAQ Global Market under the trading symbol ALDR.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC. The transfer agent's address is 6201 1st Avenue, Brooklyn, New York 11219.

Table of Contents

PLAN OF DISTRIBUTION

We may sell our common stock covered by this prospectus in any of three ways (or in any combination):

to or through underwriters or dealers;

directly to one or more purchasers; or

through agents.

We may distribute the common stock:

from time to time in one or more transactions at a fixed price or prices, which may be changed from time to time;

at market prices prevailing at the time of sale;

at prices related to the prevailing market prices; or

at negotiated prices.

Each time we offer and sell shares of our common stock covered by this prospectus, we will provide a prospectus supplement or supplements that will describe the method of distribution and set forth the terms of the offering, including:

the name or names of any underwriters, dealers or agents;

the amounts of securities underwritten or purchased by each of them;

the purchase price of the common stock and the proceeds we will receive from the sale;

any option to purchase additional shares under which underwriters may purchase additional shares of common stock from us;

any underwriting discounts or commissions or agency fees and other items constituting underwriters' or agents' compensation;

the public offering price of the common stock;

any discounts, commissions or concessions allowed or reallocated or paid to dealers; and

any securities exchange or market on which the common stock may be listed.

Any public offering price and any discounts or concessions allowed or reallocated or paid to dealers may be changed from time to time. We may determine the price or other terms of the common stock offered under this prospectus by use of an electronic auction. We will describe how any auction will determine the price or any other terms, how potential investors may participate in the auction and the nature of the obligations of the underwriter, dealer or agent in the applicable prospectus supplement.

Underwriters or dealers may offer and sell the offered common stock from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. If underwriters or dealers are used in the sale of any common stock, the common stock will be acquired by the underwriters or dealers for their own account and may be resold from time to time in one or more transactions described above. The common stock may be either offered to the public through underwriting syndicates represented by managing underwriters, or directly by underwriters or dealers. Generally, the underwriters' or dealers' obligations to purchase the common stock will be subject to certain conditions precedent. The underwriters or dealers will be obligated to purchase all of the common stock if they purchase any of the common stock, unless otherwise specified in the prospectus supplement. We may use underwriters with whom we have a material relationship. We will describe the nature of any such relationship in the prospectus supplement, naming the underwriter.

Table of Contents

We may sell the common stock through agents from time to time. The prospectus supplement will name any agent involved in the offer or sale of the common stock and any commissions we pay to them. Generally, any agent will be acting on a best efforts basis for the period of its appointment. We may authorize underwriters, dealers or agents to solicit offers by certain purchasers to purchase the common stock from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. The contracts will be subject only to those conditions set forth in the prospectus supplement, and the prospectus supplement will set forth any commissions we pay for solicitation of these contracts.

Agents, dealers and underwriters may be entitled to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, or to contribution with respect to payments which the agents, dealers or underwriters may be required to make in respect thereof. Agents, dealers and underwriters may be customers of, engage in transactions with, or perform services for us in the ordinary course of business.

To facilitate the offering of our common stock, underwriters participating in the offering may engage in overallotment, stabilizing transactions, short covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Overallotment involves the sale by the underwriters for the offering of more shares than we sold to them, which creates a short position. This short sales position may involve either covered short sales or naked short sales. Covered short sales are short sales made in an amount not greater than the underwriters' option to purchase additional shares for the offering. The underwriters may close out any covered short position either by exercising their overallotment option or by purchasing shares in the open market. To determine how they will close the covered short position, the underwriters will consider, among other things, the price of common stock available for purchase in the open market, as compared to the price at which they may purchase common stock through their overallotment option. Naked short sales are short sales in excess of the overallotment option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that, in the open market after pricing, there may be downward pressure on the price of the common stock that could adversely affect investors who purchase shares in the offering. Stabilizing transactions permit bids to purchase the underlying security for the purpose of fixing the price of the security so long as the stabilizing bids do not exceed a specified maximum. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a covering transaction to cover short positions.

Any underwriters who are qualified market makers on The NASDAQ Stock Market LLC may engage in passive market making transactions in our common stock, preferred stock, warrants and debt securities, as applicable, on The NASDAQ Stock Market LLC in accordance with Rule 103 of Regulation M, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the securities. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded.

In compliance with guidelines of the Financial Industry Regulatory Authority, or FINRA, the maximum consideration or discount to be received by any FINRA member or independent broker dealer may not exceed 8% of the aggregate amount of the securities offered pursuant to this prospectus and any applicable prospectus supplement.

Similar to other purchase transactions, an underwriter's purchase to cover the syndicate short sales or to stabilize the market price of our common stock may have the effect of raising or maintaining the market price of our common stock or preventing or mitigating a decline in the market price of our common stock. As a result, the share price of our common stock may be higher than the price that might otherwise exist in the open market. The imposition of a penalty

bid might also have an effect on the price of the common stock if it discourages resales of the shares.

Neither we nor the underwriters makes any representation or prediction as to the effect that the transactions described above may have on the price of our common stock. If such transactions are commenced, they may be discontinued without notice at any time.

Table of Contents

LEGAL MATTERS

The validity of the securities being offered hereby will be passed upon for us by Cooley LLP, Seattle, Washington. As of the date of this prospectus, an individual attorney at Cooley LLP beneficially owned 4,998 shares of our common stock.

EXPERTS

The consolidated financial statements incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2014 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits which are part of the registration statement. For further information with respect to us and the shares of common stock offered by this prospectus, we refer you to the registration statement and the exhibits filed as part of the registration statement. We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any document we file with the SEC at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1.800.SEC.0330 for further information on the operation of the public reference room. Our SEC filings are also available to the public at the SEC's website at <http://www.sec.gov>. We also maintain a website at <http://www.alderbio.com>. The information contained in, or that can be accessed through, our website is not part of this prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to incorporate by reference the information we file with it, which means that we can disclose important information to you by referring you to those documents instead of having to repeat the information in this prospectus. The information incorporated by reference is considered to be part of this prospectus, and later information that we file with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings we will make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934, as amended after the date of this prospectus (other than information furnished under Item 2.02 or Item 7.01 of Form 8-K) until the termination of the offering of the shares covered by this prospectus and applicable prospectus supplement:

our Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 13, 2015;

the information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2014 from our Definitive Proxy Statement on Schedule 14A for our 2015 Annual Meeting of Stockholders, filed with the SEC on April 9, 2015;

Edgar Filing: ALDER BIOPHARMACEUTICALS INC - Form 424B5

our Quarterly Report on Form 10-Q for the period ended March 31, 2015, filed with the SEC on May 7, 2015;

our Current Report on Form 8-K filed with the SEC on May 22, 2015; and

the description of our common stock contained in our registration statement on Form 8-A filed with the SEC on April 29, 2014, including any amendments or reports filed for the purposes of updating this description.

Table of Contents

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the documents that are incorporated by reference into this prospectus but not delivered with the prospectus, including exhibits which are specifically incorporated by reference into such documents. Requests for such copies should be directed to us at the following address:

Alder BioPharmaceuticals, Inc.

Attn: Investor Relations

11804 North Creek Parkway South

Bothell, WA 98011

(425) 205-2900

Table of Contents

5,376,344 shares

Common stock

Prospectus supplement

J.P. Morgan

Leerink Partners

Wells Fargo Securities

April 6, 2016