ALDER BIOPHARMACEUTICALS INC
Form 424B5
January 29, 2018
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**Filed Pursuant to Rule 424(b)(5)**
**Registration Number 333-216199**

The information in this preliminary prospectus supplement and the accompanying prospectus is not complete and may be changed. A registration statement relating to the notes has become effective under the Securities Act of 1933, as amended. This preliminary prospectus supplement is not an offer to sell the notes and it is not soliciting an offer to buy the notes in any jurisdiction where the offer or sale is not permitted.

Subject to completion, dated January 29, 2018

Preliminary prospectus supplement

(To prospectus dated February 23, 2017)

$200,000,000

% Convertible Senior Notes due 2025

Interest payable February 1 and August 1

We are offering $200,000,000 principal amount of our % Convertible Senior Notes due 2025. The notes will bear interest at a rate of % per year, payable semiannually in arrears on February 1 and August 1 of each year, beginning on August 1, 2018. The notes will mature on February 1, 2025.

Holders may convert their notes at their option at any time prior to the close of business on the business day immediately preceding November 1, 2024 only under the following circumstances: (1) during any calendar quarter commencing after the calendar quarter ending on March 31, 2018 (and only during such calendar quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day; (2) during the five business day period after any five consecutive trading day period (the measurement period ) in which the trading price (as defined below) per $1,000 principal amount of notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of our common stock and the conversion rate on each such trading day; (3) if we call any or all of the notes for redemption, at any time prior to the close of business on the scheduled trading day immediately preceding the redemption date; and (4) upon the occurrence of specified corporate events. On or after November 1,

2024 until the close of business on the business day immediately preceding the maturity date, holders may convert their notes at any time, regardless of the foregoing circumstances. Upon conversion, we will pay or deliver, as the case may be, cash, shares of our common stock or a combination of cash and shares of our common stock, at our election, as described in this prospectus supplement.

The conversion rate will initially be shares of common stock per $1,000 principal amount of notes (equivalent to an initial conversion price of approximately $ per share of common stock). The conversion rate will be subject to adjustment in some events but will not be adjusted for any accrued and unpaid interest. In addition, following certain corporate events that occur prior to the maturity date, we will increase the conversion rate for a holder who elects to convert its notes in connection with such a corporate event in certain circumstances.

We may not redeem the notes prior to February 1, 2022, and no sinking fund is provided for the notes. We have the option to redeem any or all of the notes on or after February 1, 2022 at a redemption price equal to 100% of the principal amount of the notes to be redeemed, *plus* accrued and unpaid interest to, but excluding, the redemption date, if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during the period of 30 consecutive trading days ending on the trading day immediately prior to the date of the redemption notice exceeds 130% of the applicable conversion price for the notes on each applicable trading day as determined by us.

If we undergo a fundamental change, holders may require us to repurchase for cash all or any portion of their notes at a fundamental change repurchase price equal to 100% of the principal amount of the notes to be repurchased, *plus* accrued and unpaid interest to, but excluding, the fundamental change repurchase date.

The notes will be our general, senior, unsecured obligations and will rank senior in right of payment to any of our indebtedness that is expressly subordinated in right of payment to the notes; equal in right of payment to any of our unsecured indebtedness that is not so subordinated; effectively junior to all of our secured indebtedness to the extent of the value of the assets securing such indebtedness; and structurally junior to all indebtedness and other liabilities (including trade payables) of our subsidiaries.

We do not intend to apply to list the notes on any securities exchange or any automated dealer quotation system. Our common stock is listed on The Nasdaq Global Market under the symbol ALDR. On January 26, 2018, the last reported sale price of our common stock on The Nasdaq Global Market was $16.70 per share.

*Investing in the notes involves a high degree of risk. See* *Risk Factors* *beginning on page S-12 of this prospectus supplement.*

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

| | Per note | Total |
|---|---|---|
| Public offering price(1) | $ | $ |

| | | |
|---|---|---|
| Underwriting discounts and commissions | $ | $ |
| Proceeds, before expenses, to us | $ | $ |

(1) Plus accrued interest, if any, from , 2018.

We have granted the underwriters the right to purchase, exercisable within a 30-day period, up to an additional $30,000,000 principal amount of notes, solely to cover over-allotments.

We expect that delivery of the notes will be made to investors in book-entry form through The Depository Trust Company, or DTC, on or about , 2018.

**Goldman Sachs & Co. LLC** **Leerink Partners** **Wells Fargo Securities**

, 2018

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**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 the notes and seeking offers to buy the notes 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 notes.**

**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 notes 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 the notes 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 February 23, 2017, 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.

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## 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 notes. 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-12 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 notes. 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. All of our product candidates were discovered and developed by Alder scientists using our proprietary antibody technology platform coupled with a deliberate approach to design and select candidates with properties that we believe optimize the therapeutic potential for patients and commercial competitiveness.

We are focusing our resources and development efforts principally on eptinezumab (ALD403), our most advanced solely owned product candidate, in order to maximize its therapeutic and commercial potential. Our infusion formulation of eptinezumab is being evaluated in a pivotal trial program for the prevention of migraine, with a Biologics License Application, or BLA, submission to the U.S. Food and Drug Administration, or FDA, planned for the second half of 2018. Migraine is a serious neurological disease affecting about 36 million people in the United States. Of that number, approximately 13 million people in the United States are candidates for a migraine prevention therapeutic. Of these candidates for migraine prevention, approximately three million people live with chronic migraine, and another two million live with severe frequent episodic migraine. This segment of five million people living with migraine are the most highly-impacted patients, and they typically experience eight or more migraines per month. Current preventative migraine treatment options available in the market today are challenged by safety, efficacy and tolerability limitations. More than 40 percent of migraineurs have not used a preventative therapeutic, and only about one in 10 currently utilize a preventative therapeutic. As a result, we believe there is a significant, unmet need for new treatment and prevention options. We plan to focus our initial commercialization efforts for eptinezumab, if approved, on this five million patient migraine segment. We estimate the U.S. market opportunity for eptinezumab infusion therapy is approximately $1.5 to $2.0 billion.

Eptinezumab is a genetically engineered monoclonal antibody inhibiting calcitonin gene-related peptide, or CGRP, a small protein and a validated target that is understood to drive migraine initiation, maintenance and chronification. Designed to deliver a competitively differentiated approach to migraine prevention, we believe eptinezumab holds the potential to be a transformative therapeutic and meet a profound medical need, changing the migraine prevention treatment paradigm for physicians and patients living with migraine.

Our deliberate approach to engineering and developing eptinezumab is designed to provide a unique clinical profile that, after a single administration via an in-office infusion procedure, provides

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rapid and persistent migraine prevention. Eptinezumab is the only anti-CGRP monoclonal antibody in development for the prevention of migraine administered via infusion. We believe that this clinical profile, as supported by data from our clinical trials, will present a potentially compelling value proposition for patients, physicians, payors and our stakeholders.

**Financial Position**

Our consolidated financial statements for the year ended December 31, 2017 are not yet available. The preliminary financial data included in this prospectus supplement has been prepared by, and is the responsibility of, management. Our Independent Registered Public Accounting Firm PricewaterhouseCoopers LLP has not audited, reviewed, compiled, or applied agreed-upon procedures with respect to the preliminary financial data. Accordingly, PricewaterhouseCoopers LLP does not express an opinion or any other form of assurance with respect thereto. It is possible that we or PricewaterhouseCoopers LLP may identify items that require us to make adjustments to the financial information set forth below. We expect to complete our audited consolidated financial statements for the year ended December 31, 2017 subsequent to the completion of this offering. Accordingly, undue reliance should not be placed on this preliminary estimate.

As of December 31, 2017, we had approximately $286 million in cash and cash equivalents and short-term investments, which includes $10 million of restricted cash.

Subsequent to December 31, 2017, we issued certain institutional and other accredited investors affiliated with or managed by Redmile Group, LLC an aggregate of 725,268 shares of non-voting Class A-1 Convertible Preferred Stock for gross proceeds of approximately $100,000,000. Also subsequent to December 31, 2017, we made a $25 million payment to Teva Pharmaceuticals International GmbH pursuant to the Settlement and License Agreement dated January 5, 2018.

**Top-Line Results for PROMISE 2 Phase 3 Pivotal Clinical Trial**

On January 8, 2018, we announced that eptinezumab, our lead investigational product candidate for migraine prevention targeting CGRP, met the primary and all key secondary endpoints with very high statistical significance vs. placebo in PRevention Of Migraine via Intravenous ALD403 Safety and Efficacy 2 (PROMISE 2), a Phase 3 pivotal clinical trial evaluating eptinezumab for the prevention of chronic migraine. PROMISE 2 commenced in November 2016 and is evaluating the safety and efficacy of eptinezumab administered at two dose levels (300mg and 100mg) and placebo via infusion once every 3 months for six months in 1,072 patients with chronic migraine.

The primary endpoint, demonstrating statistically significant reductions in mean monthly migraine days from baseline (average of approximately 16.1 days) over weeks 1 through 12 was met with a reduction of 8.2 monthly migraine days for 300mg ($p<0.0001$) and 7.7 days for 100mg ($p<0.0001$) compared to a reduction of 5.6 days for placebo.

The key secondary endpoints and other endpoints met include:

- Migraine prevalence Day One post-infusion: 52 percent reduction (300mg, $p<0.0001$) and 51 percent reduction (100mg, $p=0.0001$) in migraine risk beginning Day One post-infusion compared to 27 percent for placebo (p-values reflect Day One prevalence rate comparison between eptinezumab vs. placebo).

50% responder rates for weeks 1 through 12: 61 percent (300mg, $p<0.0001$) and 58 percent (100mg, $p<0.0001$) of patients achieved 50 percent or greater reduction in migraine days from baseline compared to 39 percent for placebo.

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75% responder rates for weeks 1 through 4: 37 percent (300mg, p<0.0001) and 31 percent (100mg, p<0.0001) of patients achieved a 75 percent or greater reduction in migraine days from baseline, compared to 16 percent for placebo.

75% responder rates for weeks 1 through 12: 33 percent (300mg, p<0.0001) and 27 percent (100mg, p=0.0001) of patients achieved a 75 percent or greater reduction in migraine days from baseline, compared to 15 percent for placebo.

100% responder rates for weeks 1 through 12 (post hoc analysis): an average 15 percent (300mg, p<0.0001, unadjusted) and 11 percent (100mg, p<0.0001, unadjusted) of the patient population had no migraines for months 1 to 3, compared to 5 percent for placebo.

All other pre-specified key secondary endpoints were met with very high statistical significance.

The observed safety profile in PROMISE 2, to date, is consistent with previously reported eptinezumab studies. Adverse event rates among eptinezumab-treated subjects were similar to placebo-treated subjects. The most commonly reported adverse events for eptinezumab, occurring at an incidence of 2.0% or greater, were nasopharyngitis (common cold) (6.3 percent), upper respiratory infection (4.0 percent), nausea (3.4 percent) and urinary tract infection (3.1 percent), arthralgia (joint pain) (2.3 percent), dizziness (2.6 percent), anxiety (2.0 percent) and fatigue (2.0 percent). Full safety data will be available at the completion of the trial.

Additional results from the trial are expected to be presented at future medical meetings.

We believe the efficacy data from PROMISE 2, supported by the observed safety and tolerability profile to date, translates into a differentiated profile for eptinezumab vs. the best-reported clinical profiles for the three other anti-CGRP monoclonal antibodies in development as well as onabotulinumtoxinA, which is currently on the market, for migraine prevention. The tables below set forth key Phase 3 chronic migraine efficacy attributes of eptinezumab and these other agents, on an absolute and placebo-adjusted basis, respectively. The column on the right sets forth the top-line PROMISE 2 data for eptinezumab and the middle and left columns highlight the highest and lowest absolute data, respectively, reported for these other agents. Comparisons are not based on data resulting from head-to-head trials and are not direct comparisons of safety or efficacy. 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 cause any comparisons of results from different trials to be unreliable.

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**Eptinezumab vs. Erenumab (Amgen), Fremanezumab (Teva), Galcanezumab (Lilly), OnabotulinumtoxinA (Allergan) (Absolute Data)**

| **Chronic Migraine Prevention Efficacy Endpoints** | **Competitor-Reported *Absolute Data*** | | **PROMISE-2 *Absolute Data*[6]** |
|---|---|---|---|
| | **Lowest** | **Highest** | |
| **Primary Endpoint:** | | | |
| **Reduction in Mean Monthly Migraine Days** | **-4.62 days[1]** | **-7.3 days[2]** | **-8.2 days** (Weeks 1-12) |
| **Reduction in Prevalence of Migraine Day 1** | **Not reported** | | **52 % reduction** |
| **50% Migraine Responder Rate** | **27.5%[1]** | **41%[3,4]** | **61%** (Weeks 1-12) |
| **75% Migraine Responder Rate Month 1** | **Not reported** | | **37%** (Weeks 1-4) |
| **75% Migraine Responder Rate** | **8.8%[1]** | **20.9%[5]** | **33%** (Weeks 1-12) |
| **100% Migraine Responder Rate** | **<2 %[1]** | **4.3%[5]** | **15%[7]** (Weeks 1-12) |

1. Detke et. al., A Phase 3 Placebo-Controlled Study of Galcanezumab in Patients with Chronic Migraine: Results from the 3-Month Double-Blind Treatment Phase of the REGAIN Study; Poster presented at the International Headache Congress September 2017. Reduction in mean monthly migraine days reported as -4.62 days for 240mg dose group; 50% responder rate of 27.5% reported for 240mg dose group; 75% responder rate of 8.8% reported for 240mg dose group; 100% migraine response rate reported as <2% for both dose groups; All results reported for months 1-3
2. OnabotulinumtoxinA Canadian Drug Review (page 64); Results reported from Study 191622-080 as -7.3 days reduction from baseline in mean monthly migraine/probable migraine days at week 12
3. Silberstein et. al., Fremanezumab for the Preventive Treatment of Chronic Migraine, N Engl J Med 2017; 377:2113-2122; Results reported as 41% of patients treated with monthly dosing regimen achieved a ³50% reduction in headache days for the 12-week period after the first dose vs. baseline
4. Tepper et. al., Safety and efficacy of erenumab for preventive treatment of chronic migraine: a randomised, double-blind placebo-controlled phase 2 trial, Lancet Neurol. 2017 Jun;16(6):425-434. 50% responder rate of 41% reported for 140mg dose group at week 12
5. Brandes et. al., Chronic Migraine Treatment with Erenumab: Responder Rates; Poster presented at the International Headache Congress September 2017; 75% responder rate of 20.9% reported for 140mg dose group; 100% responder rate of 4.3% reported for 70mg dose group; All results reported at week 12
6. Data on File, Alder BioPharmaceuticals PROMISE 2 Study 011; Absolute data reported for 300mg eptinezumab dose group

7. Defined as the average percentage of patients with a 100% response at any given month for months 1-3

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**Eptinezumab vs. Erenumab (Amgen), Fremanezumab (Teva), Galcanezumab (Lilly), OnabotulinumtoxinA (Allergan) (Placebo-Adjusted Data)**

| Chronic Migraine Prevention Efficacy Endpoints | Competitor-Reported *Placebo-Adjusted Data* Lowest | Highest | PROMISE-2 *Placebo-Adjusted Data*[6] |
|---|---|---|---|
| **Primary Endpoint:** | | | |
| **Reduction in Mean Monthly Migraine Days** | **-1.1 days**[1] | **-2.4 days**[2] | **-2.6 days** (Weeks 1-12) |
| **Reduction in Prevalence of Migraine Day 1** | **Not reported** | | **25%** |
| **50% Migraine Responder Rate** | **12.1%**[3] | **23%**[4] | **22%** (Weeks 1-12) |
| **75% Migraine Responder Rate Month 1** | **Not reported** | | **21%** (Weeks 1-4) |
| **75% Migraine Responder Rate** | **2.5%**[3] | **13.1%**[5] | **18%** (Weeks 1-12) |
| **100% Migraine Responder Rate** | **3.9%**[5] | | **10%**[7] (Weeks 1-12) |

1. OnabotulinumtoxinA Canadian Drug Review (page 64); Results reported from Study 191622-079 as a placebo-adjusted difference of -1.1 in mean monthly migraine/probable migraine days at week 12
2. Tepper et. al., Safety and efficacy of erenumab for preventive treatment of chronic migraine: a randomised, double-blind placebo-controlled phase 2 trial, Lancet Neurol. 2017 Jun;16(6):425-434. Placebo-adjusted difference in reduction of mean monthly migraine days reported at -2.4 for both 140mg and 70mg dose groups at week 12
3. Detke et. al., A Phase 3 Placebo-Controlled Study of Galcanezumab in Patients with Chronic Migraine: Results from the 3-Month Double-Blind Treatment Phase of the REGAIN Study; Poster presented at the International Headache Congress September 2017; 50% responder rate placebo-adjusted difference of 12.1% reported for the 240mg dose group; 75% responder rate placebo-adjusted difference of 2.5% reported for 120mg dose group; All results reported for months 1-3
4. Silberstein et. al., Fremanezumab for the Preventive Treatment of Chronic Migraine, N Engl J Med 2017; 377:2113-2122; Placebo-adjusted difference in ³50% reduction in headache days of 23% reported for monthly dosing regimen for the 12-week period after the first dose vs. baseline
5.

Brandes et. al., Chronic Migraine Treatment with Erenumab: Responder Rates; Poster presented at the International Headache Congress September 2017; 75% responder rate placebo-adjusted difference of 13.1% reported for 140mg dose group; 100% responder rate placebo-adjusted difference of 3.9% for 70mg dose group; All results reported at week 12

6. Data on File, Alder BioPharmaceuticals PROMISE 2 Study 011; Placebo-adjusted data reported for 300mg eptinezumab dose group
7. Defined as the average percentage of patients with a 100% response at any given month for months 1-3

**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.

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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 trade names and to trademarks and trade names 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.

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## THE OFFERING

The summary below describes the principal terms of the notes. Certain of the terms and conditions described below are subject to important limitations and exceptions. The Description of Debt Securities section of the accompanying prospectus, as supplemented by the Description of Notes section of this prospectus supplement, contains a more detailed description of the terms and conditions of the notes. As used in this section, we, our, and us refer to Alder BioPharmaceuticals, Inc. and not to its subsidiaries.

| | |
|---|---|
| **Issuer** | Alder BioPharmaceuticals, Inc., a Delaware corporation. |
| **Securities** | $200,000,000 principal amount of % Convertible Senior Notes due 2025 (*plus* up to an additional $30,000,000 principal amount to cover over-allotments). |
| **Maturity** | February 1, 2025, unless earlier repurchased, redeemed or converted. |
| **Interest** | % per year. Interest will accrue from , 2018 and will be payable semiannually in arrears on February 1 and August 1 of each year, beginning on August 1, 2018. We will pay additional interest, if any, at our election as the sole remedy relating to the failure to comply with our reporting obligations as described under Description of Notes Events of Default. |
| **Conversion Rights** | Holders may convert all or any portion of their notes, in multiples of $1,000 principal amount, at their option at any time prior to the close of business on the business day immediately preceding November 1, 2024 only under the following circumstances:<br><br>during any calendar quarter commencing after the calendar quarter ending on March 31, 2018 (and only during such calendar quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during a period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day; |

during the five business day period after any five consecutive trading day period (the measurement period ) in which the trading price (as defined under Description of Notes Conversion Rights Conversion upon

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Satisfaction of Trading Price Condition ) per $1,000 principal amount of notes for each trading day of the measurement period was less than 98% of the product of the last reported sale price of our common stock and the conversion rate on each such trading day;

if we call any or all of the notes for redemption, at any time prior to the close of business on the scheduled trading day immediately preceding the redemption date; or

upon the occurrence of specified corporate events described under Description of Notes Conversion Rights Conversion upon Specified Corporate Events.

On or after November 1, 2024 until the close of business on the business day immediately preceding the maturity date, holders may convert all or any portion of their notes, in multiples of $1,000 principal amount, at the option of the holder regardless of the foregoing circumstances.

The conversion rate for the notes is initially shares of common stock per $1,000 principal amount of notes (equivalent to an initial conversion price of approximately $ per share of common stock), subject to adjustment as described in this prospectus supplement.

Upon conversion, we will pay or deliver, as the case may be, cash, shares of our common stock or a combination of cash and shares of our common stock, at our election. If we satisfy our conversion obligation solely in cash or through payment and delivery, as the case may be, of a combination of cash and shares of our common stock, the amount of cash and the number of shares of our common stock, if any, due upon conversion will be based on a daily conversion value (as described herein) calculated on a proportionate basis for each trading day in a 40-trading day observation period (as described herein). See Description of Notes Conversion Rights Settlement upon Conversion.

In addition, following certain corporate events that occur prior to the maturity date, we will increase the conversion rate for a holder who elects to convert its notes in connection with such a corporate event in certain circumstances as described under Description of Notes

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| | Conversion Rights Increase in Conversion Rate upon Conversion upon a Make-Whole Fundamental Change.<br><br>You will not receive any additional cash payment or additional shares of our common stock representing accrued and unpaid interest, if any, upon conversion of a note, except in limited circumstances. Instead, interest will be deemed to be paid by the cash, shares of our common stock or a combination of cash and shares of our common stock paid or delivered, as the case may be, to you upon conversion of a note. |
| **Optional Redemption** | Prior to February 1, 2022, we may not redeem the notes. On or after February 1, 2022, we may redeem any or all of the notes at a redemption price equal to 100% of the principal amount of the notes to be redeemed, *plus* accrued and unpaid interest to, but excluding, the redemption date, if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during the period of 30 consecutive trading days ending on the trading day immediately prior to the date of the redemption notice exceeds 130% of the applicable conversion price for the notes on each applicable trading day.<br><br>No sinking fund is provided for the notes, which means that we are not required to redeem or retire the notes periodically. |
| **Fundamental Change** | If we undergo a fundamental change (as defined in this prospectus supplement under Description of notes Fundamental Change Permits Holders to Require Us to Repurchase Notes ), subject to certain conditions, holders may require us to repurchase for cash all or part of their notes in principal amounts of $1,000 or an integral multiple thereof. The fundamental change repurchase price will be equal to 100% of the principal amount of the notes to be repurchased, *plus* accrued and unpaid interest to, but excluding, the fundamental change repurchase date. See Description of Notes Fundamental Change Permits Holders to Require Us to Repurchase Notes. |

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**Ranking**

The notes will be our general, senior, unsecured obligations and will rank:

- senior in right of payment to any of our indebtedness that is expressly subordinated in right of payment to the notes;
- equal in right of payment to any of our unsecured indebtedness that is not so subordinated;
- effectively junior to all of our secured indebtedness to the extent of the value of the assets securing such indebtedness; and
- structurally junior to all indebtedness and other liabilities (including trade payables) of our subsidiaries.

As of September 30, 2017, we and our subsidiaries had no indebtedness. As of September 30, 2017, after giving effect to the issuance of the notes (assuming no exercise of the underwriters over-allotment option), our total indebtedness would have been $200.0 million (without giving effect to the equity component of convertible debt or any debt discount).

The indenture governing the notes will not limit the amount of debt that we or our subsidiaries may incur.

**Use of Proceeds**

We estimate that the proceeds from this offering will be approximately $ million (or $ million if the underwriters exercise their over-allotment option), after deducting fees and estimated expenses. We intend to use the net proceeds from this offering for the development and commercialization of eptinezumab, and in particular, activities in support of achieving approval by the U.S. Food and Drug Administration for, and executing the commercial launch of, the infusion formulation of eptinezumab. See Use of Proceeds for a more complete description of the intended use of proceeds from this offering.

| | |
|---|---|
| **Book-Entry Form** | The notes will be issued in book-entry form and will be represented by permanent global certificates deposited with, or on behalf of DTC and registered in the name of a nominee of DTC. Beneficial interests in any of the notes will be shown on, and transfers will be effected only through, records maintained by DTC or its nominee and any such interest may not be |

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| | |
|---|---|
| | exchanged for certificated securities, except in limited circumstances. |
| **Absence of a Public Market for the Notes** | The notes are new securities and there is currently no established market for the notes. Accordingly, we cannot assure you as to the development or liquidity of any market for the notes. The underwriters have advised us that they currently intend to make a market in the notes. However, they are not obligated to do so, and they may discontinue any market making with respect to the notes without notice. We do not intend to apply for a listing of the notes on any securities exchange or any automated dealer quotation system. |
| **U.S. Federal Income Tax Considerations** | For the U.S. federal income tax consequences of the holding, disposition and conversion of the notes, and the holding and disposition of our common stock, see Material U.S. Federal Income Tax Considerations. |
| **NASDAQ Symbol for Our Common Stock** | Our common stock is listed on the NASDAQ Global Market under the symbol ALDR. |
| **Trustee, Paying Agent and Conversion Agent** | U.S. Bank National Association. |

Unless otherwise indicated, all information in this prospectus supplement assumes no exercise of the underwriters over-allotment option to purchase additional notes in this offering.

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## 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 nine months ended September 30, 2017, our net loss was $234.5 million, and as of September 30, 2017, we had an accumulated deficit of $613.2 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 eptinezumab, ALD1910 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 eptinezumab 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 have not completed the development of any products and eptinezumab is our only product candidate in the clinical stage of development. We have never generated revenues from the sale of any products.

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Our ability to generate revenues and achieve profitability depends in large part on our ability, on our own or with any of our future collaborators, to successfully complete the development of, obtain the necessary regulatory approvals for, and commercialize our product candidates. We do not anticipate generating revenues from sales of products for several years, if at all. 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 eptinezumab;
- entering into collaboration agreements with third parties with respect to eptinezumab, ALD1910 or our other 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 eptinezumab, if approved, and successfully establishing sales, marketing and distribution infrastructure;
- obtaining regulatory approvals for ALD1910 or any 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 primarily focused on the advancement of eptinezumab through the clinical development process, as well as the advancement of the ALD1910 program 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. While we expect the proceeds of this offering to be sufficient to support our planned operations into 2020, we will need to obtain substantial additional sources of funding to develop and commercialize our other clinical programs as currently contemplated.

As of September 30, 2017, we had $330.9 million in cash, cash equivalents and short-term investments, and $10.0 million in restricted cash. On January 12, 2018, we completed the sale of 725,268 shares of our Class A-1 Preferred Stock at $137.88 per share in a private placement for gross proceeds to Alder of approximately $100,000,000, or the Preferred Private Placement. We believe that our available cash, cash equivalents and investments as of September 30, 2017, together with the proceeds from the Preferred Private Placement, will be sufficient to meet our projected operating requirements for at least the next 12 months from the date of this prospectus supplement.

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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 eptinezumab, ALD1910 and any future product candidates;
- the timing of, and costs involved in, seeking and obtaining approvals from the FDA and other regulatory authorities;
- the costs of commercialization activities if any of our product candidates, such as eptinezumab, 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 equity financings, debt financings, collaborations, strategic alliances, licensing arrangements and other marketing and distribution arrangements. There are no assurances that we will be able to raise sufficient amounts of funding on acceptable terms, or at all. If we raise additional capital through equity financings, 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 financings, 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 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.

In addition, our clinical trials for eptinezumab 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 eptinezumab, ALD1910 or any future product candidates that we develop independently. We intend to prioritize our development efforts on eptinezumab, 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.

A failure to raise additional funding or to effectively implement cost reductions could harm our business, results of operations and future prospects.

***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, 2016, we had U.S. net operating loss carryforwards, or NOLs, of $379.9 million, for which we have recorded a full valuation allowance, which may be used to offset

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future taxable income. In addition, we have U.S. research and development tax credit carryforwards of $13.1 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 2015. 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 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 Eptinezumab and Our Other Product Candidates**

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

Eptinezumab is our only product candidate currently in clinical trials. We have invested a significant portion of our efforts and financial resources into the development of eptinezumab 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 eptinezumab. The success of eptinezumab 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, PROMISE 2 and open-label Phase 3 clinical trials and the pharmacokinetic comparability study of our commercial supply of eptinezumab for our initial Biologics License Application, or BLA, submission;
- our ability to reach agreements with the FDA and other regulatory authorities on the appropriate regulatory path for approval for eptinezumab or other product candidates;
- receipt of approvals from the FDA and similar regulatory authorities outside the United States for eptinezumab or other 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.

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***If clinical trials of eptinezumab 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 eptinezumab 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 trials could occur at any stage of evaluation. The outcome of preclinical testing and early clinical trials may not be predictive of the success of later clinical trials, and interim results of a clinical trial do not necessarily predict final results.

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

- clinical trials of our product candidates, in particular our PROMISE 1, PROMISE 2 and open-label Phase 3 clinical trials, and the pharmacokinetic comparability study of our commercial supply of eptinezumab for our initial BLA submission, 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

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testing, if the results of these trials or tests are not positive or are only modestly positive or if there are safety concerns, we or any of our future collaborators may:

- be delayed in obtaining regulatory approval for our product candidates;
- not obtain regulatory approval at all;
- obtain regulatory approval for indications that are not as broad as intended;
- have the product removed from the market after obtaining regulatory approval;
- be subject to additional post-marketing testing requirements; or
- be subject to restrictions on how the product is distributed or used.

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

***The development and commercialization of biologic products is subject to extensive regulation, and we may not obtain regulatory approvals for eptinezumab 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 eptinezumab, ALD1910 and any other product candidate that we may develop in the future are subject to extensive regulation in the United States. Biologics, like eptinezumab, require the submission of a 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 eptinezumab, ALD1910 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;

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

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

may change approval policies or adopt new regulations; or

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

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

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

We have conducted, and may in the future choose to conduct, 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 international clinical trials, or if international regulatory authorities do not accept the data from our 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 eptinezumab 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

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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, and no approved drug procedure for prevention for frequent episodic migraine (by which we mean a healthcare provider-administered drug product falling under medical benefit reimbursement, as opposed to pharmacy benefit reimbursement). 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, Amgen Inc., Eli Lilly and Company, or Eli Lilly, and Teva Pharmaceuticals Industries Limited, or Teva, that are developing calcitonin gene-related peptide, or CGRP, blocking therapies using monoclonal antibodies similar to eptinezumab designed for subcutaneous administration by patients. 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. We are aware that Amgen, Eli Lilly and Teva have announced that they have made BLA submissions in 2017 for their competing CGRP therapies, which, if approved, would enable them to commercialize their CGRP therapies before we are able to do so with eptinezumab.

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 to administer 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 receive 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 eptinezumab 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.

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We can provide no assurance that we will be able to enroll patients in any ongoing or planned clinical trial 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 eptinezumab clinical trials. However, there can be no assurance that those forecasts will be accurate or that we will complete our ongoing and planned eptinezumab trials on schedule. During the initial months of our 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. In addition, we may determine it necessary to increase the target number of patients to be enrolled in a clinical trial, which could extend the time necessary to complete such clinical trial. If we experience delays in enrollment, our ability to complete the trials could be materially adversely affected.

***If serious adverse events, or SAEs, are identified during the development of eptinezumab or any of our product candidates, we or any of our future collaborators may need to abandon development of that product candidate.***

Our most advanced product candidate, eptinezumab, is still in clinical development and its risk of failure is high. It is impossible to predict when or if eptinezumab or any of our existing or future product candidates will prove effective and safe enough to receive regulatory approval.

With respect to eptinezumab, the observed SAEs to date include, among others, 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 observed SAEs to date were found to be unrelated to eptinezumab. We have observed some injection-site reactions, or ISRs, in Phase 1 clinical trials of subcutaneous and intramuscular injections of eptinezumab. 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 eptinezumab will not fail due to safety issues. In such an event, we might need to abandon development of eptinezumab.

***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

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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 contract manufacturing organizations, or CMOs, encounter such difficulties, our ability to provide supply of our product candidates for clinical trials or our products for patients, if approved, could be delayed or stopped.***

The process of manufacturing our products is complex, highly-regulated and subject to multiple risks. The manufacture of biologics involves complex processes, including developing cells or cell systems to produce the biologic, growing large quantities of such cells and harvesting and purifying the biologic produced by them. As a result, the cost to manufacture biologics is generally far higher than traditional small molecule chemical compounds, and the biologics manufacturing process is less reliable and is difficult to reproduce. Manufacturing biologics, such as eptinezumab and other product candidates, 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 CMOs to produce eptinezumab 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.

We currently rely on a single CMO to manufacture and provide us with clinical supplies of eptinezumab. We have entered into agreements with two other CMOs in anticipation of larger scale commercial production, and will use eptinezumab produced by these CMOs in future clinical studies. We expect to enter into agreements with additional CMOs in the future. 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

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implementation and development process. If we are unable to adequately validate or scale-up the manufacturing process for eptinezumab 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 eptinezumab 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.

Our yeast-based production system used for the manufacture of eptinezumab 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 eptinezumab or any of our future product candidates.

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

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

All manufacturers of our product candidates must comply with cGMP requirements enforced by the FDA through its facilities inspection program. These requirements include, among other things, quality control, quality assurance and the maintenance of records and documentation. Manufacturers of our product candidates may be unable to comply with these cGMP requirements and with other FDA, state and foreign regulatory requirements. The FDA or similar foreign regulatory agencies may also implement new standards at any time, or change their interpretation and enforcement of existing standards for manufacture, packaging or testing of products. We have little control over our manufacturers compliance with these regulations and standards. A failure to comply with these requirements may result in fines and civil penalties, suspension of production, suspension or delay in product approval, product seizure or recall or withdrawal of product approval. If the safety of any product supplied is compromised due to our manufacturers failure to adhere to applicable laws or for other reasons, we may not be able to obtain regulatory approval for or successfully commercialize our products and we may be held liable for any injuries sustained as a result. Any of these factors could cause a delay of clinical trials, regulatory submissions, approvals or commercialization of our product candidates, entail higher costs or impair our reputation.

We currently rely on Ajinomoto Althea, Inc. to manufacture and provide us with clinical supplies of eptinezumab. We have entered into agreements with other manufacturers for larger scale production in

anticipation of commercialization, and will use eptinezumab produced by these CMOs in future clinical studies. We expect to enter into agreements with additional CMOs in the future. 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.

Eptinezumab 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 eptinezumab and any other product candidates we may develop is limited, and may be expensive and take a significant amount of time to arrange for alternative suppliers. New suppliers of any product candidate would be required to qualify under applicable regulatory requirements. Obtaining the necessary FDA approvals or other qualifications under applicable regulatory requirements could result in a significant interruption of supply and could require the new manufacturer to bear significant additional costs which may be passed on to us. Our CMC activities supporting our planned BLA submission for eptinezumab include a pharmacokinetic comparability study in 2018 to ensure commercial readiness of supply upon launch.

***Even if eptinezumab 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 eptinezumab 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.

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***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 eptinezumab or any of our future products.***

We do not currently have sales or distribution capabilities and have no experience as an organization 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. Assuming regulatory approval, we plan to focus our initial commercialization efforts on high-prescribing neurologists and headache centers in the United States employing a specialty sales force that we plan to establish. To maximize the potential commercial opportunity of eptinezumab while we focus on the U.S. specialty market, we may explore strategic arrangements that provide additional capabilities and infrastructure while improving access for physicians and patients.

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 eptinezumab or any other product candidates.

***If we are able to commercialize eptinezumab 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

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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.

***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

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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;
- 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;
- the impact of the vote by the United Kingdom decided by referendum to leave the European Union (commonly referred to as Brexit ); and
- business interruptions resulting from geopolitical actions, including war and terrorism, or natural disasters including earthquakes, typhoons, floods and fires.

***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.

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***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 have used our proprietary antibody platform for the selection of monoclonal antibodies to create eptinezumab, ALD1910 and 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 any future collaborations for the development and commercialization of product candidates are not successful, our business may be harmed.***

We may choose to enter into collaboration agreements with third parties with respect to our product candidates, including eptinezumab, 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;
- 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

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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 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 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.

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

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

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

- a product candidate may not be deemed safe or effective;
- FDA officials may not find the data from preclinical studies and clinical trials sufficient;
- the FDA might not approve our or our third-party manufacturers processes or facilities; or
- the FDA may change its approval policies or adopt new regulations.

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

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

Once regulatory approval has been granted, the approved product and its manufacturer are subject to continual review by the FDA and/or non-U.S. regulatory authorities. Any regulatory approval that we or any of our future collaboration partners receive for our product candidates may be subject to limitations on the indicated uses for which the product may be marketed or contain requirements for potentially costly post-marketing follow-up trials to monitor the safety and efficacy of the product. In addition, if the FDA and/or non-U.S. regulatory authorities approve any of our product candidates, we will be subject to extensive and ongoing regulatory requirements by the FDA and other regulatory authorities with regard to the labeling, packaging, adverse event reporting, storage, advertising, promotion and recordkeeping, among other things, for our products. In addition, manufacturers of our drug products are required to comply with cGMP regulations, which include requirements related to quality control and quality assurance as well as

the corresponding maintenance of records and documentation. Furthermore, regulatory authorities must approve these manufacturing facilities before they can be used to manufacture our drug products, and these facilities are subject to continual review and periodic inspections by the FDA and other regulatory authorities for compliance with cGMP regulations. If we or a third party discover previously unknown problems with a product, such as

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adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, a regulatory authority may impose restrictions on that product, the manufacturer or us, including requiring withdrawal of the product from the market or suspension of manufacturing. If we, our product candidates or the manufacturing facilities for our product candidates fail to comply with regulatory requirements of the FDA and/or other non-U.S. regulatory authorities, we could be subject to administrative or judicially imposed sanctions, including the following:

- warning letters;
- civil or criminal penalties and fines;
- injunctions;
- suspension or withdrawal of regulatory approval;
- suspension of any ongoing clinical trials;
- voluntary or mandatory product recalls and publicity requirements;
- refusal to approve pending applications for marketing approval of new drugs or supplements to approved applications filed by us;
- restrictions on operations, including costly new manufacturing requirements; or
- seizure or detention of our products or import bans.

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

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

We or a future collaboration partner may market eptinezumab 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.

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***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. However, in January 2017, President Trump signed an Executive Order directing federal agencies with authorities and responsibilities under the ACA to waive, defer, grant exemptions from, or delay the implementation of any provision of the ACA that would impose a fiscal or regulatory burden on states, individuals, healthcare providers, health insurers, or manufacturers of pharmaceuticals or medical devices. In Congress, the U.S. House of Representatives passed ACA replacement legislation known as the American Health Care Act of 2017 in May 2017, which was not introduced in the Senate. More recently, the Senate Republicans have proposed multiple bills to repeal and replace portions of the ACA. Although none of these measures have been enacted, Congress may consider other legislation to repeal or replace certain elements of the ACA. On October 12, 2017, President Trump signed another Executive Order directing certain federal agencies to propose regulations or guidelines to permit small businesses to form association health plans, expand the availability of short-term, limited duration insurance, and expand the use of health reimbursement arrangements, which may circumvent some of the requirements for health insurance mandated by the ACA. We cannot know how efforts to repeal and replace the ACA or any future healthcare reform legislation will impact 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;

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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. Data from clinical trials may receive greater scrutiny with respect to safety, which may make the FDA or other regulatory authorities more likely to terminate or suspend clinical trials before completion, or require longer or additional clinical trials that may result in substantial additional expense and a delay or failure in obtaining approval or approval for a more limited indication than originally sought.

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

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

Even though we do not and will not control referrals of healthcare services or bill directly to Medicare, Medicaid or other third-party payors, certain federal and state healthcare laws and regulations, including those pertaining to fraud and abuse and patients rights, are and will be applicable to our business. We could be subject to healthcare regulation by both the federal government and the states in which we conduct our business. The 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, or 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 annually report to the U.S. Department of Health and Human Services Centers for Medicare & Medicaid Services, or CMS, information related to payments and other transfers of value provided to physicians and teaching hospitals and physician ownership and investment interests;

HIPAA, 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

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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 other healthcare providers and healthcare entities, 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.

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, individual imprisonment, exclusion from participation in federal healthcare programs, integrity obligations, contractual damages, reputational harm, diminished profits and future earnings, and the curtailment or restructuring of our operations, which 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 non-exclusive, royalty bearing license with Teva Pharmaceuticals International GmbH, or Teva GmbH, for its CGRP patent portfolio to develop, manufacture and commercialize eptinezumab in the United States and worldwide, excluding Japan and Korea. We also have a third-party royalty free license associated with the Keck Graduate Institute for our yeast-based proprietary manufacturing technology. We may enter into additional license agreements in the future. Our existing license agreements impose, and we expect that our future license agreements will impose, various diligence, royalty payment, milestone payment, insurance and other obligations on us. If we fail to comply with these obligations or our other obligations in our license agreements, our licensors may have the right to terminate these agreements, in which event we may not be able to develop and market any product or use any platform technology that is covered by these agreements. Termination of these licenses or reduction or elimination of our licensed rights may result in our having to negotiate new or reinstated licenses with less favorable terms or our not having sufficient intellectual property rights to operate our business. The occurrence of such events could materially harm our business.

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

Our success depends in large part on our and our licensors ability to obtain and maintain patent and other intellectual property protection in the United States and in other countries with respect to our

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

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

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

In March 2013, the United States converted to a first-to-file patent system under the recently enacted America Invents Act. With this change, the United States patent system was brought into closer conformity with the patent systems of other countries, the vast majority of which operate as first-to-file patent systems. Under the former system, and assuming the other requirements for patentability were met, the first to 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 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.***

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.

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We may initiate litigation or other legal proceedings with respect to patents held by others. For example, in July 2014, we and Eli Lilly each filed an opposition to a European patent issued to Teva GmbH requesting that such patent be revoked in its entirety. In an oral proceeding held in Munich, Germany on November 18, 2016, the Opposition Division, or OD, of the European Patent Office, or EPO, issued a ruling revoking all claims in the patent relating to CGRP antagonist antibodies and maintaining but narrowing claims relating to the use of CGRP antagonist antibodies in human therapy to the prevention or treatment of headache such as migraine and cluster headache. The written decision consistent with the oral ruling was issued in February 2017. We subsequently initiated an appeal of the decision. On January 5, 2018, we entered into a Settlement and License Agreement with Teva GmbH pursuant to which we received a non-exclusive license to Teva GmbH s CGRP patent portfolio to develop, manufacture and commercialize eptinezumab in the United States and worldwide, excluding Japan and Korea, and agreed to withdraw our appeal.

Because of the inevitable uncertainty in intellectual property legal proceedings, any such proceedings, if initiated, may not ultimately be resolved in our favor regardless of our perception of the merits. 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 to engage in commercialization and related activities for a product candidate 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 in the United States treble damages if we are found to have willfully infringed a patent, and attorneys fees. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations.

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

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

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

Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although we try to ensure that our employees do not use the proprietary information or know-how of others in their work

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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 executive officers and other key employees and to attract, retain and motivate qualified personnel.***

We are highly dependent on our executive officers and other key employees. The employment of our executive officers and other key employees is typically at-will and our executive officers and other key employees may terminate their employment with us at any time. The loss of the services of any of our executive officers or other key employees could impede the achievement of our research, development and commercialization objectives.

Recruiting and retaining other qualified scientific, clinical, manufacturing and sales and marketing personnel is critical to our success. We may not be able to attract and retain critical 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. 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 eptinezumab is approved, we plan to build a specialty 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

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additional qualified personnel. The physical expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

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

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

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

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

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

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

***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

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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 amounts earned from collaboration agreements may be an important source of our revenues. Accordingly, our revenues, if any, will depend on development funding and the achievement of development and clinical milestones under any of our future collaboration arrangements, as well as any potential future license agreements and sales of our products, if approved. These upfront and milestone payments may vary significantly from period to period and any such variance could cause a significant fluctuation in our operating results from one period to the next.

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

- the timing and cost of, and level of investment in, research and development activities relating to our product candidates, which may change from time to time;
- the cost of manufacturing our product candidates, which may vary depending on the quantity of production and the terms of our agreements with manufacturers;
- expenditures that we will or may incur to acquire or develop additional product candidates and technologies;
- the level of demand for our product candidates, should they receive approval, which may vary significantly;
- future accounting pronouncements or changes in our accounting policies;
- the timing and success or failure of clinical trials for our product candidates or competing product candidates, or any other change in the competitive landscape of our industry, including consolidation among our competitors or partners; and

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

The cumulative effects of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance. This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our 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 operating results guidance we may provide.

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***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 $8.60 and $54.90 per share. For example, on June 26, 2017 prior to our announcement of our PROMISE 1 data, the closing price of our common stock was $18.70 per share. Following the announcement of our PROMISE 1 data, the closing price of our common stock on June 27, 2017 was $13.48, and since that date the reported sale price of our common stock has been as low as $8.60 per share.

The stock market in general and the market for biotechnology companies in particular have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may experience losses on their investment in our common stock. The market price for our common stock may be influenced by many factors, including the following:

- the success of competitive products or technologies;
- results of clinical trials of our product candidates or those of our competitors;
- regulatory or legal developments in the United States and other countries, especially changes in laws or regulations applicable to our product candidates;
- introductions and announcements of future product candidates by us, any of our future collaborators, or our competitors, and the timing of these introductions or announcements;
- actions taken by regulatory agencies with respect to our product candidates, clinical trials, manufacturing process or sales and marketing terms;
- variations in our financial results or those of companies that are perceived to be similar to us;
- the success of our efforts to discover, acquire or in-license additional products or product candidates;
- developments concerning our future collaborations, including but not limited to those with our sources of manufacturing supply and our future collaborators;
- manufacturing disruptions;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;

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

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

the recruitment or departure of key personnel;

changes in the structure of healthcare payment systems;

market conditions in the pharmaceutical and biotechnology sectors;

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

trading volume of our common stock;

sales of our common stock by us or our stockholders;

changes in our board of directors or key personnel;

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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, including, for example, the impact of Brexit or similar events on global financial markets;

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. We may issue shares of our common stock or equity securities senior to our common stock in the future for a number of reasons, including to finance our operations and business strategy, to adjust our ratio of debt-to-equity, to satisfy our obligations upon the exercise of options, or for other reasons. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. We are unable to predict the effect that such sales may have on the prevailing market price of our common stock.

In addition, as of September 30, 2017, we had options outstanding that, if fully exercised, would result in the issuance of 6,957,227 shares of common stock. As of September 30, 2017, there were also 1,958,564 shares of common stock reserved for future issuance under our 2014 Equity Incentive Plan and 1,249,093 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 automatic annual increases in the number of shares of common stock reserved for future issuance on January 1 of each year through 2024. 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 and the restrictions of Rule 144 under the Securities Act in the case of our affiliates.

Moreover, as of September 30, 2017, holders of an aggregate of up to approximately 3.7 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.

In addition, in connection with our January 2018 issuance of non-voting Class A-1 Convertible Preferred Stock to certain institutional and other accredited investors affiliated with or managed by Redmile Group, LLC, collectively, Redmile, we entered into a registration rights agreement with Redmile. Under the registration rights agreement, we are required to register the shares of common stock issuable upon conversion of the Class A-1 Convertible Preferred Stock for resale under the Securities Act on or before February 1, 2018.

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

The trading market for our common stock 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 of 2002, or 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 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.

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

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

- our board of directors is divided into three classes with staggered three-year terms which may delay or prevent a change of our management or a change in control;
- our board of directors has the right to elect directors to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- our stockholders may not act by written consent or call special stockholders meetings; as a result, a holder, or holders, controlling a majority of our capital stock would not be able to take certain actions other than at annual stockholders meetings or special stockholders meetings called by the board of directors, the chairman of the board or the chief executive officer;
- our certificate of incorporation does not provide for cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- stockholders must provide advance notice and additional disclosures in order to nominate individuals for election to the board of directors or to propose matters that can be acted upon at a stockholders meeting, which may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect the acquiror s own slate of directors or otherwise attempting to obtain control of our company; and
- our board of directors may issue, without stockholder approval, shares of undesignated preferred stock; the ability to issue undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to acquire us.

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

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

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**Risks Related to the Notes**

***The notes are effectively subordinated to our secured debt and any liabilities of our subsidiaries.***

The notes will rank senior in right of payment to any of our indebtedness that is expressly subordinated in right of payment to the notes; equal in right of payment to any of our liabilities that are not so subordinated; effectively junior to all of our secured indebtedness to the extent of the value of the assets securing such indebtedness; and structurally junior to all indebtedness and other liabilities (including trade payables) of our subsidiaries. In the event of our bankruptcy, liquidation, reorganization or other winding up, our assets that secure any debt ranking senior in right of payment to the notes will be available to pay obligations on the notes only after the secured debt has been repaid in full from these assets. There may not be sufficient assets remaining to pay amounts due on any or all of the notes then outstanding. The indenture governing the notes does not prohibit us from incurring additional senior debt or secured debt, nor does it prohibit any of our subsidiaries from incurring additional liabilities.

The notes will not be guaranteed by any of our existing or future subsidiaries. Our subsidiaries are separate and distinct legal entities and have no obligation, contingent or otherwise, to pay any amounts due with respect to the notes or to make any funds available therefor, whether by dividends, loans or other payments. In addition, dividends, loans or other distributions to us from such subsidiaries may be subject to contractual and other restrictions and are subject to other business considerations. The notes will effectively rank junior in right of payment to all existing and future debt and other liabilities (including trade payables) of our subsidiaries. Our right to receive any assets of any of our subsidiaries upon their bankruptcy, liquidation or reorganization, and, therefore, the right of the holders of the notes to participate in those assets, will be subject to prior claims of creditors of the subsidiary, including trade creditors, and such subsidiary may not have sufficient assets remaining to make any payments to us as a stockholder or otherwise. We advise you that there may not be sufficient assets remaining to pay amounts due on any or all the notes then outstanding.

As of September 30, 2017, we and our subsidiaries had no indebtedness. As of September 30, 2017, after giving effect to the issuance of the notes (assuming no exercise of the underwriters over-allotment option) and the use of proceeds therefrom, our total consolidated indebtedness would have been $200.0 million (without giving effect to the equity component of convertible debt or any debt discount).

***We may not be able to generate sufficient cash to service all of our debt, including the notes, and may be forced to take other actions to satisfy our obligations under our debt, which may not be successful.***

Our ability to make scheduled payments on or to refinance our debt obligations, including the notes, and to fund future capital expenditures depends on our ability to generate cash in the future and our financial condition and operating performance, which are subject to prevailing economic and competitive conditions and to certain financial, business and other factors beyond our control. We cannot assure you that we will maintain a level of cash flows from operating activities sufficient to permit us to pay the principal, premium, if any, and interest on (as well as any cash due upon conversion of) our debt, including the notes.

If our cash flows and capital resources are insufficient to fund our debt service obligations, we may be forced to adopt one or more alternatives, such as reducing or delaying investments and capital expenditures, or to selling assets, seeking additional capital or restructuring or refinancing our debt, including the notes. These alternative measures may not be successful and may not permit us to meet

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our scheduled debt service obligations. If our operating results and available cash are insufficient to meet our debt service obligations, we could face substantial liquidity problems and might be required to dispose of material assets or operations to meet our debt service and other obligations. We may not be able to consummate those dispositions or to obtain the proceeds that we could realize from them, and these proceeds may not be adequate to meet any debt service obligations then due. Further, we may need to refinance all or a portion of our debt on or before maturity, and we cannot assure you that we will be able to refinance any of our debt on commercially reasonable terms or at all.

***We may be unable to make cash payments on the notes, including payments of interest, repurchase the notes for cash when required upon the occurrence of a fundamental change or pay cash upon conversion of the notes, and our future debt may contain limitations on our ability to make cash payments on the notes.***

Holders of the notes will have the right to require us to repurchase their notes upon the occurrence of a fundamental change at a fundamental change repurchase price equal to 100% of their principal amount, plus accrued and unpaid interest, if any, as described under Description of Notes Fundamental Change Permits Holders to Require Us to Repurchase Notes. In addition, upon conversion of the notes, unless we elect to deliver solely common stock to settle such conversion (other than cash in lieu of any fractional share), we will be required to make cash payments in respect of the notes being converted as described in under Description of Notes Conversion Rights Settlement upon Conversion. However, we may not have enough available cash or be able to obtain financing at the time we are required to make repurchases of notes surrendered therefor or notes being converted.

In addition, our ability to make cash payments on the notes, including payments of interest, repurchase the notes for cash when required upon the occurrence of a fundamental change or pay cash upon conversion of the notes may be limited by law, by regulatory authority or by the terms of other agreements relating to our debt outstanding at the time.

***We could incur additional indebtedness that could have adverse effects on our business and prevent us from fulfilling our obligations under the notes.***

As of September 30, 2017, we and our subsidiaries had no indebtedness. In the future, we may incur additional indebtedness, including secured indebtedness, in connection with financing acquisitions, strategic transactions or for other purposes, which indebtedness may rank senior to the notes. The indenture governing the notes will not limit the amount of debt that we or our subsidiaries may incur. Our indebtedness increases the risk that we may be unable to generate enough cash to pay amounts due in respect of our indebtedness, including the notes.

Our indebtedness could have important consequences to you and significant effects on our business. For example, it could:

- make it more difficult for us to satisfy our debt obligations, including the notes;
- increase our vulnerability to general adverse economic and industry conditions;
- require us to dedicate a substantial portion of our cash flow from operations to payments on our indebtedness, thereby reducing the availability of our cash flow to fund working capital, capital expenditures and other general corporate purposes;

limit our flexibility in planning for, or reacting to, changes in our business, the industry in which we operate or the general economy;

restrict us from exploiting business opportunities;

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- heighten our vulnerability to downturns in our business, our industry or in the general economy, and restrict us from exploiting business opportunities or making acquisitions;
- limit management s discretion in operating our business;
- place us at a competitive disadvantage compared to our competitors that have less indebtedness; and
- limit our availability to borrow additional funds for working capital, capital expenditures, acquisitions, debt service requirements, execution of our business strategy or other general purposes.

In addition, the agreements that may govern any future indebtedness that we may incur may contain financial and other restrictive covenants that will limit our ability to engage in activities that may be in our long-term best interests. Our failure to comply with those covenants could result in an event of default that, if not cured or waived, could result in the acceleration of all of our debt.

***We may incur substantially more debt or take other actions that would intensify the risks discussed above.***

We and our subsidiaries may be able to incur substantial additional debt in the future, which may be secured debt. We will not be restricted under the terms of the indenture that will govern the notes from incurring additional debt, securing future debt, recapitalizing our debt or taking a number of other actions that are not limited by the terms of the indenture that will govern the notes that could have the effect of diminishing our ability to make payments on the notes when due.

***There is currently no trading market for the notes, and an active liquid trading market for the notes may not develop or, if it develops, be maintained.***

The notes are a new issue of securities, and there is currently no existing trading market for the notes. We do not intend to apply for listing of the notes on any securities exchange or for quotation of the notes on any automated dealer quotation system. Although the underwriters have advised us that they intend to make a market in the notes, they are not obligated to do so and may discontinue any market-making at any time without notice. Accordingly, an active public trading market may not develop for the notes and, even if one develops, may not be maintained. If an active public trading market for the notes does not develop or is not maintained, the market price and liquidity of the notes is likely to be adversely affected and holders may not be able to sell their notes at desired times and prices or at all. If any of the notes are traded after their purchase, they may trade at a discount from their purchase price.

The liquidity of the trading market, if any, and future trading prices of the notes will depend on many factors, including, among other things, the market price of our common stock, prevailing interest rates, our financial condition, results of operations, business, prospects and credit quality relative to our competitors, the market for similar securities and the overall securities market, and may be adversely affected by unfavorable changes in any of these factors, some of which are beyond our control and others of which would not affect debt that is not convertible or exchangeable into capital shares. Historically, the market for convertible or exchangeable debt has been volatile. Market volatility could materially and adversely affect the notes, regardless of our financial condition, results of operations, business, prospects or credit quality.

The notes have a number of features that may adversely affect the value and trading prices of the notes, including conversion conditions and the lack of financial covenants. Furthermore, even if the conversion conditions are met,

volatile or depressed market prices for our common stock are likely to

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have a similar effect on the trading prices of the notes. It is impossible to assure holders of notes that the trading price of our common stock in the future will not have an adverse effect on the trading price of the notes.

***Recent and future regulatory actions and other events may adversely affect the trading price and liquidity of the notes.***

We expect that many investors in, and potential purchasers of, the notes will employ, or seek to employ, a convertible arbitrage strategy with respect to the notes. Investors that employ a convertible arbitrage strategy with respect to convertible debt instruments typically implement that strategy by selling short the common stock underlying the notes and dynamically adjusting their short position while they hold the notes. Investors may also implement this strategy by entering into swaps on our common stock in lieu of or in addition to short selling the common stock. As a result, any specific rules regulating equity swaps or short selling of securities or other governmental action that interferes with the ability of market participants to effect short sales or equity swaps with respect to our common stock could adversely affect the ability of investors in, or potential purchasers of, the notes to conduct the convertible arbitrage strategy that we believe they will employ, or seek to employ, with respect to the notes. This could, in turn, adversely affect the trading price and liquidity of the notes.

The SEC and other regulatory and self-regulatory authorities have implemented various rules and taken certain actions, and may in the future adopt additional rules and take other actions, that may impact those engaging in short selling activity involving equity securities (including our common stock). These rules and actions include Rule 201 of Regulation SHO of the Exchange Act, the adoption by the Financial Industry Regulatory Authority, Inc. and the national securities exchanges of a Limit Up-Limit Down program, the imposition of market-wide circuit breakers that halt trading of securities for certain periods following specific market declines, and the implementation of certain regulatory reforms required by the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. Any governmental or regulatory action that restricts the ability of investors in, or potential purchasers of, the notes to effect short sales of our common stock or enter into swaps on our common stock could adversely affect the trading price and the liquidity of the notes.

In addition, if investors and potential purchasers seeking to employ a convertible arbitrage strategy are unable to borrow or enter into swaps on our common stock, in each case on commercially reasonable terms, the trading price and liquidity of the notes may be adversely affected.

***Volatility in the market price and trading volume of our common stock could adversely impact the trading price of the notes.***

The stock market in recent years has experienced significant price and volume fluctuations that have often been unrelated to the operating performance of companies. The market price of our common stock could fluctuate significantly for many reasons, including in response to the risks described in this section, elsewhere in this prospectus supplement or the documents we have incorporated by reference in this prospectus supplement or for reasons unrelated to our operations, such as reports by industry analysts, investor perceptions or negative announcements by our customers, competitors or suppliers regarding their own performance, as well as industry conditions and general financial, economic and political instability. A decrease in the market price of our common stock would likely adversely impact the trading price of the notes. The market price of our common stock could also be affected by possible sales of our common stock by investors who view the notes as a more attractive means of equity participation in us and by hedging or arbitrage trading activity that we expect to develop involving our common stock. This trading activity could, in turn, affect the trading price of the notes.

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***Holders of notes will not be entitled to any rights with respect to our common stock, but they will be subject to all changes made with respect to them to the extent our conversion obligation includes common stock.***

Holders of notes will not be entitled to any rights with respect to our common stock (including, without limitation, voting rights and rights to receive any dividends or other distributions on our common stock) prior to the conversion date relating to such notes (if we have elected to settle the relevant conversion by delivering solely shares of our common stock (other than paying cash in lieu of delivering any fractional share)) or the last trading day of the relevant observation period (if we elect to pay and deliver, as the case may be, a combination of cash and shares of our common stock in respect of the relevant conversion), but holders of notes will be subject to all changes affecting our common stock. For example, if an amendment is proposed to our amended and restated certificate of incorporation or bylaws requiring stockholder approval and the record date for determining the stockholders of record entitled to vote on the amendment occurs prior to the conversion date related to a holder s conversion of its notes (if we have elected to settle the relevant conversion by delivering solely shares of our common stock (other than paying cash in lieu of delivering any fractional share)) or the last trading day of the relevant observation period (if we elect to pay and deliver, as the case may be, a combination of cash and shares of our common stock in respect of the relevant conversion), such holder will not be entitled to vote on the amendment, although such holder will nevertheless be subject to any changes affecting our common stock.

***Redemption may adversely affect your return on the notes.***

We may not redeem the notes prior to February 1, 2022. We may redeem, in whole or in part, on or after February 1, 2022 at a redemption price equal to 100% of the principal amount of the notes to be redeemed, plus accrued and unpaid interest, to, but excluding, the redemption date, if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during any period of 30 consecutive trading days ending on the trading day immediately prior to the date of the redemption notice exceeds 130% of the applicable conversion price for the notes on each applicable trading day in the manner described under Description of Notes Optional Redemption On or After February 1, 2022. We may choose to redeem some or all of the notes, including at times when prevailing interest rates are relatively low. As a result, you may not be able to reinvest the proceeds you receive from the redemption in a comparable security at an effective interest rate as high as the interest rate on your notes being redeemed. In addition, holders who convert in advance of any redemption would not get any compensation for the lost option value of their notes. See Description of Notes Optional Redemption On or After February 1, 2022.

***The conditional conversion feature of the notes, if triggered, may adversely affect our financial condition and operating results.***

In the event the conditional conversion feature of the notes is triggered, holders of notes will be entitled to convert the notes at any time during specified periods at their option. See Description of Notes Conversion Rights. If one or more holders elect to convert their notes, unless we elect to satisfy our conversion obligation by delivering solely shares of our common stock (other than paying cash in lieu of delivering any fractional share), we would be required to settle a portion or all of our conversion obligation through the payment of cash, which could adversely affect our liquidity. In addition, even if holders do not elect to convert their notes, we could be required under applicable accounting rules to reclassify all or a portion of the outstanding principal of the notes as a current rather than long-term liability, which would result in a material reduction of our net working capital.

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***The conditional conversion feature of the notes could result in your receiving less than the value of our common stock into which the notes would otherwise be convertible.***

Prior to the close of business on the business day immediately preceding November 1, 2024, you may convert your notes only if specified conditions are met. If the specific conditions for conversion are not met, you will not be able to convert your notes, and you may not be able to receive the value of the cash, shares of our common stock or a combination of cash and shares of our common stock, as applicable, into which the notes would otherwise be convertible.

***Conversion of the notes may dilute the ownership interest of existing stockholders, including holders who had previously converted their notes, or may otherwise depress the price of our common stock.***

The conversion of some or all of the notes will dilute the ownership interests of existing stockholders to the extent we deliver shares upon conversion of any of the notes. Any sales in the public market of the common stock issuable upon such conversion could adversely affect prevailing market prices of our common stock. In addition, the existence of the notes may encourage short selling by market participants because the conversion of the notes could be used to satisfy short positions, or anticipated conversion of the notes into shares of our common stock could depress the price of our common stock.

***The accounting method for convertible debt securities that may be settled in cash, such as the notes, could have a material effect on our reported financial results.***

Pursuant to Accounting Standards Codification Subtopic 470-20, *Debt with Conversion and Other Options*, which we refer to as ASC 470-20, an entity must separately account for the liability and equity components of the convertible debt instruments (such as the notes) that may be settled entirely or partially in cash upon conversion in a manner that reflects the issuer s economic interest cost. The effect of ASC 470-20 on the accounting for the notes is that the equity component is required to be included in the additional paid-in capital section of shareholders equity on our consolidated balance sheet and the value of the equity component would be treated as original issue discount for purposes of accounting for the debt component of the notes. As a result, we will be required to record a greater amount of non-cash interest expense in current periods presented as a result of the amortization of the discounted carrying value of the notes to their face amount over the term of the notes. We will report greater losses in our financial statements because ASC 470-20 will require interest to include both the current period s amortization of the debt discount and the instrument s coupon interest, which could adversely affect our reported or future financial results, the market price of our common stock and the trading price of the notes. In addition, there may be features within the terms that are considered to be an embedded derivative and could be recorded on the balance sheet at fair value as a liability. If it is determined to be an embedded derivative, we will be required to recognize changes in the derivative s fair value from period to period in other income (expense) in our statements of operations.

In addition, under certain circumstances, convertible debt instruments (such as the notes) that may be settled entirely or partly in cash are currently accounted for utilizing the treasury stock method, the effect of which is that the shares issuable upon conversion of the notes are not included in the calculation of diluted earnings per share except to the extent that the conversion value of the notes exceeds their principal amount. Under the treasury stock method, for diluted earnings per share purposes, the transaction is accounted for as if the number of our common stock that would be necessary to settle such excess, if we elected to settle such excess in shares, are issued. We cannot be sure that we will be able to use the treasury stock method or the accounting standards in the future will continue to permit the use of the treasury stock method. If we are unable to use the treasury stock method in accounting for the shares issuable upon conversion of the notes, then our diluted earnings per share would be adversely affected.

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***Upon conversion of the notes, you may receive less valuable consideration than expected because the value of our common stock may decline after you exercise your conversion right but before we settle our conversion obligation.***

Under the notes, a converting holder will be exposed to fluctuations in the value of our common stock during the period from the date such holder surrenders notes for conversion until the date we settle our conversion obligation.

Upon conversion of the notes, we have the option to pay or deliver, as the case may be, cash, shares of our common stock, or a combination of cash and shares of our common stock. If we elect to satisfy our conversion obligation in cash or a combination of cash and shares of our common stock, the amount of consideration that you will receive upon conversion of your notes will be determined by reference to the volume-weighted average price of our common stock for each trading day in a 40-trading day observation period. As described under Description of Notes Conversion Rights Settlement upon Conversion, this period would be (i) if the relevant conversion date occurs prior to November 1, 2024, the 40 consecutive trading day period beginning on, and including, the second trading day immediately succeeding such conversion date; (ii) if the relevant conversion date occurs on or after November 1, 2024, the 40 consecutive trading days beginning on, and including, the 42nd scheduled trading day immediately preceding the maturity date; and (iii) notwithstanding the foregoing, if the relevant conversion date occurs after the date of the issuance of a notice of redemption as described under Description of Notes Optional Redemption on or after February 1, 2022, but prior to the close of business on the scheduled trading day immediately preceding the applicable redemption date, the 40 consecutive trading-day period beginning on and including the 42nd scheduled trading day immediately preceding the applicable redemption date. Accordingly, if the price of our common stock decreases during this period, the amount and/or value of consideration you receive will be adversely affected. In addition, if the market price of our common stock at the end of such period is below the average volume-weighted average price of our common stock during such period, the value of any shares of our common stock that you will receive in satisfaction of our conversion obligation will be less than the value used to determine the number of shares that you will receive.

If we elect to satisfy our conversion obligation solely in shares of our common stock upon conversion of the notes, we will be required to deliver the shares of our common stock, together with cash for any fractional share, on the second business day following the relevant conversion date. Accordingly, if the price of our common stock decreases during this period, the value of the shares of our common stock that you receive will be adversely affected and would be less than the conversion value of the notes on the conversion date.

***The increase in the conversion rate for notes converted in connection with a make-whole fundamental change may not adequately compensate you for any lost value of your notes as a result of such transaction.***

If a make-whole fundamental change occurs prior to the maturity date, under certain circumstances, we will increase the conversion rate by a number of additional shares of our common stock for notes converted in connection with such make-whole fundamental change. The increase in the conversion rate will be determined based on the date on which the specified corporate transaction becomes effective and the price paid (or deemed to be paid) per share of common stock in such transaction, as described below under Description of Notes Conversion Rights Increase in Conversion Rate upon Conversion upon a Make-Whole Fundamental Change. The increase in the conversion rate for notes converted in connection with a make-whole fundamental change may not adequately compensate you for any lost value of your notes as a result of such transaction. In addition, if the price per share of our common stock paid (or deemed paid) in the transaction is greater than $ per share of our common stock or less than $ per share of common stock (in each case,

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subject to adjustment), no additional shares of our common stock will be added to the conversion rate. Moreover, in no event will the conversion rate per $1,000 principal amount of notes as a result of this adjustment exceed shares of our common stock, subject to adjustment in the same manner as the conversion rate as set forth under Description of Notes Conversion Rights Conversion Rate Adjustments.

Our obligation to increase the conversion rate for notes converted in connection with a make-whole fundamental change could be considered a penalty, in which case the enforceability thereof would be subject to general principles of reasonableness and equitable remedies.

***Future sales of our common stock in the public market could lower the market price for our common stock and adversely impact the trading price of the notes.***

In the future, we may sell additional common stock to raise capital. In addition, a substantial number of shares of our common stock is reserved for issuance upon the exercise of stock options and upon conversion of the notes and our outstanding preferred stock. We cannot predict the size of future issuances or the effect, if any, that they may have on the market price for our common stock. The issuance and sale of substantial amounts of our common stock, or the perception that such issuances and sales may occur, could adversely affect the trading price of the notes and the market price of our common stock and impair our ability to raise capital through the sale of additional equity securities.

***The conversion rate of the notes may not be adjusted for all dilutive events.***

The conversion rate of the notes is subject to adjustment for certain events, including, but not limited to, the issuance of certain stock dividends on our common stock, the issuance of certain rights or warrants, subdivisions, combinations, distributions of capital stock, indebtedness, or assets, cash dividends and certain issuer tender or exchange offers as described under Description of Notes Conversion Rights Conversion Rate Adjustments. However, the conversion rate will not be adjusted for other events, such as a third-party tender or exchange offer or an issuance of shares of our common stock for cash, that may adversely affect the trading price of the notes or our common stock. An event that adversely affects the value of the notes may occur, and that event may not result in an adjustment to the conversion rate of the notes.

***The notes are not protected by restrictive covenants.***

The indenture governing the notes does not contain any financial or operating covenants or restrictions on the payments of dividends, the incurrence of indebtedness or the issuance or repurchase of securities by us or any of our subsidiaries. The indenture contains no covenants or other provisions to afford protection to holders of the notes in the event of a fundamental change or other corporate transaction involving us except to the extent described under Description of Notes Fundamental change permits holders to require us to repurchase notes, Description of Notes Conversion Rights Increase in Conversion Rate upon Conversion upon a Make-Whole Fundamental Change and Description of Notes Consolidation, Merger and Sale of Assets.

***Some significant restructuring transactions and significant changes in the composition of our board may not constitute a fundamental change, in which case we would not be obligated to offer to repurchase the notes.***

Upon the occurrence of a fundamental change, you have the right to require us to repurchase your notes. However, the fundamental change provisions will not afford protection to holders of notes in the event of other transactions that could adversely affect the notes. For example, transactions such as leveraged recapitalizations, refinancings, restructurings, or acquisitions initiated by us may not

constitute a fundamental change requiring us to repurchase the notes. In the event of any such transaction, the holders would not have the right to require us to repurchase the notes, even though each of these transactions could increase the amount of our indebtedness, or otherwise adversely affect our capital structure or any credit ratings, thereby adversely affecting the holders of notes.

***The fundamental change repurchase feature of the notes may delay or prevent an otherwise beneficial attempt to take over our company.***

The terms of the notes require us to repurchase the notes in the event of a fundamental change. A takeover of our company would trigger an option of the holders of the notes to require us to repurchase the notes. This may have the effect of delaying or preventing a takeover of our company that would otherwise be beneficial to investors in the notes. See Description of Notes Fundamental Change Permits Holders to Require Us to Repurchase Notes.

***Any adverse rating of the notes may cause their trading price to fall.***

We do not intend to seek a rating on the notes. However, if a rating service were to rate the notes and if such rating service were to lower its rating on the notes below the rating initially assigned to the notes or otherwise announces its intention to put the notes on credit watch, the trading price of the notes could decline.

***You may be subject to tax if we make or fail to make certain adjustments to the conversion rate of the notes even though you do not receive a corresponding cash distribution.***

The conversion rate of the notes is subject to adjustment in certain circumstances, including the payment of cash dividends on our common stock. If the conversion rate is adjusted as a result of a distribution that is taxable to our common stockholders, such as a cash dividend, you may be deemed to have received a dividend subject to U.S. federal income tax without the receipt of any cash. In addition, a failure to adjust (or to adjust adequately) the conversion rate after an event that increases your proportionate interest in us could be treated as a deemed taxable dividend to you. If a make-whole fundamental change occurs on or prior to the maturity date under some circumstances, we will increase the conversion rate for notes converted in connection with the make-whole fundamental change. Such increase may also be treated as a distribution subject to U.S. federal income tax as a dividend. See Material U.S. Federal Income Tax Considerations. If you are a non-U.S. holder (as defined in Material U.S. Federal Income Tax Considerations ), any deemed dividend would generally be subject to U.S. federal withholding tax at a 30% rate, or such lower rate as may be specified by an applicable treaty, which may be set off against subsequent payments on the notes. See Material U.S. Federal Income Tax Considerations.

***The recently passed comprehensive tax reform legislation could adversely affect our business and financial condition.***

On December 22, 2017, President Trump signed into law new tax legislation, the Tax Act, that significantly changes the Internal Revenue Code of 1986, as amended. The Tax Act, among other things, contains significant changes to corporate taxation, including reduction of the corporate tax rate from a top marginal rate of 35% to a flat rate of 21%, limitation of the tax deduction for interest expense to 30% of adjusted earnings (except for certain small businesses), limitation of the deduction for net operating losses to 80% of current year taxable income and elimination of net operating loss carrybacks, one time taxation of offshore earnings at reduced rates regardless of whether they are repatriated, immediate deductions for certain new investments instead of deductions for depreciation expense over time, and modifying or repealing many business deductions and credits. Any federal net operating loss carryovers created in 2018 and thereafter will be carried forward indefinitely pursuant to

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the Tax Act. We continue to examine the impact this tax legislation may have on our business. Notwithstanding the reduction in the corporate income tax rate, the overall impact of the Tax Act is uncertain and our business and financial condition could be adversely affected. The impact of this Tax Act on holders of our notes or common stock is also uncertain and could be adverse. This prospectus supplement does not discuss any such tax legislation or the manner in which it might affect us or purchasers of our notes or holders of our common stock. We urge purchasers of notes in this offering, to consult with their legal and tax advisors with respect to such legislation and the potential tax consequences of investing in our notes and common stock.

***The notes will initially be held in book-entry form and, therefore, holders must rely on the procedures and the relevant clearing systems to exercise their rights and remedies.***

Unless and until certificated notes are issued in exchange for book-entry interests in the notes, owners of the book-entry interests will not be considered owners or holders of the notes. Instead, The Depository Trust Company, or DTC, or its nominee, will be the sole holder of the notes. Payments of principal, interest (including any additional interest), amounts due upon conversion, and other amounts owing on or in respect of the notes in global form will be made to the paying agent, which will make the payments to DTC. Thereafter, such payments will be credited to DTC participants accounts that hold book-entry interests in the notes in global form and credited by such participants to indirect participants. Unlike holders of the notes themselves, owners of book-entry interests will not have the direct right to upon our solicitations for consents or requests for waivers or other actions from holders of the notes. Instead, if a holder owns a book-entry interest, such holder will be permitted to act only to the extent such holder has received appropriate proxies to do so from DTC or, if applicable, a participant. The applicable procedures for the granting of these proxies may not be sufficient to enable owners of beneficial interests in global notes to vote on any requested actions on a timely basis. We cannot assure holders that to procedures for the granting of such proxies will be sufficient to enable holders to vote on any requests actions on a timely basis. In addition, notices and other communications relating to the notes (including any notice of redemption) will be sent to DTC. We expect DTC to forward any such communications to DTC participants, which in turn would forward such communications to indirect DTC participants. But we can make no assurances that you timely receive any such communications.

***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 fund the development and commercialization of eptinezumab, and in particular, activities in support of achieving approval by the U.S. Food and Drug Administration for, and executing the commercial launch of, the infusion formulation of eptinezumab.

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.

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## 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 and in our most recent Quarterly Report on Form 10-Q, 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, plans, anticipates, believes, estimates, projects, predicts, potential and similar expressions intended to iden 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.

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We discuss many of these risks, uncertainties and other factors in greater detail under the section titled Risk Factors contained in this prospectus supplement and in our most recent Quarterly Report on Form 10-Q incorporated by reference into this prospectus supplement. 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.

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

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## USE OF PROCEEDS

We estimate that we will receive net proceeds from this offering will be approximately $ million ($ million if the underwriters over-allotment option to purchase additional notes is exercised in full), after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

We currently plan to use the net proceeds from this offering to fund the development and commercialization of eptinezumab, and in particular, activities in support of achieving approval by the FDA for, and executing the commercial launch of, the infusion formulation of eptinezumab.

The expected uses of the net proceeds from this offering 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, the status of and results from clinical trials and developments with respect to regulatory application, review and approval processes, 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 believe the net proceeds from this offering, together with our existing cash, cash equivalents and investments, will be sufficient to fund our operations as currently contemplated into 2020. However, we may not achieve the progress that we expect because the actual costs and timing of drug development and commercialization are difficult to predict and subject to risks and uncertainties, including, without limitation, those described in the Risk Factors section of this prospectus supplement.

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.

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## RATIO OF EARNINGS TO FIXED CHARGES AND PREFERRED STOCK DIVIDENDS

The following table sets forth our ratio of earnings to fixed charges and the ratio of our earnings to combined fixed charges and preferred stock dividends to earnings for each of the periods presented. Our net losses were insufficient to cover fixed charges and combined fixed charges and preferred stock dividends for each of the periods presented, other than the year ended December 31, 2014. Because of these deficiencies, the ratio information is not applicable for those periods. The extent to which earnings were insufficient to cover fixed charges and combined fixed charges and preferred stock dividends for those periods is shown below. Amounts shown are in thousands, except for ratios.

| | Year Ended December 31, | | | | | Nine Months Ended September 30, |
|---|---|---|---|---|---|---|
| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| Ratio of earnings to fixed charges(1) | N/A | N/A | 34.5 | N/A | N/A | N/A |
| Ratio of earnings to combined fixed charges and preferred stock dividends | N/A | N/A | 34.5 | N/A | N/A | N/A |
| Deficiency of earnings available to cover fixed charges | $ (17,806) | $ (20,613) | N/A | $ (85,470) | $ (156,069) | $ (234,059) |
| Deficiency of earnings available to cover combined fixed charges and preferred stock dividends | $ (17,806) | $ (20,613) | N/A | $ (85,470) | $ (156,069) | $ (234,059) |

(1) Fixed charges are comprised of our estimate of interest within rental expense.

## MARKET PRICE OF COMMON STOCK

Our common stock is traded on The Nasdaq Global Market under the symbol ALDR. 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, 2016: | High | Low |
|---|---|---|
| First quarter | $ 32.96 | $ 15.82 |
| Second quarter | 32.44 | 22.38 |
| Third quarter | 36.48 | 24.39 |
| Fourth quarter | 34.30 | 20.30 |

| Year Ended December 31, 2017: | High | Low |
|---|---|---|
| First quarter | $25.45 | $18.55 |
| Second quarter | 22.50 | 11.15 |
| Third quarter | 12.00 | 8.60 |
| Fourth quarter | 13.25 | 9.55 |

| Year Ended December 31, 2018: | High | Low |
|---|---|---|
| First quarter (through January 26, 2018) | $ 18.60 | $ 11.35 |

On January 26, 2018, the last reported sale price of our common stock on The Nasdaq Global Market was $16.70 per share. As of September 30, 2017, we had 19 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.

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## DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We do not anticipate declaring, or paying in the foreseeable future, any cash dividends on our common stock. Subject to certain exceptions, holders of our Class A-1 Convertible Preferred Stock are entitled to receive dividends at a rate of 5% per year of the original purchase price of $137.88 per share. Preferred dividends accrue and accumulate semi-annually and are payable semi-annually in arrears on June 30 and December 31 of each year commencing on June 30, 2018. We may elect to pay the preferred dividends in cash or by issuance of additional fully paid and nonassessable shares of Class A-1 Convertible Preferred Stock in an amount equal to (i) the aggregate dollar amount of the preferred dividends payable, divided by (ii) the original issue price. Future determinations as to the declaration and payment of dividends, if any, other than the preferred dividends, 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.

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## CAPITALIZATION

The following table sets forth our unaudited cash, cash equivalents and investments and capitalization as of September 30, 2017:

on an actual basis; and

on an as adjusted basis to give effect the issuance of $200.0 million principal amount of notes in this offering, after deducting the underwriters 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 Quarterly Report on Form 10-Q 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.

| | As of September 30, 2017 | |
|---|---|---|
| **(In thousands, except share and per share data)** | **Actual** | **As Adjusted** |
| Cash, cash equivalents and investments | $ 330,885 | $ |
| % convertible senior notes due 2025 offered hereby(1) | $ | $ |
| 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, 67,715,531 shares issued and outstanding, actual and as adjusted | 7 | |
| Additional paid-in capital(2) | 940,387 | |
| Accumulated other comprehensive loss | (72) | |
| Accumulated deficit | (613,152) | |
| Total stockholders equity(2) | 327,170 | |
| Total capitalization(2) | $ 327,170 | $ |

(1) In accordance with Financial Accounting Standards Board Accounting Standards Codification, or ASC, 470-20, Debt with Conversion and Other Options, convertible debt that may be entirely or partially settled in cash (such as the notes offered hereby) is required to be separated into a liability and an equity component, such that interest expense reflects the issuer s non-convertible debt interest cost. On the issuance date, the value of the conversion option of the notes, representing the equity component, will be recorded as additional paid-in capital

within stockholders equity and as a discount to the notes, which reduces their initial carrying value. The carrying value of the notes, net of the discount recorded, will be accreted up to the principal amount of the notes from the issuance date until maturity. Disclosure requirements under ASC 470-20 do not affect the actual amount that we are required to repay.

(2) The issuance of the notes (after giving effect to the application of ASC 470-20 as described in note (1) above) will result in an increase to additional paid-in capital and, therefore, an increase in total stockholders equity and total capitalization. However, amounts shown in the table above relating to the notes offered hereby do not reflect the application of ASC 470-20 to the notes.

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The number of shares of our common stock to be outstanding after this offering is based on 67,715,531 shares of our common stock outstanding as of September 30, 2017 and excludes:

- 6,957,227 shares of common stock issuable upon the exercise of outstanding stock options as of September 30, 2017, at a weighted-average exercise price of $20.91 per share;

- 1,958,564 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;

- 1,249,093 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; and

- the shares of common stock to be reserved for issuance upon conversion of the notes offered by us hereby.

Subsequent to September 30, 2017, we issued certain institutional and other accredited investors affiliated with or managed by Redmile Group, LLC an aggregate of 725,268 shares of non-voting Class A-1 Convertible Preferred Stock for gross proceeds of approximately $100,000,000. The information presented in the table above does not reflect this issuance of preferred stock or any other events occurring after September 30, 2017.

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## DESCRIPTION OF NOTES

We will issue the notes under a base indenture dated as of the date of the initial issuance of the notes between us and U.S. Bank National Association, as supplemented by a supplemental indenture with respect to the notes to be dated as of the date of the initial issuance of the notes. In this section, we refer to the base indenture, or the base indenture, as supplemented by the supplemental indenture, or the supplemental indenture, collectively referred to as the indenture. This description of the notes supplements and, to the extent it is inconsistent, replaces the description of the general provisions of the notes and the base indenture in the accompanying prospectus. The terms of the notes include those expressly set forth in the indenture and those made part of the indenture by reference to the Trust Indenture Act of 1939, as amended, or the Trust Indenture Act.

You may request a copy of the indenture from us as described under Where you can find more information.

The following description is a summary of the material provisions of the notes and the indenture and does not purport to be complete. This summary is subject to and is qualified by reference to all the provisions of the notes and the indenture, including the definitions of certain terms used in the indenture. We urge you to read these documents because they, and not this description, define your rights as a holder of the notes.

For purposes of this description, references to we, our and us refer only to Alder BioPharmaceuticals, Inc. and not to its subsidiaries.

### General

The notes will:

- be our general, senior, unsecured obligations;
- initially be limited to an aggregate principal amount of $200,000,000 (or $230,000,000 if the underwriters over-allotment option is exercised in full);
- bear cash interest from , 2018 at an annual rate of % payable on February 1 and August 1 of each year, beginning on August 1, 2018;
- will be subject to redemption at our option, in whole or in part, on or after February 1, 2022 at a redemption price equal to 100% of the principal amount of the notes to be redeemed, plus accrued and unpaid interest, to, but excluding, the redemption date, if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during any period of 30 consecutive trading days ending on the trading day immediately prior to the date of the redemption notice exceeds 130% of the applicable conversion price for the notes on each applicable trading day in the manner described under Optional Redemption on or after February 1, 2022;

be subject to repurchase by us at the option of the holders following a fundamental change (as defined below under Fundamental Change Permits Holders to Require Us to Repurchase Notes ), at a fundamental change repurchase price equal to 100% of the principal amount of the notes to be repurchased, *plus* accrued and unpaid interest to, but excluding, the fundamental change repurchase date;

mature on February 1, 2025, unless earlier converted, redeemed or repurchased;

be issued in minimum denominations of $1,000 and integral multiples of $1,000; and

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be represented by one or more registered notes in global form, but in certain limited circumstances may be represented by notes in definitive form. See Book-Entry, Settlement and Clearance.

Subject to satisfaction of certain conditions and during the periods described below, the notes may be converted at an initial conversion rate of shares of common stock per $1,000 principal amount of notes (equivalent to an initial conversion price of approximately $ per share of common stock). The conversion rate is subject to adjustment if certain events occur.

We will settle conversions of notes by paying or delivering, as the case may be, cash, shares of our common stock or a combination of cash and shares of our common stock, at our election, as described under Conversion Rights Settlement upon Conversion. You will not receive any separate cash payment for interest, if any, accrued and unpaid to the conversion date except under the limited circumstances described below.

The indenture will not limit the amount of debt, including secured debt, that may be issued by us or our subsidiaries under the indenture or otherwise. The indenture will not contain any financial covenants and will not restrict us from paying dividends or issuing or repurchasing our other securities or indebtedness. Other than restrictions described under Fundamental Change Permits Holders to Require Us to Repurchase Notes and Consolidation, Merger and Sale of Assets below and except for the provisions set forth under Conversion Rights Increase in Conversion Rate upon Conversion upon a Make-Whole Fundamental Change, the indenture will not contain any covenants or other provisions designed to afford holders of the notes protection in the event of a highly leveraged transaction involving us or in the event of a decline in our credit rating as the result of a takeover, recapitalization, highly leveraged transaction or similar restructuring involving us that could adversely affect such holders.

Notwithstanding anything to the contrary in the accompanying prospectus, we may, without the consent of, or notice to, the holders, reopen the indenture for the notes and issue additional notes under the indenture with the same terms as the notes offered hereby (other than differences in the issue date, the issue price and interest accrued prior to the issue date of such additional notes) in an unlimited aggregate principal amount; *provided* that if any such additional notes are not fungible with the notes initially offered hereby for U.S. federal income tax or securities law purposes, such additional notes will have one or more separate CUSIP numbers.

We do not intend to list the notes on any securities exchange or any automated dealer quotation system.

Except to the extent the context otherwise requires, we use the term notes in this prospectus supplement to refer to each $1,000 principal amount of notes. We use the term common stock in this prospectus supplement to refer to shares of our common stock, par value $0.0001 per share. References in this prospectus supplement to a holder or holders of notes that are held through The Depository Trust Company, or DTC, are references to owners of beneficial interests in such notes, unless the context otherwise requires. However, we and the trustee will treat the person in whose name the notes are registered (Cede & Co., in the case of notes held through DTC) as the owner of such notes for all purposes. References herein to the close of business refer to 5:00 p.m., New York City time, and to the open of business refer to 9:00 a.m., New York City time.

**Purchase and Cancellation**

We will cause all notes surrendered for payment, redemption, repurchase (including as described below but excluding notes repurchased pursuant to cash-settled swaps or other derivatives),

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registration of transfer or exchange or conversion, if surrendered to any person that we control other than the trustee, to be delivered to the trustee for cancellation. All notes delivered to the trustee shall be cancelled promptly by the trustee in accordance with its customary procedures. Except for notes surrendered for registration of transfer or exchange, no notes shall be authenticated in exchange for any notes cancelled as provided in the indenture.

We may, to the extent permitted by law, and directly or indirectly (regardless of whether such notes are surrendered to us), repurchase notes in the open market or otherwise, whether by us or our subsidiaries or affiliates or through a private or public tender or exchange offer or through counterparties pursuant to private agreements, including by cash-settled swaps or other derivatives, in each case, without notice to the holders. We will cause any notes so repurchased (other than notes repurchased pursuant to cash-settled swaps or other derivatives) to be surrendered to the trustee for cancellation, and they will no longer be considered outstanding under the indenture upon their repurchase.

**Payments on the Notes; Paying Agent and Registrar; Transfer and Exchange**

The provisions described in the first paragraph under Description of Debt Securities Payment and Paying Agent in the accompanying prospectus will not apply to the notes. Instead, the provisions described in this Payments on the Notes; Paying Agent and Registrar; Transfer and Exchange section will apply to the notes. We will pay, or cause the paying agent to pay, the principal of, and interest on, notes in global form registered in the name of or held by DTC or its nominee in immediately available funds to DTC or its nominee, as the case may be, as the registered holder of such global note.

We will pay, or cause the paying agent to pay, the principal of any certificated notes at the office or agency designated by us for that purpose. We have initially designated the trustee as our paying agent and registrar and its agency as a place where notes may be presented for payment or for registration of transfer. We may, however, change the paying agent or registrar without prior notice to the holders of the notes, and we may act as paying agent or registrar. Interest on any certificated notes will be payable (i) to holders holding certificated notes having an aggregate principal amount of $3,000,000 or less, by check mailed to the holders of these notes and (ii) to holders holding certificated notes having an aggregate principal amount of more than $3,000,000, either by check mailed to each holder or, upon written application by such a holder to the registrar not later than the relevant regular record date, by wire transfer in immediately available funds to that holder s account within the United States if such holder has provided us, the trustee, the registrar or the paying agent with the requisite information necessary to make such wire transfer, which application shall remain in effect until the holder notifies, in writing, the registrar to the contrary.

A holder of notes may transfer or exchange notes at the office of the registrar in accordance with the indenture. The registrar and the trustee may require a holder, among other things, to furnish appropriate endorsements and transfer documents. No service charge will be imposed by us, the trustee or the registrar for any registration of transfer or exchange of notes, but we may require a holder to pay a sum sufficient to cover any transfer tax or other similar governmental charge required by law or permitted by the indenture. We are not required to transfer or exchange any note selected for redemption or surrendered for conversion or required repurchase. The transfer agent for the notes will initially be the trustee. A holder of a beneficial interest in a note in global form may transfer or exchange such beneficial interest in accordance with the indenture and the applicable procedures of DTC. See Book-Entry, Settlement and Clearance.

The registered holder of a note will be treated as its owner for all purposes.

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**Interest**

The notes will bear cash interest at a rate of % per year until maturity. Interest on the notes will accrue from , 2018 or from the most recent date on which interest has been paid or duly provided for. Interest will be payable semiannually in arrears on February 1 and August 1 of each year, beginning on August 1, 2018.

Interest will be paid to the person in whose name a note is registered at the close of business on January 15 or July 15, as the case may be, immediately preceding the relevant interest payment date, (each, whether or not a business day, a regular record date ). Interest on the notes will be computed on the basis of a 360-day year composed of twelve 30-day months and, for partial months, on the basis of the number of days actually elapsed in a 30-day month.

If any interest payment date, the maturity date, redemption date or any earlier required repurchase date upon a fundamental change of a note falls on a day that is not a business day, the required payment will be made on the next succeeding business day with the same force and effect as if made on such scheduled payment date, and no interest on such payment will accrue in respect of the delay. The term business day means, with respect to any note, any day other than a Saturday, a Sunday or a day on which the Federal Reserve Bank of New York is authorized or required by law or executive order to close or be closed.

Unless the context otherwise requires, all references to interest in this prospectus supplement include additional interest, if any, payable at our election as the sole remedy relating to the failure to comply with our reporting obligations as described under Events of Default.

**Ranking**

The notes will be our senior, direct, unsecured obligations and will rank:

- senior in right of payment to any of our indebtedness that is expressly subordinated in right of payment to the notes;
- equal in right of payment to any of our unsecured indebtedness that is not so subordinated;
- effectively junior to all of our secured indebtedness to the extent of the value of the assets securing such indebtedness; and
- structurally junior to all indebtedness and other liabilities (including trade payables) of our subsidiaries.

The notes will not be guaranteed by any of our existing or future subsidiaries. Our subsidiaries are separate and distinct legal entities and have no obligation, contingent or otherwise, to pay any amounts due with respect to the notes or to make any funds available therefor, whether by dividends, loans or other payments. The notes will effectively rank junior in right of payment to all existing and future debt and other liabilities (including trade payables) of our subsidiaries. Our right to receive any assets of any of our subsidiaries upon their bankruptcy, liquidation or reorganization, and, therefore, the right of the holders of the notes to participate in those assets, will be subject to prior claims of creditors of the subsidiary, including trade creditors, and such subsidiary may not have sufficient assets remaining to make any payments to us as a shareholder or otherwise. We advise you that there may

not be sufficient assets remaining to pay amounts due on any or all the notes then outstanding.

As of September 30, 2017, we and our subsidiaries had no indebtedness. As of September 30, 2017, after giving effect to the issuance of the notes (assuming no exercise of the underwriters over-allotment option), our total indebtedness would have been $200.0 million (without giving effect to the equity component of convertible debt or any debt discount).

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The ability of our subsidiaries to pay dividends and make other payments to us is restricted by, among other things, our future debt agreements, applicable corporate and other laws and regulations as well as agreements to which our subsidiaries may become a party. We may not be able to pay the cash portions of any settlement amount upon conversion of interest on the notes or to pay cash for the fundamental change repurchase price if a holder requires us to repurchase notes upon a fundamental change as described below. See Risk Factors Risks Related to the Notes The notes are effectively subordinated to our secured debt and any liabilities of our subsidiaries and We may be unable to make cash payments on the notes, including payments of interest, repurchase the notes for cash when required upon the occurrence of a fundamental change or pay cash upon conversion of the notes, and our future debt may contain limitations on our ability to make cash payments on the notes.

**Optional Redemption on or after February 1, 2022**

We may not redeem the notes prior to February 1, 2022, and no sinking fund is provided for the notes. On or after February 1, 2022, we may redeem any or all of the notes, except for the notes that we are required to repurchase as provided under Fundamental Change Permits Holders to Require Us to Repurchase Notes, in cash at the redemption price as set forth below; provided that the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during the period of 30 consecutive trading days ending on the trading day immediately prior to the date of the redemption notice exceeds 130% of the applicable conversion price for the notes on each applicable trading day as determined by us.

The redemption price for the notes to be redeemed on any redemption date will equal:

100% of the principal amount of the notes being redeemed; plus

accrued and unpaid interest to, but excluding, the redemption date;

unless the redemption date falls after a record date but on or prior to the immediately succeeding interest payment date, in which case we will instead pay the full amount of accrued and unpaid interest to the holder of record as of the close of business on such record date and the redemption price will be 100% of the principal amount of notes to be redeemed. The redemption date must be a business day.

We will give a written notice of redemption not more than 75 days but not less than 55 days (or such longer notice period as required to provide that there is a sufficient number of trading days between the notice of redemption and the redemption date, which we refer to as the redemption period , such that the entire conversion redemption observation period (as defined below) occurs within such redemption period and such redemption notice is delivered by us at least two trading days prior to the commencement of the related conversion redemption observation period) prior to the redemption date to each record holder of notes to be redeemed at their addresses set forth in the register of the registrar. The notice will state, among other things:

that such holder has a right to convert the notes called for redemption upon satisfaction of the requirements therefor set forth in the indenture, and the conversion rate applicable to such conversion; and

the time at which such holder s right to convert the notes called for redemption will expire, which will be the close of business on the business day immediately preceding the redemption date.

Simultaneously with providing such notice, we will publish the information on our website or through such other public medium as we may use at that time.

Trading day means a day on which trading in our common stock (or other security into which the notes are then convertible) generally occurs on The Nasdaq Global Market or, if our common stock (or

such other security) is not then listed on The Nasdaq Global Market, on the principal other U.S. national or regional securities exchange on which our common stock (or such other security) is then listed or, if our common stock (or such other security) is not then listed on a U.S. national or regional securities exchange, on the principal other market on which our common stock (or such other security) is then traded. If our common stock (or such other security) is not so listed or traded, trading day means a business day.

If fewer than all of the outstanding notes are to be redeemed, the trustee will select the notes to be redeemed in principal amounts of $1,000 or integral multiples of $1,000 by lot or by another method the trustee considers reasonable, fair and appropriate in accordance with DTC procedures. If a portion of your notes is selected for redemption and you convert a portion of your notes, the converted portion will be deemed to be of the portion selected for redemption to the extent that the converted portion does not exceed the portion selected for redemption.

In the event of any redemption in part, we shall not be required to (i) issue, register the transfer of or exchange any notes during a period beginning at the open of business 15 days before the mailing of a notice of redemption and ending at the close of business on the earliest date on which the relevant notice of redemption is deemed to have been given to all holders of notes to be redeemed or (ii) register the transfer of or exchange any notes so selected for redemption, in whole or in part, except the unredeemed portion of any notes being redeemed in part.

No notes may be redeemed if the principal amount of the notes has been accelerated, and such acceleration has not been rescinded, on or prior to the redemption date (except in the case of an acceleration resulting from a default by us in the payment of the applicable redemption price with respect to such notes).

**Conversion Rights**

***General***

Prior to the close of business on the business day immediately preceding November 1, 2024, the notes will be convertible only upon satisfaction of one or more of the conditions described under the headings Conversion upon Satisfaction of Sale Price Condition, Conversion upon Satisfaction of Trading Price Condition, Conversion upon Notice of Redemption and Conversion upon Specified Corporate Events. On or after November 1, 2024 until the close of business on the business day immediately preceding the maturity date, holders may convert all or any portion of their notes at the conversion rate at any time irrespective of the foregoing conditions.

The conversion rate will initially be shares of common stock per $1,000 principal amount of notes (equivalent to an initial conversion price of approximately $ per share of common stock). Upon conversion of a note, we will satisfy our conversion obligation by paying or delivering, as the case may be, cash, shares of our common stock or a combination of cash and shares of our common stock, at our election, all as set forth below under Settlement upon Conversion. If we satisfy our conversion obligation solely in cash or through payment and delivery, as the case may be, of a combination of cash and shares of our common stock, the amount of cash and number of shares of our common stock, if any, due upon conversion will be based on a daily conversion value (as defined below) calculated on a proportionate basis for each trading day in a 40 trading day observation period (as defined below under Settlement upon Conversion ). The conversion rate and the equivalent conversion price in effect at any given time will be subject to adjustment as described below under Conversion Rate Adjustments. The trustee will initially act as the conversion agent.

A holder may convert fewer than all of such holder s notes so long as the notes converted are a multiple of $1,000 principal amount.

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If we call notes for redemption, a holder of notes may convert all or any portion of its notes only until the close of business on the scheduled trading day immediately preceding the redemption date unless we fail to pay the redemption price (in which case a holder of notes may convert such notes until the scheduled trading day immediately preceding the date on which the redemption price has been paid or duly provided for). If a holder of notes has submitted notes for repurchase upon a fundamental change, the holder may convert those notes only if that holder first withdraws its repurchase election.

Upon conversion, you will not receive any separate cash payment for accrued and unpaid interest, if any, except as described below. We will not issue fractional shares of our common stock upon conversion of notes. Instead, we will pay cash in lieu of delivering any fractional share as described under Settlement upon Conversion. Our payment of cash, delivery of shares of our common stock or a combination thereof, in the manner set forth herein, into which a note is convertible will be deemed to satisfy in full our obligation to pay:

- the principal amount of the note; and
- accrued and unpaid interest, if any, to, but excluding, the relevant conversion date.

As a result, accrued and unpaid interest, if any, to, but excluding, the relevant conversion date will be deemed to be paid in full rather than cancelled, extinguished or forfeited. Upon a conversion of notes into a combination of cash and shares of our common stock, accrued and unpaid interest will be deemed to be paid first out of the cash paid upon such conversion.

Notwithstanding the immediately preceding paragraph, if notes are converted after the close of business on a regular record date for the payment of interest, holders of such notes at the close of business on such regular record date will receive the full amount of interest payable on such notes on the corresponding interest payment date notwithstanding the conversion. Notes surrendered for conversion during the period from the close of business on any regular record date to the open of business on the immediately following interest payment date must be accompanied by funds equal to the amount of interest payable on the notes so converted; *provided* that no such payment need be made:

- for conversions following the regular record date immediately preceding the maturity date;
- if we have specified a redemption date that is after a regular record date and on or prior to the business day immediately following the corresponding interest payment date;
- if we have specified a fundamental change repurchase date that is after a regular record date and on or prior to the business day immediately following the corresponding interest payment date; or
- to the extent of any overdue interest, if any overdue interest exists at the time of conversion with respect to such note.

Therefore, for the avoidance of doubt, all record holders of notes on the regular record date immediately preceding the maturity date, any redemption date described in the second bullet in the immediately preceding paragraph and any

fundamental change repurchase date described in the third bullet in the immediately preceding paragraph will receive the full interest payment due on the maturity date regardless of whether their notes have been converted following such regular record date.

If a holder converts notes, we will pay any documentary, stamp or similar issue or transfer tax due on any issuance of any shares of common stock upon the conversion, unless the tax is due because the holder requests such shares to be issued in a name other than the holder s name, in which case the holder will pay that tax.

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Holders may surrender their notes for conversion to the conversion agent only under the following circumstances:

***Conversion upon Notice of Redemption***

If, at any time after February 1, 2022, we call any or all of the notes for redemption as described under Optional Redemption on or after February 1, 2022, holders of the notes will have the right to convert their notes at any time until the close of business on the scheduled trading day preceding the redemption date, after which time holders will no longer have the right to convert their notes on account of our delivery of notice of such redemption, unless we default in the payment of the redemption price.

***Conversion upon Satisfaction of Sale Price Condition***

Prior to the close of business on the business day immediately preceding November 1, 2024, a holder may surrender all or any portion of its notes for conversion at any time during any calendar quarter commencing after the calendar quarter ending on March 31, 2018 (and only during such calendar quarter), if the last reported sale price of our common stock for at least 20 trading days (whether or not consecutive) during the period of 30 consecutive trading days ending on the last trading day of the immediately preceding calendar quarter is greater than or equal to 130% of the conversion price on each applicable trading day.

The last reported sale price of our common stock (or other security for which a closing sale price must be determined) on any date means the closing sale price per share (or if no closing sale price is reported, the average of the bid and ask prices or, if more than one in either case, the average of the average bid and the average ask prices) on that date as reported in composite transactions for the principal U.S. national or regional securities exchange on which our common stock (or such other security) is traded. If our common stock (or such other security) is not listed for trading on a U.S. national or regional securities exchange on the relevant date, the last reported sale price will be the last quoted bid price for our common stock (or such other security) in the over-the-counter market on the relevant date as reported by OTC Markets Group Inc. or a similar organization. If our common stock (or such other security) is not so quoted, the last reported sale price will be the average of the mid-point of the last bid and ask prices for our common stock (or such other security) on the relevant date from each of at least three nationally recognized independent investment banking firms selected by us for this purpose.

Trading day means a day on which (i) trading in our common stock (or other security for which a closing sale price must be determined) generally occurs on The Nasdaq Global Market or, if our common stock (or such other security) is not then listed on The Nasdaq Global Market, on the principal other U.S. national or regional securities exchange on which our common stock (or such other security) is then listed or, if our common stock (or such other security) is not then listed on a U.S. national or regional securities exchange, on the principal other market on which our common stock (or such other security) is then traded, and (ii) a last reported sale price for our common stock (or closing sale price for such other security) is available on such securities exchange or market. If our common stock (or such other security) is not so listed or traded, trading day means a business day.

***Conversion upon Satisfaction of Trading Price Condition***

Prior to the close of business on the business day immediately preceding November 1, 2024, a holder of notes may surrender all or any portion of its notes for conversion at any time during the five business day period after any five consecutive trading day period (the measurement period ), in which the trading price per $1,000 principal amount of notes, as determined following a request by a holder of notes in accordance with the procedures described below, for each trading day of the measurement

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period was less than 98% of the product of the last reported sale price of our common stock and the conversion rate for the notes on each such trading day.

The trading price of the notes on any date of determination means the average of the secondary market bid quotations obtained by the bid solicitation agent for $2,000,000 principal amount of notes at approximately 3:30 p.m., New York City time, on such determination date from three independent nationally recognized securities dealers we select for this purpose; *provided* that if three such bids cannot reasonably be obtained by the bid solicitation agent but two such bids are obtained, then the average of the two bids shall be used, and if only one such bid can reasonably be obtained by the bid solicitation agent, then that one bid shall be used. If the bid solicitation agent cannot reasonably obtain at least one bid for $2,000,000 principal amount of notes from a nationally recognized securities dealer, then the trading price per $1,000 principal amount of notes will be deemed to be less than 98% of the product of the last reported sale price of our common stock and the conversion rate for the notes. Any such determination will be conclusive absent manifest error. If (x) we are not acting as bid solicitation agent, and we do not, when we are required to, instruct the bid solicitation agent to obtain bids, or if we give such instruction to the bid solicitation agent, and the bid solicitation agent fails to make such determination, or (y) we are acting as bid solicitation agent and we fail to make such determination, then, in either case, the trading price per $1,000 principal amount of notes will be deemed to be less than 98% of the product of the last reported sale price of our common stock and the conversion rate for the notes on each trading day of such failure.

The bid solicitation agent (if other than us) shall have no obligation to determine the trading price per $1,000 principal amount of notes unless we have requested such determination; and we shall have no obligation to make such request (or, if we are acting as bid solicitation agent, we shall have no obligation to determine the trading price) unless a holder of at least $2,000,000 aggregate principal amount of notes provides us with reasonable evidence that the trading price per $1,000 principal amount of notes would be less than 98% of the product of the last reported sale price of our common stock and the conversion rate for the notes. At such time, we shall instruct the bid solicitation agent (if other than us) to determine, or if we are acting as bid solicitation agent, we shall determine, the trading price per $1,000 principal amount of notes beginning on the next trading day and on each successive trading day until the trading price per $1,000 principal amount of notes is greater than or equal to 98% of the product of the last reported sale price of our common stock and the conversion rate for the notes. If the trading price condition has been met, we will so notify the holders, the trustee and the conversion agent (if other than the trustee) in accordance with the provisions of the indenture. If, at any time after the trading price condition has been met and the notes are convertible, the trading price per $1,000 principal amount of notes is greater than or equal to 98% of the product of the last reported sale price of our common stock and the conversion rate for such date, we will so notify the holders, the trustee and the conversion agent (if other than the trustee), in accordance with the provisions of the indenture, that the trading price condition is no longer applicable.

We will initially act as the bid solicitation agent.

***Conversion upon Specified Corporate Events***

***Certain Distributions***

If, prior to the close of business on the business day immediately preceding November 1, 2024, we elect to:

issue to all or substantially all holders of our common stock any rights, options or warrants (other than in connection with a stockholder rights plan prior to separation of the relevant rights) entitling them, for a period

of not more than 60 calendar days after the announcement date of such issuance, to subscribe for or purchase our common stock at a price per share that is less

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than the average of the last reported sale price of our common stock for the 10 consecutive trading day period ending on, and including, the trading day immediately preceding the date of announcement of such issuance; or

distribute to all or substantially all holders of our common stock our assets, securities or rights to purchase our securities (other than in connection with a stockholder rights plan prior to separation of the relevant rights), which distribution has a per share value, as reasonably determined by our board of directors or a committee thereof, exceeding 10% of the last reported sale price of our common stock on the trading day preceding the date of announcement for such distribution,

then, in either case, we must notify the holders of the notes at least 45 scheduled trading days prior to the ex-dividend date for such issuance or distribution (or, if later in the case of any such separation of rights issued pursuant to a stockholder rights plan or the occurrence of any such triggering event under a stockholder rights plan, as soon as reasonably practicable after we become aware of that such separation or triggering event has occurred or will occur). Once we have given such notice, holders may surrender all or any portion of their notes for conversion at any time until the earlier of the close of business on the business day immediately preceding the ex-dividend date for such issuance or distribution and our announcement that such issuance or distribution will not take place, even if the notes are not otherwise convertible at such time.

***Certain Corporate Events***

If a transaction or event that constitutes a fundamental change (as defined under Fundamental Change Permits Holders to Require Us to Repurchase Notes ) or a make-whole fundamental change (as defined under Increase in Conversion Rate upon Conversion upon a Make-Whole Fundamental Change ) occurs prior to the close of business on the business day immediately preceding November 1, 2024, regardless of whether a holder has the right to require us to repurchase the notes as described under Fundamental Change Permits Holders to Require Us to Repurchase Notes, or if we are a party to a consolidation, merger, binding share exchange, or transfer or lease of all or substantially all of our assets, in each case, that occurs prior to the close of business on the business day immediately preceding November 1, 2024, in each case, and pursuant to which our common stock would be converted into cash, securities or other assets, then, in either case, all or any portion of a holder s notes may be surrendered for conversion at any time from or after the effective date of such transaction or event until 35 trading days after the effective date of such transaction (or, if we give notice after the effective date of such transaction pursuant to the succeeding sentence, until the 35th trading day after we give such notice or, if such transaction also constitutes a fundamental change, until the related fundamental change repurchase date). We will notify holders, the trustee and the conversion agent (if other than the trustee) no later than one business day after the effective date of such transaction.

***Conversions on or after November 1, 2024***

On or after November 1, 2024, a holder may convert all or any portion of its notes at any time prior to the close of business on the business day immediately preceding the maturity date regardless of the foregoing conditions.

***Conversion procedures***

If you hold a beneficial interest in a global note, to convert you must comply with DTC s procedures for converting a beneficial interest in a global note and, if required, pay funds equal to interest payable on the next interest payment date to which you are not entitled. As such, if you are a beneficial owner of the notes, you must allow for sufficient time to comply with DTC s procedures if you wish to exercise your conversion rights. The exercise of such conversion rights shall be irrevocable.

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If you hold a certificated note, to convert you must:

complete and manually sign the conversion notice on the back of the note, or a facsimile of the conversion notice;

deliver the conversion notice, which is irrevocable, and the note to the conversion agent;

if required, furnish appropriate endorsements and transfer documents; and

if required, pay funds equal to interest payable on the next interest payment date to which you are not entitled.

We will pay any documentary, stamp or similar issue or transfer tax on the issuance of any shares of our common stock upon conversion of the notes, unless the tax is due because the holder requests such shares to be issued in a name other than the holder s name, in which case the holder will pay the tax.

We refer to the date you comply with the relevant procedures for conversion described above as the conversion date.

If a holder has already delivered a repurchase notice as described under Fundamental Change Permits Holders to Require Us to Repurchase Notes with respect to a note, the holder may not surrender that note for conversion until the holder has withdrawn the repurchase notice in accordance with the relevant provisions of the indenture. If a holder submits its notes for required repurchase, the holder s right to withdraw the fundamental change repurchase notice and convert the notes that are subject to repurchase will terminate at the close of business on the business day immediately preceding the relevant fundamental change repurchase date.

***Settlement upon conversion***

Upon conversion, we may choose to pay or deliver, as the case may be, either cash ( cash settlement ), shares of our common stock ( physical settlement ), or a combination of cash and shares of our common stock ( combination settlement ), as described below. We refer to each of these settlement methods as a settlement method.

All conversions for which the relevant conversion date occurs on or after November 1, 2024 and all conversions for which the relevant occurs after our issuance of a notice of redemption and prior to the related redemption date, will be settled using the same settlement method. Except for any conversions for which the relevant conversion date occurs after our issuance of a notice of redemption, but prior to the related redemption date, and any conversions for which the relevant conversion date occurs on or after November 1, 2024, we will use the same settlement method for all conversions with the same conversion date, but we will not have any obligation to use the same settlement method with respect to conversions with different conversion dates. That is, we may choose for notes converted on one conversion date to settle conversions in physical settlement, and choose for notes converted on another conversion date cash settlement or combination settlement.

If we elect a settlement method, we will inform holders so converting through the trustee of the settlement method we have selected no later than the close of business on the trading day immediately following the related conversion date (or in the case of any conversions for which the relevant conversion date occurs (i) after the date of issuance of a notice of redemption as described under Optional Redemption on or after February 1, 2022 and prior to the related

redemption date, in such notice of redemption or (ii) on or after November 1, 2024, no later than November 1, 2024). If we do not timely elect a settlement method, we will no longer have the right to elect cash settlement or physical settlement and we will be deemed to have elected combination settlement in respect of our

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conversion obligation, as described below, and the specified dollar amount (as defined below) per $1,000 principal amount of notes will be equal to $1,000. If we elect combination settlement, but we do not timely notify converting holders of the specified dollar amount per $1,000 principal amount of notes, such specified dollar amount will be deemed to be $1,000. It is our current intent and policy to settle conversions through combination settlement with a specified dollar amount per $1,000 principal amount of notes of $1,000.

In addition, at any time prior to November 1, 2024, we may irrevocably elect to settle all conversions of notes by combination settlement as described in the preceding paragraph.

Settlement amounts will be computed as follows:

- if we elect physical settlement, we will deliver to the converting holder in respect of each $1,000 principal amount of notes being converted a number of shares of common stock equal to the conversion rate;

- if we elect cash settlement, we will pay to the converting holder in respect of each $1,000 principal amount of notes being converted cash in an amount equal to the sum of the daily conversion values for each of the 40 consecutive trading days during the related observation period; and

- if we elect (or are deemed to have elected) combination settlement, we will pay or deliver, as the case may be, to the converting holder in respect of each $1,000 principal amount of notes being converted a settlement amount equal to the sum of the daily settlement amounts for each of the 40 consecutive trading days during the related observation period.

The daily settlement amount for each of the 40 consecutive trading days during the observation period shall consist of:

- cash equal to the lesser of (i) the maximum cash amount per $1,000 principal amount of notes to be received upon conversion as specified in the notice specifying our chosen settlement method (or deemed specified, as described above) (the specified dollar amount ), if any, *divided by* 40 (such quotient, the daily measurement value ) and (ii) the daily conversion value; and

- if the daily conversion value exceeds the daily measurement value, a number of shares of common stock equal to (i) the difference between the daily conversion value and the daily measurement value, *divided by* (ii) the daily VWAP for such trading day.

The daily conversion value means, for each of the 40 consecutive trading days during the observation period, 2.5% of the product of (1) the conversion rate on such trading day and (2) the daily VWAP for such trading day.

The daily VWAP means, for each of the 40 consecutive trading days during the relevant observation period, the per share volume-weighted average price as displayed under the heading Bloomberg VWAP on Bloomberg page ALDR <equity> AQR (or its equivalent successor if such page is not available) in respect of the period from the scheduled open of trading until the scheduled close of trading of the primary trading session on such trading day (or if such volume-weighted average price is unavailable, the market value of one share of our common stock on such trading day determined, using a volume-weighted average method, by a nationally recognized independent investment

banking firm retained for this purpose by us). The daily VWAP will be determined without regard to after-hours trading or any other trading outside of the regular trading session trading hours.

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The observation period with respect to any note surrendered for conversion means:

- if the relevant conversion date occurs prior to November 1, 2024, the 40 consecutive trading day period beginning on, and including, the second trading day immediately succeeding such conversion date;

- if the relevant conversion date occurs on or after November 1, 2024, the 40 consecutive trading days beginning on, and including, the 42nd scheduled trading day immediately preceding the maturity date; and

- notwithstanding the foregoing, if the relevant conversion date occurs after the date of the issuance of a notice of redemption as described under Optional Redemption on or after February 1, 2022 , but prior to the close of business on the scheduled trading day immediately preceding the applicable redemption date, the 40 consecutive trading-day period beginning on and including the 42nd scheduled trading day immediately preceding the applicable redemption date (the conversion redemption observation period ).

For the purposes of determining amounts due upon conversion only, trading day means a day on which (i) there is no market disruption event (as defined below) and (ii) trading in our common stock generally occurs on The Nasdaq Global Market or, if our common stock is not then listed on The Nasdaq Global Market, on the principal other U.S. national or regional securities exchange on which our common stock is then listed or, if our common stock is not then listed on a U.S. national or regional securities exchange, on the principal other market on which our common stock is then listed or admitted for trading. If our common stock is not so listed or admitted for trading, trading day means a business day.

Scheduled trading day means a day that is scheduled to be a trading day on the principal U.S. national or regional securities exchange or market on which our common stock is listed or admitted for trading. If our common stock is not so listed or admitted for trading, scheduled trading day means a business day.

For the purposes of determining amounts due upon conversion, market disruption event means (i) a failure by the primary U.S. national or regional securities exchange or market on which our common stock is listed or admitted for trading to open for trading during its regular trading session or (ii) the occurrence or existence prior to 1:00 p.m., New York City time, on any scheduled trading day for our common stock for more than one half-hour period in the aggregate during regular trading hours of any suspension or limitation imposed on trading (by reason of movements in price exceeding limits permitted by the relevant stock exchange or otherwise) in our common stock on the primary U.S. national or regional securities exchange or market on which our common stock is listed or admitted for trading or in any options contracts or futures contracts relating to our common stock.

Except as described under Increase in Conversion Rate upon Conversion upon a Make-Whole Fundamental Change and Recapitalizations, Reclassifications and Changes of Our Common Stock, we will pay or deliver, as the case may be, the consideration due in respect of conversion on the second business day immediately following the relevant conversion date, if we elect physical settlement, or on the second business day immediately following the last trading day of the relevant observation period, in the case of any other settlement method.

We will pay cash in lieu of delivering any fractional share of common stock issuable upon conversion based on the daily VWAP for the relevant conversion date (in the case of physical settlement) or based on the daily VWAP for the last trading day of the relevant observation period (in the case of combination settlement).

Each conversion will be deemed to have been effected as to any notes surrendered for conversion on the conversion date; *provided*, *however*, that the person in whose name any shares of

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common stock shall be issuable upon such conversion will become the holder of record of such shares of common stock as of the close of business on the conversion date (in the case of physical settlement) or the last trading day of the relevant observation period (in the case of combination settlement).

***Exchange in Lieu of Conversion***

When a holder surrenders its notes for conversion, we may, at our election, which we refer to as an exchange election , direct the conversion agent to surrender, on or prior to the trading day following the conversion date, such notes to one or more financial institutions designated by us for exchange in lieu of conversion. In order to accept any notes surrendered for conversion, the designated financial institution(s) must agree to timely pay and/or deliver, in exchange for such notes, the cash, shares of our common stock or combination thereof due upon conversion, all as provided above under Settlement upon Conversion. By the close of business on the trading day following the conversion date, we will notify the holder surrendering its notes for conversion that we have directed the designated financial institution(s) to make an exchange in lieu of conversion and such financial institution(s) will be required to notify the conversion agent whether it will deliver the conversion consideration upon exchange. If the designated financial institution(s) accepts any such notes, it (or they) will pay and/or deliver the cash, shares of our common stock or combination thereof due upon conversion to the conversion agent and the conversion agent will pay and/or deliver such cash, shares of common stock or combination thereof to the holder. Any notes exchanged by the designated financial institution(s) will remain outstanding, subject to the applicable procedures of DTC.

If the designated financial institution(s) agrees to accept any notes for exchange but does not timely pay and/or deliver the cash, shares of our common stock or combination thereof, or if such designated financial institution(s) does not accept the notes for exchange, we will pay and/or deliver the cash, shares of our common stock or combination thereof due upon conversion to the converting holder at the time and in the manner described herein under Settlement upon Conversion as if we had not made an exchange election. Our designation of any financial institution(s) to which the notes may be submitted for exchange does not require the financial institution(s) to accept any notes. We may, but will not be obligated to, pay any consideration to, or otherwise enter into any agreement with, the designated financial institution(s) for or with respect to such designation.

***Conversion Rate Adjustments***

The conversion rate will be adjusted as described below, without duplication, except that we will not make any adjustments to the conversion rate if holders of the notes participate (other than in the case of (x) a share split or share combination or (y) a tender offer or exchange offer), at the same time and upon the same terms as holders of our common stock and solely as a result of holding the notes, in any of the transactions described below without having to convert their notes as if they held a number of shares of common stock equal to the conversion rate, *multiplied by* the principal amount (expressed in thousands) of notes held by such holder.

(1) If we exclusively issue shares of our common stock as a dividend or distribution on all shares of our common stock, or if we effect a share split or share combination of our common stock (in each case excluding any issuance solely pursuant to common stock change event, as to which the provisions described below under Recapitalizations, Reclassifications and Changes of Our Common Stock will apply), the conversion rate will be adjusted based on the following formula:

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where,

$CR_0$ = the conversion rate in effect immediately prior to the open of business on the ex-dividend date of such dividend or distribution, or immediately prior to the open of business on the effective date of such share split or share combination, as applicable;

$CR_1$ = the conversion rate in effect immediately after the open of business on such ex-dividend date or effective date;

$OS_0$ = the number of shares of our common stock outstanding immediately prior to the open of business on such ex-dividend date or effective date; and

$OS_1$ = the number of shares of our common stock outstanding immediately after giving effect to such dividend, distribution, share split or share combination.

Any adjustment made under this clause (1) shall become effective immediately after the open of business on the ex-dividend date for such dividend or distribution, or immediately after the open of business on the effective date for such share split or share combination, as applicable. If any dividend, distribution, share split or share combination of the type described in this clause (1) is declared but not so paid or made, the conversion rate shall be immediately readjusted, effective as of the date our board of directors or a committee thereof determines not to pay such dividend or distribution or to effect such share split or share combination, to the conversion rate that would then be in effect if such dividend, distribution, share split or share combination had not been declared.

(2) If we issue to all or substantially all holders of our common stock any rights, options or warrants (other than rights issued pursuant to a stockholder rights plan adopted by us) entitling them, for a period of not more than 60 calendar days after the announcement date of such issuance, to subscribe for or purchase shares of our common stock at a price per share that is less than the average of the last reported sale prices of our common stock for the 10 consecutive trading day period ending on, and including, the trading day immediately preceding the date of announcement of such issuance, the conversion rate will be increased based on the following formula:

where,

$CR_0$ = the conversion rate in effect immediately prior to the open of business on the ex-dividend date for such issuance;

$CR_1$ = the conversion rate in effect immediately after the open of business on such ex-dividend date;

$OS_0$ = the number of shares of our common stock outstanding immediately prior to the open of business on such ex-dividend date;

X = the total number of shares of our common stock issuable pursuant to such rights, options or warrants; and

Y = the number of shares of our common stock equal to the aggregate price payable to exercise such rights,

options or warrants, *divided by* the average of the last reported sale prices of our common stock over the 10 consecutive trading day period ending on, and including, the trading day immediately preceding the date of announcement of the issuance of such rights, options or warrants.

Any increase made under this clause (2) will be made successively whenever any such rights, options or warrants are issued and shall become effective immediately after the open of business on

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the ex-dividend date for such issuance. To the extent that shares of common stock are not delivered (including as a result of such rights, options or warrants not being exercised) after the expiration of such rights, options or warrants, the conversion rate shall be readjusted, effective as of the date of such expiration, to the conversion rate that would then be in effect had the increase with respect to the issuance of such rights, options or warrants been made on the basis of delivery of only the number of shares of common stock actually delivered. If such rights, options or warrants are not so issued, the conversion rate shall be decreased, effective as of the date our board of directors or a committee thereof determines not to make such issuance, to the conversion rate that would then be in effect if such ex-dividend date for such issuance had not occurred.

For the purpose of this clause (2), and for the purpose of the first bullet point under Conversion upon Specified Corporate Events Certain Distributions, in determining whether any rights, options or warrants entitle the holders to subscribe for or purchase shares of our common stock at less than such average of the last reported sale prices for the 10 consecutive trading day period ending on, and including, the trading day immediately preceding the date of announcement of such issuance, and in determining the aggregate offering price of such common stock, there shall be taken into account any consideration received by us for such rights, options or warrants and any amount payable on exercise or conversion thereof, the value of such consideration, if other than cash, to be determined by our board of directors or a committee thereof.

(3) If we distribute shares of our capital stock, evidences of our indebtedness, other assets or property of ours or rights, options or warrants (other than in connection with a stockholder rights plan prior to separation of the relevant rights) to acquire our capital stock or other securities, to all or substantially all holders of our common stock, excluding:

dividends, distributions or issuances as to which an adjustment was effected pursuant to clause (1) or (2) above;

dividends or distributions paid exclusively in cash as to which the provisions set forth in clause (4) below shall apply;

rights issued pursuant to a stockholder rights plan adopted by us;

distributions of reference property in exchange for, or upon conversion or, our common stock in a transaction described in Recapitalizations, Reclassifications and Changes of Our Common Stock ; and

spin-offs as to which the provisions set forth below in this clause (3) shall apply; then the conversion rate will be increased based on the following formula:

where,

$CR_0$ = the conversion rate in effect immediately prior to the open of business on the ex-dividend date for such distribution;

$CR_1$ = the conversion rate in effect immediately after the open of business on such ex-dividend date;

$SP_0$ = the average of the last reported sale prices of our common stock over the 10 consecutive trading day period ending on, and including, the trading day immediately preceding the ex-dividend date for such distribution; and

FMV = the fair market value (as determined by our board of directors or a committee thereof) of the shares of capital stock, evidences of indebtedness, assets, property, rights, options or warrants distributed with respect to each outstanding share of our common stock on the ex-dividend date for such distribution.

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Any increase made under the portion of this clause (3) above will become effective immediately after the open of business on the ex-dividend date for such distribution. If such distribution is not so paid or made or in the case of a distribution of rights, options or warrants, such rights, options or warrants are not exercised prior to their expiration, the conversion rate shall be decreased to be the conversion rate that would then be in effect if such distribution had not been declared. Notwithstanding the foregoing, if FMV (as defined above) is equal to or greater than $SP_0$ (as defined above), in lieu of the foregoing increase, each holder of a note shall receive, in respect of each $1,000 principal amount thereof, at the same time and upon the same terms as holders of our common stock, the amount and kind of our capital stock, evidences of our indebtedness, other assets or property of ours or rights, options or warrants to acquire our capital stock or other securities that such holder would have received if such holder owned a number of shares of common stock equal to the conversion rate in effect on the ex-dividend date for the distribution.

With respect to an adjustment pursuant to this clause (3) where there has been a payment of a dividend or other distribution on our common stock of shares of capital stock of any class or series, or similar equity interest, of or relating to a subsidiary or other business unit, that are, or, when issued, will be, listed or admitted for trading (other than a distributions of reference property in exchange for, or upon conversion or, our common stock in a transaction described Recapitalizations, Reclassifications and Changes of Our Common Stock will apply) on a U.S. national securities exchange, which we refer to as a spin-off, the conversion rate will be increased based on the following formula:

where,

$CR_0$ = the conversion rate in effect immediately prior to the end of the valuation period (as defined below);

$CR_1$ = the conversion rate in effect immediately after the end of the valuation period;

$FMV_0$ = the average of the last reported sale prices of the capital stock or similar equity interest distributed to holders of our common stock applicable to one share of our common stock (determined by reference to the definition of last reported sale price set forth under Conversion upon Satisfaction of Sale Price Condition as if references therein to our common stock were to such capital stock or similar equity interest) over the first 10 consecutive trading day period after, and including, the ex-dividend date of the spin-off (the valuation period ); and

$MP_0$ = the average of the last reported sale prices of our common stock over the valuation period.

The increase to the conversion rate under the preceding paragraph will occur on the last trading day of the valuation period; *provided* that (x) in respect of any conversion of notes for which physical settlement is applicable, if the relevant conversion date occurs during the valuation period, the reference to 10 in the preceding paragraph shall be deemed replaced with such lesser number of trading days as have elapsed between the ex-dividend date for such spin-off and such conversion date in determining the conversion rate and (y) in respect of any conversion of notes for which cash settlement or combination settlement is applicable, for any trading day that falls within the relevant observation period for such conversion and within the valuation period, the reference to 10 in the preceding paragraph shall be deemed replaced with such lesser number of trading days as have elapsed between the ex-dividend date for such spin-off and such trading day in determining the conversion rate as of such trading day. In addition, if the

ex-dividend date for such spin-off is after the 10th trading day immediately preceding, and including, the end of any observation period in respect of

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a conversion of notes, references to 10 or 10th in the preceding paragraph and this paragraph shall be deemed to be replaced, solely in respect of that conversion, with such lesser number of trading days as have elapsed from, and including, the ex-dividend date for such spin-off to, and including, the last trading day of such observation period. If any dividend or distribution that constitutes a spin-off is declared but not so paid or made, the conversion rate shall be immediately decreased, effective as of the date our board or a committee thereof determines not to pay such dividend or distribution, to the conversion rate that would then be in effect if such dividend or distribution had not been declared or announced.

(4) If any cash dividend or distribution is made to all or substantially all holders of our common stock, excluding any consideration payable in connection with a tender offer or exchange offer made by us or any of our subsidiaries, the conversion rate will be adjusted based on the following formula:

where,

$CR_0$ = the conversion rate in effect immediately prior to the open of business on the ex-dividend date for such dividend or distribution;

$CR_1$ = the conversion rate in effect immediately after the open of business on the ex-dividend date for such dividend or distribution;

$SP_0$ = the last reported sale price of our common stock on the trading day immediately preceding the ex-dividend date for such dividend or distribution; and

C = the amount in cash per share we distribute to all or substantially all holders of our common stock.

Any increase made under this clause (4) shall become effective immediately after the open of business on the ex-dividend date for such dividend or distribution. If such dividend or distribution is not so paid, the conversion rate shall be decreased, effective as of the date our board of directors or a committee thereof determines not to make or pay such dividend or distribution, to be the conversion rate that would then be in effect if such dividend or distribution had not been declared. Notwithstanding the foregoing, if C (as defined above) is equal to or greater than SP0 (as defined above), in lieu of the foregoing increase, each holder of a note shall receive, for each $1,000 principal amount of notes, at the same time and upon the same terms as holders of our common stock, the amount of cash that such holder would have received if such holder owned a number of shares of our common stock equal to the conversion rate on the ex-dividend date for such cash dividend or distribution.

(5) If we or any of our subsidiaries make a payment in respect of a tender or exchange offer for our common stock that is subject to the then-applicable tender offer rules under the Exchange Act (other than an odd-lot tender offer that satisfies the requirements of Rule 13e-4(h)(5), or any successor rule), to the extent that the cash and value (as determined by us in good faith) of any other consideration included in the payment per share of common stock exceeds the average of the last reported sale prices of our common stock over the 10 consecutive trading day period commencing on, and including, the trading day next succeeding the last date on which tenders or exchanges may be made pursuant to such tender or exchange offer, the

conversion rate will be increased based on the following formula:

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where,

$CR_0$ = the conversion rate in effect immediately prior to the open of business on the trading day next succeeding the date such tender or exchange offer expires;

$CR_1$ = the conversion rate in effect immediately after the open of business on the trading day next succeeding the date such tender or exchange offer expires;

AC = the aggregate value of all cash and any other consideration (as determined by our board of directors or a committee thereof) paid or payable for shares purchased in such tender or exchange offer;

$OS_0$ = the number of shares of our common stock outstanding immediately prior to the date such tender or exchange offer expires (prior to giving effect to the purchase of all shares accepted for purchase or exchange in such tender or exchange offer);

$OS_1$ = the number of shares of our common stock outstanding immediately after the date such tender or exchange offer expires (after giving effect to the purchase of all shares accepted for purchase or exchange in such tender or exchange offer); and

$SP_1$ = the average of the last reported sale prices of our common stock over the 10 consecutive trading day period commencing on, and including, the trading day next succeeding the date such tender or exchange offer expires.

The increase to the conversion rate under the preceding paragraph will be determined at the close of business on the 10th trading day immediately following, and including, the trading day next succeeding the date such tender or exchange offer expires but will be in effect at the open of business on the trading day next succeeding the date such tender offer or exchange offer expires; *provided* that (x) in respect of any conversion of notes for which physical settlement is applicable, if the relevant conversion date occurs during the 10 trading days immediately following, and including, the trading day next succeeding the expiration date of any tender or exchange offer, references to 10 or 10th in the preceding paragraph shall be deemed replaced with such lesser number of trading days as have elapsed between the expiration date of such tender or exchange offer and such conversion date in determining the conversion rate and (y) in respect of any conversion of notes for which cash settlement or combination settlement is applicable, if the trading day next succeeding the date such tender or exchange offer expires is after the 10th trading day immediately preceding, and including, the end of any observation period in respect of a conversion of notes, references to 10 or 10th in the preceding paragraph and this paragraph shall be deemed to be replaced, solely in respect of that conversion, with such lesser number of trading days as have elapsed from, and including, the trading day next succeeding the date such tender or exchange offer expires to, and including, the last trading day of such observation period. If we are obligated to purchase our common stock pursuant to any such tender or exchange offer described in this clause (5) but are permanently prevented by applicable law from effecting any such purchase or all such purchases are rescinded, the applicable conversion rate will be decreased to be the conversion rate that would then be in effect if such tender or exchange offer had not been made or had been made only in respect of the purchases that have been effected.

Notwithstanding the foregoing, if a conversion rate adjustment becomes effective on any ex-dividend date as described above, and a holder that has converted its notes on or after such ex-dividend date and on or prior to the related record date would be treated as the record holder of shares of our common stock as of the related conversion date as described under Settlement upon Conversion based on an adjusted conversion rate for such ex-dividend date, then, notwithstanding the foregoing conversion rate adjustment provisions, the conversion rate adjustment relating to such ex-dividend date will not be made for such converting holder. Instead, such holder will be treated as if such

holder were the record owner of the shares of our common stock on an unadjusted basis and participate in the related dividend, distribution or other event giving rise to such adjustment.

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Except as stated herein, we will not adjust the conversion rate for the issuance of shares of our common stock or any securities convertible into or exchangeable for shares of our common stock or the right to purchase shares of our common stock or such convertible or exchangeable securities.

As used in this section, ex-dividend date means the first date on which the shares of our common stock trade on the applicable exchange or in the applicable market, regular way, without the right to receive the issuance, dividend or distribution in question, from us or, if applicable, from the seller of our common stock on such exchange or market (in the form of due bills or otherwise) as determined by such exchange or market, and effective date means the first date on which the shares of our common stock trades on the applicable exchange or in the applicable market, regular way, reflecting the relevant share split or share combination, as applicable.

As used in this section, record date means, with respect to any dividend, distribution or other transaction or event in which the holders of our common stock (or other applicable security) have the right to receive any cash, securities or other property or in which our common stock (or such other security) is exchanged for or converted into any combination of cash, securities or other property, the date fixed for determination of holders of our common stock (or such other security) entitled to receive such cash, securities or other property (whether such date is fixed by our board of directors or a duly authorized committee thereof, statute, contract or otherwise).

Subject to applicable listing standards of The Nasdaq Global Market, we are permitted to increase the conversion rate of the notes by any amount for a period of at least 20 business days if our board of directors or a committee thereof determines that such increase would be in our best interest. Subject to applicable listing standards of The Nasdaq Global Market, we may also (but are not required to) increase the conversion rate to avoid or diminish income tax to holders of our common stock or rights to purchase shares of our common stock in connection with a dividend or distribution of shares (or rights to acquire shares) or similar event.

A beneficial owner may, in some circumstances, including a distribution of cash dividends to holders of our common stock, be deemed to have received a distribution subject to U.S. federal income tax as a result of an adjustment or the nonoccurrence of an adjustment to the conversion rate. For a discussion of the U.S. federal income tax treatment of an adjustment to the conversion rate, see Material U.S. Federal Income Tax Considerations.

If we have a rights plan in effect upon conversion of the notes into common stock, you will receive, in addition to any shares of common stock received in connection with such conversion, the rights under the rights plan. However, if, prior to any conversion, the rights have separated from the common stock in accordance with the provisions of the applicable rights plan, the conversion rate will be adjusted at the time of separation as if we distributed to all or substantially all holders of our common stock, shares of our capital stock, evidences of indebtedness, assets, property, rights, options or warrants as described in clause (3) above, subject to readjustment in the event of the expiration, termination or redemption of such rights.

Notwithstanding any of the foregoing, the conversion rate will not be adjusted:

except as described above, upon the sale of shares of our common stock for a purchase price that is less than the market price per share of our common stock or less than the conversion price;

upon the issuance of any shares of our common stock pursuant to any present or future plan providing for the reinvestment of dividends or interest payable on our securities and the investment of additional optional

amounts in shares of our common stock under any plan;

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upon the issuance of any shares of our common stock or options or rights to purchase those shares of our common stock pursuant to any present or future employee, director or consultant benefit plan or program of or assumed by us or any of our subsidiaries;

upon the issuance of any shares of our common stock pursuant to any option, warrant, right or exercisable, exchangeable or convertible security not described in the preceding bullet and outstanding as of the date the notes were first issued;

upon the repurchase of any of shares of our common stock pursuant to an open-market share purchase program or other buy-back transaction, including structured or derivative transactions such as accelerated share repurchase transactions or similar forward derivatives, or other buyback transaction, in each case, that is not a tender offer or exchange offer of the kind described under clause (5) above;

as a result of a tender offer solely to holders of fewer than 100 shares of our common stock;

solely for a change in the par value of our common stock; or

for accrued and unpaid interest, if any.

We will not adjust the conversion rate pursuant to the clauses above unless the adjustment would result in a change of at least 1% in the then-effective conversion rate. However, we will carry forward any adjustment to the conversion rate that is less than 1% of the then-effective conversion rate and take that adjustment into account in any subsequent adjustment. Notwithstanding the foregoing, all such carried-forward adjustments shall be made (i) in connection with any subsequent adjustment to the conversion rate of at least 1%, (ii) on the conversion date for any notes (in the case of physical settlement), (iii) on each trading day of any observation period related to any conversion of notes (in the case of cash settlement or combination settlement), (iv) on the effective date of any make-whole fundamental change, (v) on each one year anniversary of the original issue date of the notes, and (vi) on November 1, 2024, in each case, unless the adjustment has already been made.

Adjustments to the conversion rate will be calculated to the nearest 1/10,000th of a share.

If certain of the possible adjustments to the conversion rate of the notes are made (or, in certain other circumstances, if no adjustments are made), a beneficial owner may be deemed to have received a distribution with respect to our shares even though such beneficial owner has not received any cash or property as a result of such adjustments. We intend to withhold U.S. federal income tax (in the case of a non-U.S. holder, as defined in Material U.S. Federal Income Tax Considerations ) with respect to any constructive distribution from us from amounts otherwise payable to you after the occurrence of such constructive distribution, including interest payments made on the notes or, if appropriate, the proceeds of sale, retirement or conversion of the notes. See Material U.S. Federal Income Tax Considerations Considerations for Non-U.S. holders Dividends and Constructive Distributions.

***Recapitalizations, Reclassifications and Changes of Our Common Stock***

In the case of:

any recapitalization, reclassification or change of our common stock (other than (x) changes resulting from a subdivision or combination of our common stock, (y) a change in par value or from par value to no par value or from no par value to par value or (z) stock splits and stock combinations that do not involve the issuance of any other series or class of securities),

any consolidation, merger or combination involving us,

any sale, lease or other transfer to a third party of the consolidated assets of ours and our subsidiaries substantially as an entirety, or

any statutory share exchange,

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in each case, as a result of which our common stock would be converted into, or exchanged for, stock, other securities, other property or assets (including cash or any combination thereof), then, at and after the effective time of the transaction, we or the successor or acquiring corporation, as the case may be, will execute a supplemental indenture with the trustee of the indenture, without the consent of holders, providing that the right to convert each $1,000 principal amount of notes will be changed into a right to convert such principal amount of notes into the kind and amount of shares, shares of stock, other securities or other property or assets (including cash or any combination thereof) that a holder of a number of shares of common stock equal to the conversion rate immediately prior to such transaction would have owned or been entitled to receive (the reference property ) upon such transaction. However, at and after the effective time of the transaction, (i) we will continue to have the right to determine the form of consideration to be paid or delivered, as the case may be, upon conversion of notes, as set forth under Settlement upon Conversion and (ii)(x) any amount payable in cash upon conversion of the notes as set forth under Settlement upon Conversion will continue to be payable in cash, (y) any shares of our common stock that we would have been required to deliver upon conversion of the notes as set forth under Settlement upon Conversion will instead be deliverable in the amount and type of reference property that a holder of that number of shares of our common stock would have received in such transaction and (z) the daily VWAP will be calculated based on the value of a unit of reference property that a holder of one share of our common stock would have received in such transaction. If the transaction causes our common stock to be converted into, or exchanged for, the right to receive more than a single type of consideration (determined based in part upon any form of stockholder election), the reference property into which the notes will be convertible will be deemed to be (i) the weighted average of the types and amounts of consideration received by the holders of our common stock that affirmatively make such an election or (ii) if no holders of our common stock affirmatively make such an election, the types and amounts of consideration actually received by the holders of our common stock. If the holders of our common stock receive only cash in such transaction, then for all conversions that occur after the effective date of such transaction (i) the consideration due upon conversion of each $1,000 principal amount of notes shall be solely cash in an amount equal to the conversion rate in effect on the conversion date (as may be increased as described under Increase in Conversion Rate upon Conversion upon a Make-Whole Fundamental Change ), *multiplied by* the price paid per share of common stock in such transaction and (ii) we will satisfy our conversion obligation by paying cash to converting holders on the second business day immediately following the conversion date. We will notify holders, the trustee and the conversion agent (if other than the trustee) of the weighted average as soon as reasonably practicable after such determination is made.

If the reference property in respect of any such transaction includes shares of common equity or American depositary receipts (or other interests) in respect thereof, the supplemental indenture providing that the notes will be convertible into reference property will also provide for anti-dilution and other adjustments that are as nearly equivalent as possible to the adjustments described under Conversion Rate Adjustments above. If the reference property in respect of any such transaction includes shares of stock, securities or other property or assets (other than cash and/or cash equivalents) of a company other than us or the successor or purchasing corporation, as the case may be, in such transaction, such other company, if an affiliate of us or the successor or purchasing corporation, will also execute such supplemental indenture, and such supplemental indenture will contain such additional provisions to protect the interests of the holders as we reasonably consider necessary or appropriate.

We will agree in the indenture not to become a party to any such transaction unless its terms are consistent with the foregoing.

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***Adjustments of Prices***

Whenever any provision of the indenture requires us to calculate the last reported sale prices, the daily VWAPs, the daily conversion values or the daily settlement amounts over a span of multiple days (including an observation period and the stock price for purposes of a make-whole fundamental change), our board of directors or a committee thereof will make appropriate adjustments (to the extent no corresponding adjustment is otherwise made pursuant to the provisions described under Conversion Rate Adjustments above) to each to account for any adjustment to the conversion rate that becomes effective, or any event requiring an adjustment to the conversion rate where the ex-dividend date, effective date, effective time or expiration date of the event occurs, at any time during the period when such last reported sale prices, daily VWAPs, the daily conversion values or the daily settlement amounts are to be calculated.

***Increase in Conversion Rate upon Conversion upon a Make-Whole Fundamental Change***

If the effective date (as defined below) of a make-whole fundamental change (as defined below) occurs prior to the maturity date of the notes and a holder elects to convert its notes in connection with such make-whole fundamental change, we will, under certain circumstances, increase the conversion rate for the notes so surrendered for conversion by a number of additional shares of common stock (the additional shares ), as described below. A make-whole fundamental change means any transaction or event that constitutes a fundamental change defined below in clause (1), (2), (3) or (4) of the definition of fundamental change under Fundamental Change Permits Holders to Require Us to Repurchase Notes below, after giving effect to any exceptions or exclusions from such definition, but without regard to the *proviso* in clause (2) of the definition thereof. A conversion of notes will be deemed for these purposes to be in connection with such make-whole fundamental change if the relevant notice of conversion of the notes is received by the conversion agent from, and including, the effective date of the make-whole fundamental change up to, and including, the business day immediately prior to the related fundamental change repurchase date (or, in the case of a make-whole fundamental change that would have been a fundamental change but for the *proviso* in clause (2) of the definition thereof, the 35th trading day immediately following the effective date of such make-whole fundamental change) (such period, the make-whole fundamental change period ).

Upon surrender of notes for conversion in connection with a make-whole fundamental change, we will, at our option, satisfy our conversion obligation by physical settlement, cash settlement or combination settlement, as described under Conversion Rights Settlement upon Conversion. However, if the consideration for our common stock in any make-whole fundamental change described in clause (2) of the definition of fundamental change is composed entirely of cash, for any conversion of notes following the effective date of such make-whole fundamental change, the conversion obligation will be calculated based solely on the stock price (as defined below) for the transaction and will be deemed to be an amount of cash per $1,000 principal amount of converted notes equal to the conversion rate (including any increase to reflect the additional shares as described in this section), *multiplied by* such stock price. In such event, the conversion obligation will be determined and paid to holders in cash on the second business day following the conversion date. We will notify holders of the effective date of any make-whole fundamental change no later than five business days after such effective date.

The number of additional shares, if any, by which the conversion rate will be increased will be determined by reference to the table below, based on the date on which the make-whole fundamental change occurs or becomes effective (the effective date ), and the price (the stock price ), paid (or deemed to be paid) per share of common stock in the make-whole fundamental change. If the holders of our common stock receive in exchange for their common stock only cash in a make-whole fundamental change described in clause (2) of the definition of fundamental change, the stock price will

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be the cash amount paid per share. Otherwise, the stock price will be the average of the last reported sale prices of our common stock over the five consecutive trading day period ending on, and including, the trading day immediately preceding the effective date of the make-whole fundamental change.

The stock prices set forth in the column headings of the table below will be adjusted as of any date on which the conversion rate of the notes is otherwise adjusted. The adjusted stock prices will equal the stock prices immediately prior to such adjustment, *multiplied by* a fraction, the numerator of which is the conversion rate immediately prior to the adjustment giving rise to the stock price adjustment and the denominator of which is the conversion rate as so adjusted. The number of additional shares as set forth in the table below will be adjusted in the same manner and at the same time as the conversion rate as set forth under Conversion Rate Adjustments.

The following table sets forth the number of additional shares by which the conversion rate will be increased per $1,000 principal amount of notes for each stock price and effective date set forth below:

| | Stock price | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Effective date** | **$** | **$** | **$** | **$** | **$** | **$** | **$** | **$** | **$** | **$** | **$** | **$** | **$** | **$** | **$** |
| , 2018 | | | | | | | | | | | | | | | |
| February 1, 2019 | | | | | | | | | | | | | | | |
| February 1, 2020 | | | | | | | | | | | | | | | |
| February 1, 2021 | | | | | | | | | | | | | | | |
| February 1, 2022 | | | | | | | | | | | | | | | |
| February 1, 2023 | | | | | | | | | | | | | | | |
| February 1, 2024 | | | | | | | | | | | | | | | |
| February 1, 2025 | | | | | | | | | | | | | | | |

The exact stock prices and effective dates may not be set forth in the table above, in which case

If the stock price is between two stock prices in the table or the effective date is between two effective dates in the table, the number of additional shares by which the conversion rate will be increased will be determined by a straight-line interpolation between the number of additional shares set forth for the higher and lower stock prices and the earlier and later effective dates, as applicable, based on a 365-day year.

If the stock price is greater than $ per share (subject to adjustment in the same manner as the stock prices set forth in the column headings of the table above), no additional shares will be added to the conversion rate.

If the stock price is less than $ per share (subject to adjustment in the same manner as the stock prices set forth in the column headings of the table above), no additional shares will be added to the conversion rate.

Notwithstanding the foregoing, in no event will the conversion rate per $1,000 principal amount of notes exceed shares of common stock, subject to adjustment in the same manner as the conversion rate as set forth under Conversion Rate Adjustments.

Our obligation to increase the conversion rate for notes converted in connection with a make-whole fundamental change could be considered a penalty, in which case the enforceability thereof would be subject to general principles of reasonableness and equitable remedies.

**Fundamental Change Permits Holders to Require Us to Repurchase Notes**

If a fundamental change (as defined below in this section) occurs at any time, holders will have the right, at their option, to require us to repurchase for cash all of their notes, or any portion of the

principal amount thereof that is equal to $1,000 or a multiple of $1,000. The fundamental change repurchase date will be a date specified by us that is not less than 20 or more than 35 business days following the date of our fundamental change notice as described below.

The fundamental change repurchase price we are required to pay will be equal to 100% of the principal amount of the notes to be repurchased, *plus* accrued and unpaid interest to, but excluding, the fundamental change repurchase date (unless the fundamental change repurchase date falls after a regular record date but on or prior to the interest payment date to which such regular record date relates, in which case we will instead pay the full amount of accrued and unpaid interest to the holder of record on such regular record date, and the fundamental change repurchase price will be equal to 100% of the principal amount of the notes to be repurchased).

A fundamental change will be deemed to have occurred at the time after the notes are originally issued if any of the following occurs:

(1) a person or group within the meaning of Section 13(d) of the Exchange Act, other than us, our wholly owned subsidiaries and our and their employee benefit plans, files a Schedule TO or any schedule, form or report under the Exchange Act disclosing such person or group has become the direct or indirect beneficial owner, as defined in Rule 13d-3 under the Exchange Act, of our common equity representing more than 50% of the voting power of our common equity;

(2) the consummation of (A) any recapitalization, reclassification or change of our common stock (other than changes resulting from a subdivision or combination or changes solely in par value) as a result of which our common stock would be converted into, or exchanged for, shares, stock, other securities, other property or assets except for a transaction described in clause (B); (B) any share exchange, consolidation or merger involving us pursuant to which our common stock will be converted into cash, securities or other property or assets; or (C) any sale, lease or other transfer in one transaction or a series of transactions of all or substantially all of the consolidated assets of us and our subsidiaries, taken as a whole, to any person other than one of our subsidiaries; *provided*, *however*, that neither (x) a transaction described in clause (B) in which the holders of all classes of our common equity immediately prior to such transaction own, directly or indirectly, more than 50% of all classes of common equity of the continuing or surviving corporation or transferee or the parent thereof immediately after such transaction in substantially the same proportions (relative to each other), directly or indirectly, as such ownership immediately prior to such transaction nor (y) any merger of us solely for the purpose of changing our jurisdiction of incorporation that results in a reclassification, conversion or exchange of outstanding shares of common stock solely into shares of common stock of the surviving entity shall be a fundamental change pursuant to this clause (2);

(3) our stockholders approve any plan or proposal for the liquidation or dissolution of us; or

(4) our common stock (or other common equity underlying the notes) ceases to be listed or quoted on any of The Nasdaq Global Market, The Nasdaq Global Select Market or the New York Stock Exchange (or any of their respective successors).

A transaction or transactions described in clause (1) or clause (2) above will not constitute a fundamental change, however, if at least 90% of the consideration received or to be received by our common stockholders, excluding cash payments for fractional shares and cash payments made pursuant to dissenters appraisal rights, in connection with such transaction or transactions consists of common stock that is listed or quoted on any of The Nasdaq Global Market, The Nasdaq Global Select Market or the New York Stock Exchange (or any of their respective successors) or will be so listed or quoted when issued or exchanged in connection with such transaction or transactions and as a result of such transaction or transactions the notes become convertible into such consideration, excluding cash

payments for fractional shares and cash payments made pursuant to dissenters appraisal rights (subject to the provisions set forth above under Conversion Rights Settlement upon Conversion ).

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Any event, transaction or series of related transactions that constitute a fundamental change under both clause (1) and clause (2) above (determined without regard to the proviso in clause (2) above) will be deemed to be a fundamental change solely under clause (2) above.

If any transaction in which our common stock is replaced by the securities of another entity (including American depositary receipts) occurs, following completion of any related make-whole fundamental change period (or, in the case of a transaction that would have been a fundamental change or a make-whole fundamental change but for the immediately preceding paragraph, following the effective date of such transaction), references to us in the definition of fundamental change above shall instead be references to such other entity.

On or before the 20th day after the occurrence of a fundamental change, we will provide to all holders of the notes and the trustee and paying agent (if other than the trustee) a notice of the occurrence of the fundamental change and of the resulting repurchase right. Such notice shall state, among other things:

the events causing a fundamental change;

the date of the fundamental change;

the last date on which a holder may exercise the repurchase right;

the fundamental change repurchase price;

the fundamental change repurchase date;

the name and address of the paying agent and the conversion agent, if applicable;

if applicable, the conversion rate and any adjustments to the conversion rate;

that the notes with respect to which a fundamental change repurchase notice has been delivered by a holder may be converted only if the holder withdraws the fundamental change repurchase notice in accordance with the terms of the indenture; and

the procedures that holders must follow to require us to repurchase their notes.

Simultaneously with providing such notice, we will publish the information on our website or through such other public medium as we may use at that time.

To exercise the fundamental change repurchase right, you must deliver, on or before the business day immediately preceding the fundamental change repurchase date, the notes to be repurchased, duly endorsed for transfer, together

with a written repurchase notice, to the paying agent. Each repurchase notice must state:

if certificated, the certificate numbers of your notes to be delivered for repurchase;

the portion of the principal amount of notes to be repurchased, which must be in minimum denominations of $1,000 or an integral multiple thereof; and

that the notes are to be repurchased by us pursuant to the applicable provisions of the notes and the indenture.

If the notes are not in certificated form, such repurchase notice must comply with appropriate DTC procedures.

Holders may withdraw any repurchase notice (in whole or in part) by a written notice of withdrawal delivered to the paying agent prior to the close of business on the business day immediately preceding the fundamental change repurchase date. The notice of withdrawal shall state:

the principal amount of the withdrawn notes;

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if certificated notes have been issued, the certificate numbers of the withdrawn notes; and

the principal amount, if any, which remains subject to the repurchase notice.

If the notes are not in certificated form, such notice of withdrawal must comply with appropriate DTC procedures.

We will be required to repurchase the notes properly surrendered for repurchase and not validly withdrawn on the fundamental change repurchase date, subject to postponement to comply with applicable law. Holders who have exercised the repurchase right will receive payment of the fundamental change repurchase price on the later of (i) the fundamental change repurchase date and (ii) the time of book-entry transfer or the delivery of the notes. If the paying agent holds money sufficient to pay the fundamental change repurchase price of the notes on the fundamental change repurchase date, then, with respect to the notes that have been properly surrendered for repurchase and have not been validly withdrawn:

the notes will cease to be outstanding and interest will cease to accrue (whether or not book-entry transfer of the notes is made or whether or not the notes are delivered to the paying agent); and

all other rights of the holder will terminate (other than the right to receive the fundamental change repurchase price).

In connection with any repurchase offer pursuant to a fundamental change repurchase notice, we will, if required:

comply with the tender offer rules under the Exchange Act that may then be applicable;

file a Schedule TO or any other required schedule under the Exchange Act; and

otherwise comply in all material respects with all federal and state securities laws in connection with any offer by us to repurchase the notes;

in each case, so as to permit the rights and obligations under this Fundamental Change Permits Holders to Require Us to Repurchase Notes to be exercised in the time and in the manner specified in the indenture.

No notes may be repurchased on any date at the option of holders upon a fundamental change if the principal amount of the notes has been accelerated, and such acceleration has not been rescinded, on or prior to such date (except in the case of an acceleration resulting from a default by us in the payment of the fundamental change repurchase price with respect to such notes).

Notwithstanding anything to the contrary described above, we will be deemed to satisfy our obligations to repurchase notes pursuant to the provisions described above if (i) one or more third parties conduct the repurchase offer and repurchase tendered notes in a manner that would have satisfied our obligations to do the same if conducted directly by us; and (ii) an owner of a beneficial interest in the notes would not receive a lesser amount (as a result of taxes, additional expenses or for any other reason) than such owner would have received had we repurchased the notes.

To the extent that the provisions of any securities laws or regulations conflict with the provisions of the indenture relating to our obligations to repurchase the notes upon a fundamental change, we will comply with the applicable securities laws and regulations and will not be deemed to have breached our obligations under such provisions of the indenture by virtue of such conflict.

The repurchase rights of the holders could discourage a potential acquirer of us. The fundamental change repurchase feature, however, is not the result of management s knowledge of any specific

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effort to obtain control of us by any means or part of a plan by management to adopt a series of anti-takeover provisions.

The term fundamental change is limited to specified transactions and may not include other events that might adversely affect our financial condition. In addition, the requirement that we offer to repurchase the notes upon a fundamental change may not protect holders in the event of a highly leveraged transaction, reorganization, merger or similar transaction involving us.

The definition of fundamental change includes a phrase relating to the sale, lease or other transfer of all or substantially all of our consolidated assets. There is no precise, established definition of the phrase substantially all under applicable law. Accordingly, the ability of a holder of the notes to require us to repurchase its notes as a result of the sale, lease or other transfer of less than all of our assets may be uncertain.

If a fundamental change were to occur, we may not have enough funds to pay the fundamental change repurchase price. Our ability to repurchase the notes for cash may be limited by restrictions on our ability to obtain funds for such repurchase through dividends from our subsidiaries and the terms of any of our other then existing borrowing arrangements or otherwise. See Risk Factors Risks Related to the Notes We may be unable to make cash payments on the notes, including payments of interest, repurchase the notes for cash when required upon the occurrence of a fundamental change or pay cash upon conversion of the notes, and our future debt may contain limitations on our ability to make cash payments on the notes. If we fail to repurchase the notes when required following a fundamental change, we will be in default under the indenture. In addition, we may in the future incur, other indebtedness with similar change in control provisions permitting our holders to accelerate or to require us to repurchase or repay, as applicable, our indebtedness upon the occurrence of similar events or on some specific dates.

**Consolidation, Merger and Sale of Assets**

The provisions described under Description of Debt Securities Consolidation, Merger or Sale in the accompanying prospectus will not apply to the notes. Instead, the provisions described in this Consolidation, Merger and Sale of Assets section will apply to the notes.

The indenture will provide that we will not consolidate with or merge with or into, or sell, convey, transfer or lease all or substantially all of our properties and assets, to, another person, unless (i) the resulting, surviving or transferee person (if not us) is a corporation organized and existing under the laws of the United States of America, any State thereof or the District of Columbia, and such corporation (if not us) expressly assumes by supplemental indenture all of our obligations under the notes and the indenture; and (ii) immediately after giving effect to such transaction, no default or event of default has occurred and is continuing under the indenture. Upon any such consolidation, merger or sale, conveyance, transfer or lease, the resulting, surviving or transferee person (if not us) shall succeed to, and may exercise every right and power of, ours under the indenture, and we shall be discharged from our obligations under the notes and the indenture except in the case of any such lease.

Although these types of transactions will be permitted under the indenture, certain of the foregoing transactions could constitute a fundamental change permitting each holder to require us to repurchase the notes of such holder as described above.

**Events of Default**

The provisions described under Description of Debt Securities Events of Default under the Indenture in the accompanying prospectus will not apply to the notes. Instead, the events of default and related provisions described in

this Events of Default section will apply to the notes.

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Each of the following is an event of default with respect to the notes:

(1) default in any payment of interest on any note when due and payable and the default continues for a period of 30 days;

(2) default in the payment of principal of any note when due and payable at its stated maturity, upon any required repurchase, upon optional redemption, upon declaration of acceleration or otherwise;

(3) our failure to comply with our obligation to convert the notes in accordance with the indenture upon exercise of a holder s conversion right and such failure continues for a period of five business days;

(4) our failure to give a fundamental change notice as described under Fundamental Change Permits Holders to Require Us to Repurchase Notes or notice of a specified corporate transaction as described under Conversion Rights Conversion upon Specified Corporate Events, in each case when due;

(5) our failure to comply with our obligations under Consolidation, Merger and Sale of Assets ;

(6) our failure for 60 days after written notice received by us from the trustee or the holders of at least 25% in principal amount of the notes then outstanding has been received to comply with any of our other agreements contained in the notes or indenture;

(7) default by us or any of our significant subsidiaries with respect to any mortgage, agreement or other instrument under which there may be outstanding, or by which there may be secured or evidenced, any indebtedness for money borrowed in excess of $20,000,000 (or its foreign currency equivalent) in the aggregate of us and/or any such significant subsidiary, whether such indebtedness now exists or shall hereafter be created (i) resulting in such indebtedness becoming or being declared due and payable prior to its stated maturity or (ii) constituting a failure to pay the principal or interest of any such debt when due and payable (after the expiration of all applicable grace periods) at its stated maturity, upon required repurchase, upon declaration of acceleration or otherwise, and such acceleration is not cured, waived, rescinded, stayed or annulled or such indebtedness is not discharged, as applicable, within a period of 60 days after written notice of such indebtedness becoming due and payable or such failure, as the case may be, has been received by us from the trustee or the holders of at least 25% in principal amount of the notes then outstanding; or

(8) certain events of bankruptcy, insolvency, or reorganization of us or any of our significant subsidiaries.

A significant subsidiary is a subsidiary that is a significant subsidiary as defined in Article 1, Rule 1-02 of Regulation S-X promulgated by the SEC as in effect on the date of the indenture; provided that, in the case of a subsidiary that meets the criteria of clause (3) of the definition thereof but not clause (1) or (2) thereof, such subsidiary shall not be deemed to be a significant subsidiary unless the subsidiary s income from continuing operations before income taxes, extraordinary items and cumulative effect of a change in accounting principle exclusive of amounts attributable to any non-controlling interests for the last completed fiscal year prior to the date of such determination exceeds $10,000,000.

If an event of default occurs and is continuing, the trustee by notice to us, or the holders of at least 25% in principal amount of the outstanding notes by notice to us and the trustee, may, and the trustee at the request of such holders shall, declare 100% of the principal of and accrued and unpaid

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interest, if any, on all the notes to be due and payable. In case of certain events of bankruptcy, insolvency or reorganization, involving us, 100% of the principal of and accrued and unpaid interest on the notes will automatically become due and payable. Upon such a declaration of acceleration, such principal and accrued and unpaid interest, if any, will be due and payable immediately.

Notwithstanding the foregoing, the indenture will provide that, to the extent we elect, the sole remedy for an event of default relating to (i) our failure to file with the trustee pursuant to Section 314(a)(1) of the Trust Indenture Act any documents or reports that we are required to file with the SEC pursuant to Section 13 or 15(d) of the Exchange Act or (ii) our failure to comply with our obligations as set forth under Reports below, will after the occurrence of such an event of default consist exclusively of the right to receive additional interest on the notes at a rate equal to:

- 0.25% per annum of the principal amount of the notes outstanding for each day during the 180-day period on which such event of default is continuing beginning on, and including, the date on which such an event of default first occurs and ending on, but excluding, the earlier of (x) the date on which such event of default is no longer continuing and (y) the 181st day following the date on which such an event of default first occurs; and

- 0.50% per annum of the principal amount of the notes outstanding for each day during the 180-day period on which such event of default is continuing beginning on, and including, the 181st day following the date on which such an event of default first occurs and ending on, but excluding, the date on which such event of default is no longer continuing.

If we so elect, such additional interest will be payable in the same manner and on the same dates as the stated interest payable on the notes. On the 366th day after such event of default (if the event of default relating to the reporting obligations is not cured or waived prior to such 366th day), such additional interest will cease to accrue and the notes will be subject to acceleration as provided above. The provisions of the indenture described in this paragraph will not affect the rights of holders of notes in the event of the occurrence of any other event of default. In the event we do not elect to pay the additional interest following an event of default in accordance with this paragraph or we elected to make such payment but do not pay the additional interest when due, the notes will be immediately subject to acceleration as provided above.

In order to elect to pay the additional interest as the sole remedy during the first 180 days after the occurrence of an event of default relating to the failure to comply with the reporting obligations in accordance with the immediately preceding paragraph, we must notify all holders of notes, the trustee and the paying agent of such election prior to the beginning of such 365-day period. Upon our failure to timely give such notice, the notes will be immediately subject to acceleration as provided above.

If any portion of the amount payable on the notes upon acceleration is considered by a court to be unearned interest (through the allocation of the value of the instrument to the embedded warrant or otherwise), the court could disallow recovery of any such portion.

The holders of a majority in principal amount of the outstanding notes may waive all past defaults with respect to the notes (except with respect to nonpayment of principal or interest or with respect to the failure to deliver the consideration due upon conversion, with respect to the failure to pay the repurchase price or the redemption price in connection with a fundamental change or optional redemption, as applicable, when due) and rescind any such acceleration with respect to the notes and its consequences if (i) rescission would not conflict with any judgment or

decree of a court of competent jurisdiction and (ii) all existing events of default, other than the nonpayment of the principal of and interest on the notes that have become due solely by such declaration of acceleration, have been cured or waived.

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Each holder shall have the right to receive payment or delivery, as the case may be, of:

the principal (including the redemption price and fundamental change repurchase price, if applicable) of;

accrued and unpaid interest, if any, on; and

the consideration due upon conversion of its notes, on or after the respective due dates expressed or provided for in the indenture, or to institute suit for the enforcement of any such payment or delivery, as the case may be.

Subject to the provisions of the indenture relating to the duties of the trustee, if an event of default occurs and is continuing, the trustee will be under no obligation to exercise any of the rights or powers under the indenture at the request or direction of any of the holders unless such holders have offered to the trustee indemnity or security reasonably satisfactory to it against any loss, liability or expense. Except to enforce the right to receive payment of principal or interest when due, the right to receive payment or delivery of the consideration due upon conversion, or the right to receive the repurchase price in connection with a fundamental change when due or the right to receive the redemption price in connection with an optional redemption when due, no holder may pursue any remedy with respect to the indenture or the notes unless:

(1) such holder has previously given the trustee written notice that an event of default is continuing;

(2) holders of at least 25% in aggregate principal amount of the outstanding notes have requested the trustee to pursue the remedy;

(3) such holders have offered the trustee security or indemnity reasonably satisfactory to it against any loss, liability or expense;

(4) the trustee has not complied with such request within 60 days after the receipt of the request and the offer of such security or indemnity; and

(5) the holders of a majority in principal amount of the outstanding notes have not given the trustee a direction that, in the opinion of the trustee, is inconsistent with such request within such 60-day period.

Subject to certain restrictions, the holders of a majority in principal amount of the outstanding notes are given the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or of exercising any trust or power conferred on the trustee under the indenture.

The indenture will provide that in the event an event of default has occurred and is continuing, the trustee will be required in the exercise of its powers to use the degree of care that a prudent person would use in the conduct of its own affairs. The trustee, however, may refuse to follow any direction that conflicts with law or the indenture or that the trustee determines is unduly prejudicial to the rights of any other holder or that would involve the trustee in personal liability. Prior to taking any action under the indenture, the trustee will be entitled to indemnification reasonably satisfactory to it against any loss, liability or expense caused by taking or not taking such action.

The indenture will provide that if a default occurs and is continuing and is actually known to a responsible officer of the trustee, the trustee shall send to each holder notice of the default within 90 days after it occurs. Except in the case of a default in the payment of principal of or interest on any note or a default in the payment or delivery of the consideration due upon conversion, the trustee may

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withhold notice if and so long as it in good faith determines that withholding notice is in the interests of the holders. In addition, we are required to deliver to the trustee, within 120 days after the end of each fiscal year, a certificate indicating whether the signers thereof know of any default that occurred during the previous year. We are also required to deliver to the trustee, within 30 days after the occurrence thereof, written notice of any events which would constitute certain defaults, their status and what action we are taking or proposing to take in respect thereof; *provided* that we are not required to deliver such notice if the default has been cured.

Payments of the redemption price, fundamental change repurchase price, principal and interest that are not made when due will accrue interest per annum at the then-applicable interest rate from the required payment date.

**Modification and Amendment**

The provisions described under Description of Debt Securities Modification of Indenture; Waiver in the accompanying prospectus will not apply to the notes. Instead, the modification, waiver and amendment and related provisions described in this Modification and Amendment section will apply to the notes.

Subject to certain exceptions, the indenture or the notes may be amended with the consent of the holders of at least a majority in principal amount of the notes then outstanding (including without limitation, consents obtained in connection with a repurchase of, or tender or exchange offer for, notes) and, subject to certain exceptions, any past default or compliance with any provisions may be waived with the consent of the holders of a majority in principal amount of the notes then outstanding (including, without limitation, consents obtained in connection with a repurchase of, or tender or exchange offer for, notes). However, without the consent of each holder of an outstanding note affected, no amendment may, among other things:

(1) reduce the amount of notes whose holders must consent to an amendment;

(2) reduce the rate of or extend the stated time for payment of interest on any note;

(3) reduce the principal of or extend the stated maturity of any note;

(4) make any change that adversely affects the conversion rights of any notes other than as required by the indenture;

(5) waive a payment default with respect to any note;

(6) reduce the fundamental change repurchase price or redemption price of any note or amend or modify in any manner adverse to the holders of the notes our obligation to make such payments, whether through an amendment or waiver of provisions in the covenants, definitions or otherwise;

(7) make any note payable in money, or at a place of payment, other than that stated in the note;

(8) change the ranking of the notes;

(9) make any change in the modification or amendment provisions that require each holder s consent or in the waiver provisions; or

(10) impair the rights of any holder to receive payment of the principal of and interest on such holder s notes on or after the due dates therefor or institute suit for the enforcement of any payment on, or with respect to, such holder s notes.

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Without the consent of any holder, we and the trustee may amend the indenture or the notes to:

(1) cure any ambiguity, omission, defect or inconsistency;

(2) provide for the assumption by a successor corporation of our obligations under the indenture;

(3) add guarantees with respect to the notes;

(4) provide for the issuance of additional notes;

(5) secure the notes;

(6) add to our covenants or events of default for the benefit of the holders or surrender any right or power conferred upon us under the indenture;

(7) make any change that does not materially adversely affect the rights of any holder;

(8) in connection with any transaction described under Conversion rights Recapitalizations, Reclassifications and Changes of Our Common Stock above, provide that the notes are convertible into reference property, subject to the provisions described under Conversion rights Settlement upon Conversion above, and make certain related changes to the terms of the notes to the extent expressly required by the indenture;

(9) comply with any requirement of the SEC in connection with the qualification of the indenture under the Trust Indenture Act;

(10) conform the provisions of the indenture or the notes to any provision of the Description of Notes section in the preliminary prospectus supplement, as supplemented by the related pricing term sheet, as set forth in an officer s certificate;

(11) comply with the rules of any applicable securities depositary, including DTC, so long as such amendment does not adversely affect the rights of any holder;

(12) appoint a successor trustee with respect to the notes;

(13) provide for additional rights and benefits for the holder;

(14) irrevocably elect to eliminate one or more of the settlement methods and/or irrevocably elect a minimum specified dollar amount; or

(15) provide for the issuance of additional notes, to the extent that we deem such amendment necessary or advisable in connection with such issuance.

Holders do not need to approve the particular form of any proposed amendment. It will be sufficient if such holders approve the substance of the proposed amendment. After an amendment under the indenture becomes effective, we are required to deliver to the holders a notice briefly describing such amendment. However, the failure to give such notice to all the holders, or any defect in the notice, will not impair or affect the validity of the amendment.

**Discharge**

The provisions described under Description of Debt Securities Discharge in the accompanying prospectus will not apply to the notes. Instead, the modification, waiver and amendment and related provisions described in this Discharge section will apply to the notes.

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We may satisfy and discharge our obligations under the indenture and the notes by delivering to the securities registrar for cancellation all outstanding notes or by depositing with the trustee or delivering to the holders, as applicable, after the notes have become due and payable, whether at maturity, at any fundamental change repurchase date or redemption date or upon conversion or otherwise, cash or cash and/or shares of common stock, solely to satisfy outstanding conversions, as applicable, sufficient to pay all of the outstanding notes and paying all other sums payable under the indenture by us. Such discharge is subject to terms contained in the indenture.

**Calculations in Respect of the Notes**

Except as otherwise provided above, we will be responsible for making all calculations called for under the notes. These calculations include, but are not limited to, determinations of the trading price of the notes, determinations of whether the notes are convertible and determinations of the stock price, the last reported sale prices of our common stock, the daily VWAPs, the daily conversion values, the daily settlement amounts, accrued interest payable on the notes, any increase in the conversion rate due to make-whole fundamental change and the conversion rate of the notes. We will make all these calculations in good faith and, absent manifest error, our calculations will be final and binding on holders of notes. We will provide a schedule of our calculations to each of the trustee, the paying agent and the conversion agent, and each of the trustee, the paying agent and the conversion agent is entitled to rely conclusively upon the accuracy of our calculations without independent verification. The trustee will forward our calculations to any holder of notes upon the written request of that holder.

**Reports**

The indenture will provide that any annual or quarterly (on Form 10-K or 10-Q or any respective successor form) reports that we are required to file with the SEC pursuant to Section 13 or 15(d) of the Exchange Act (excluding, for the avoidance of doubt, any such information, documents or reports (or portions thereof) that are subject to confidential treatment and any correspondence with the SEC) must be filed by us with the trustee within 15 days after the same are required to be filed with the SEC (giving effect to any grace period provided by Rule 12b-25 or any successor rule under the Exchange Act). Documents filed by us with the SEC via the EDGAR system (or any successor thereto) will be deemed to be filed with the trustee as of the time such documents are filed via EDGAR (or any successor thereto); provided, however, that the trustee shall have no obligation to verify that such filing has occurred.

**Trustee**

U.S. Bank National Association is the trustee, security registrar, paying agent and conversion agent. U.S. Bank National Association, in each of its capacities, including without limitation as trustee, security registrar, paying agent and conversion agent, assumes no responsibility for the accuracy or completeness of the information concerning us or our affiliates or any other party contained in this document or the related documents or for any failure by us or any other party to disclose events that may have occurred and may affect the significance or accuracy of such information.

We maintain banking relationships in the ordinary course of business with the trustee and its affiliates.

**Governing Law**

The indenture will provide that it and the notes, and any claim, controversy or dispute arising under or related to the indenture or the notes, will be governed by and construed in accordance with the laws of the State of New York.

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**Book-Entry, Settlement and Clearance**

***The Global Notes***

The notes will be initially issued in the form of one or more registered notes in global form, without interest coupons, or the global notes. Upon issuance, each of the global notes will be deposited with the trustee as custodian for DTC and registered in the name of Cede & Co., as nominee of DTC.

Ownership of beneficial interests in a global note will be limited to persons who have accounts with DTC, or DTC participants, or persons who hold interests through DTC participants. We expect that under procedures established by DTC:

- upon deposit of a global note with DTC s custodian, DTC will credit portions of the principal amount of the global note to the accounts of the DTC participants designated by the underwriters; and
- ownership of beneficial interests in a global note will be shown on, and transfer of ownership of those interests will be effected only through, records maintained by DTC (with respect to interests of DTC participants) and the records of DTC participants (with respect to other owners of beneficial interests in the global note).

Beneficial interests in global notes may not be exchanged for notes in physical, certificated form except in the limited circumstances described below.

***Book-Entry Procedures for the Global Notes***

All interests in the global notes will be subject to the operations and procedures of DTC and, therefore, you must allow for sufficient time in order to comply with these procedures if you wish to exercise any of your rights with respect to the notes. We provide the following summary of those operations and procedures solely for the convenience of investors. The operations and procedures of DTC are controlled by that settlement system and may be changed at any time. Neither we nor the underwriters are responsible for those operations or procedures.

DTC has advised us that it is:

- a limited purpose trust company organized under the laws of the State of New York;
- a banking organization within the meaning of the New York State Banking Law;
- a member of the Federal Reserve System;
- a clearing corporation within the meaning of the Uniform Commercial Code; and

a clearing agency registered under Section 17A of the Exchange Act.

DTC was created to hold securities for its participants and to facilitate the clearance and settlement of securities transactions between its participants through electronic book-entry changes to the accounts of its participants. DTC s participants include securities brokers and dealers, including the underwriters; banks and trust companies; clearing corporations and other organizations. Indirect access to DTC s system is also available to others such as banks, brokers, dealers and trust companies; these indirect participants clear through or maintain a custodial relationship with a DTC participant, either directly or indirectly. Investors who are not DTC participants may beneficially own securities held by or on behalf of DTC only through DTC participants or indirect participants in DTC.

So long as DTC s nominee is the registered owner of a global note, that nominee will be considered the sole owner or holder of the notes represented by that global note for all purposes under the indenture. Except as provided below, owners of beneficial interests in a global note:

will not be entitled to have notes represented by the global note registered in their names;

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will not receive or be entitled to receive physical, certificated notes; and

will not be considered the owners or holders of the notes under the indenture for any purpose, including with respect to the giving of any direction, instruction or approval to the trustee under the indenture.

DTC will credit, on its book-entry registration and transfer system, the respective principal amounts of notes represented by the global note to the accounts of its participants. Each person owning a beneficial interest in a global note must rely on the procedures of the DTC (and, if such person is not a DTC participant, on procedures of the DTC participant through which such person owns its interest) to exercise any rights of a holder under the indenture.

Payments on a global note will be made to DTC s nominee as the holder of the global note. Some jurisdictions have laws that require that certain purchasers of securities take physical delivery of such securities in definitive form. These laws may impair the ability to transfer beneficial interests in a global note.

Ownership of beneficial interests in a global note will be shown on and effected through records maintained by DTC, with respect to DTC participants interests, or by any DTC participant, with respect to interests of persons held by DTC participants on their behalf. Payments, transfers and exchanges relating to beneficial interests in a global note will be subject to policies and procedures of DTC.

As a result, each investor who owns a beneficial interest in a global note must rely on the procedures of DTC to exercise any rights of a holder of notes under the indenture (and, if the investor is not a participant or an indirect participant in DTC, on the procedures of the DTC participant through which the investor owns its interest).

Payments of principal and interest with respect to the notes represented by a global note will be made by the trustee to DTC s nominee as the registered holder of the global note. Neither we nor the trustee will have any responsibility or liability for the payment of amounts to owners of beneficial interests in a global note, for any aspect of the records relating to or payments made on account of those interests by DTC, or for maintaining, supervising or reviewing any records of DTC relating to those interests.

Payments by participants and indirect participants in DTC to the owners of beneficial interests in a global note will be governed by standing instructions and customary industry practice and will be the responsibility of those participants or indirect participants and DTC.

Transfers between participants in DTC will be effected under DTC s procedures and will be settled in same-day funds. DTC s policies and procedures may change from time to time.

***Certificated Notes***

The provisions described in the second paragraph under Description of Debt Securities Global Securities in the accompanying prospectus will not apply to the notes. Instead, the modification, waiver and amendment and related provisions described in this " Certificated Notes section will apply to the notes.

Notes in physical, certificated form will be issued and delivered to each person that DTC identifies as a beneficial owner of the related notes only if:

DTC notifies us at any time that it is unwilling or unable to continue as depositary for the global notes and a successor depositary is not appointed within 90 days;

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DTC ceases to be registered as a clearing agency under the Exchange Act and a successor depositary is not appointed within 90 days; or

an event of default with respect to the notes has occurred and is continuing and such beneficial owner requests that its notes be issued in physical, certificated form.

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## MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES

The following is a summary of certain material U.S. federal income tax considerations of the purchase, ownership and disposition of notes and the shares of common stock into which the notes may be converted. This summary is based upon provisions of the Internal Revenue Code of 1986, as amended, or the Code, applicable Treasury Regulations, administrative rulings and judicial decisions in effect as of the date hereof, any of which may subsequently be changed, possibly retroactively, so as to result in U.S. federal income tax consequences different from those discussed below. This summary deals only with notes or shares of common stock held as capital assets by a beneficial owner who purchased the notes on original issuance at their issue price (the first price at which a substantial amount of the notes is sold to persons other than bond houses, brokers, or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers). This summary is general in nature, does not address all aspects of U.S. federal income taxes, and does not address state, local, estate, gift or non-U.S. tax consequences. In addition, it does not deal with all tax consequences that may be relevant to holders in light of their personal circumstances or particular situations, such as:

- holders who may be subject to special tax treatment, including dealers in securities or currencies, banks, financial institutions, regulated investment companies, real estate investment trusts, tax-exempt entities, insurance companies, or traders in securities that elect to use a mark-to-market method of tax accounting for their securities;
- persons holding notes or common stock as a part of an integrated or conversion transaction or a straddle or persons deemed to sell notes or common stock under the constructive sale provisions of the Code;
- U.S. holders (as defined below) whose functional currency is not the U.S. dollar;
- S corporations, partnerships or other entities classified as partnerships for U.S. federal income tax purposes or other pass-through entities, or investors in such pass-through entities holding notes or our common stock; persons subject to special tax accounting rules under section 451(b) of the Code;
- persons subject to the alternative minimum tax; and
- persons subject to the Medicare net investment income tax.

If an entity or arrangement treated as a partnership holds notes or shares of common stock, the tax treatment of a partner will generally depend upon the status of the partner and the activities of the partnership. If you are a partner in a partnership holding the notes or shares of common stock, you should consult your tax advisor.

We have not sought, nor will we seek, a ruling from the Internal Revenue Service, or the IRS, with respect to the matters discussed below. There can be no assurance that the IRS will not take a different position concerning the tax consequences of the purchase, ownership or disposition of the notes or common stock or that any such position would not be sustained.

THIS SUMMARY OF CERTAIN U.S. FEDERAL INCOME TAX CONSIDERATIONS IS FOR GENERAL INFORMATION ONLY AND IS NOT TAX ADVICE. YOU SHOULD CONSULT YOUR TAX ADVISOR WITH RESPECT TO THE APPLICATION OF U.S. FEDERAL INCOME TAX LAWS TO YOUR PARTICULAR SITUATION AS WELL AS ANY TAX CONSEQUENCES OF THE PURCHASE, OWNERSHIP, AND DISPOSITION OF THE NOTES OR THE SHARES OF OUR COMMON STOCK INTO WHICH THE NOTES ARE CONVERTIBLE ARISING UNDER U.S. FEDERAL ESTATE OR GIFT TAX RULES OR UNDER THE LAWS OF ANY STATE, LOCAL, NON-U.S. OR ANY OTHER TAXING JURISDICTION OR UNDER ANY APPLICABLE TAX TREATY. IN ADDITION, SIGNIFICANT

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CHANGES IN U.S. FEDERAL INCOME TAX LAWS WERE RECENTLY ENACTED. YOU SHOULD ALSO CONSULT WITH YOUR TAX ADVISOR WITH RESPECT TO SUCH CHANGES IN U.S. TAX LAWS AS WELL AS POTENTIAL CONFORMING CHANGES IN STATE TAX LAWS.

As used herein, the term U.S. holder means a beneficial owner of notes or shares of common stock received upon conversion of the notes that is, for U.S. federal income tax purposes:

- an individual who is a citizen or resident of the United States;
- a corporation (or any other entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States, any state thereof or the District of Columbia;
- an estate the income of which is subject to U.S. federal income taxation regardless of its source; or
- a trust, if it (i) is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all substantial decisions of the trust, or (ii) has a valid election in effect under applicable U.S. Treasury Regulations to be treated as a U.S. person.

As used herein, the term non-U.S. holder is a beneficial owner (other than a partnership, or any entity or arrangement treated as a partnership for U.S. federal income tax purposes, or any investor in such partnership or other entity or arrangement) of notes or shares of common stock received upon conversion of the notes that is not a U.S. holder. Special rules may apply to certain non-U.S. holders such as corporations that accumulate earnings to avoid U.S. federal income tax or, in certain circumstances, former citizens or long-term residents of the United States. Consequently, non-U.S. holders should consult their tax advisors to determine the U.S. federal, state, local, non-U.S. and other tax consequences that may be relevant to them.

**Consequences to U.S. Holders**

***Interest***

It is anticipated, and this discussion assumes, that the notes will be issued with no more than a de minimis amount of original issue discount, if any (as determined under the Code). Interest on a note will generally be taxable to a U.S. holder as ordinary income at the time it is paid or accrued in accordance with the U.S. holder s usual method of accounting for tax purposes.

***Certain Additional Payments***

As described under the heading Description of Notes Events of Default, we may elect to pay or we may be required to pay additional interest on the notes in certain circumstances. We intend to take the position that the possibility of such additional payments should not cause the notes to be treated as contingent payment debt instruments. This position is based in part on our assessment that the possibility, as of the date of issuance of the notes, that such additional amounts will be paid is remote. Assuming such position is respected, any additional interest paid to a U.S. holder as described under Description of Notes Events of Default would be taxable as additional ordinary income when received or accrued, in accordance with such U.S. holder s method of accounting for U.S. federal income tax purposes.

Our position that the notes are not contingent payment debt instruments is binding on each U.S. holder unless such U.S. holder discloses its contrary position to the IRS in the manner required by applicable Treasury Regulations. Our position that the notes are not contingent payment debt

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instruments is not, however, binding on the IRS. If the IRS successfully challenged this position, and the notes were treated as contingent payment debt instruments U.S. holders would, among other things, be required to accrue interest income at a higher rate than the stated interest rate on the notes and to treat any gain recognized on the sale or other disposition of a note (including any gain realized on the conversion of a note) as ordinary income rather than as capital gain. The remainder of this discussion assumes that the notes are not treated as contingent payment debt instruments.

***Sale, Exchange, Redemption, Repurchase, Retirement or Other Taxable Disposition of Notes***

Except as provided below under Conversion of Notes, a U.S. holder will generally recognize capital gain or loss upon the sale, exchange, redemption, repurchase, retirement or other taxable disposition of a note, equal to the difference between the sum of the cash plus the fair market value of any other property received upon such disposition (excluding any amount attributable to accrued but unpaid interest, which will be treated as described under Interest above) and such U.S. holder s adjusted tax basis in the note. A U.S. holder s tax basis in a note will generally be equal to the amount that the U.S. holder paid for the note, plus the amount, if any, included in income on an adjustment to the conversion rate of the notes, as described in Constructive Distributions below. If, at the time of the sale, exchange, retirement or other taxable disposition of the note, a U.S. holder held the note for more than one year, such gain or loss will be long-term capital gain or loss. Long-term capital gains recognized by certain non-corporate U.S. holders, including individuals, will generally be subject to a reduced rate of U.S. federal income tax. A U.S. holder s ability to deduct capital losses may be limited.

***Conversion of Notes***

If a U.S. holder presents a note for conversion, the U.S. holder may receive solely cash, solely common stock or a combination of cash and common stock in exchange for notes, depending upon our chosen settlement method.

If a U.S. holder receives solely cash in exchange for notes upon conversion, the U.S. holder s gain or loss will be determined in the same manner as if the U.S. holder disposed of the notes in a taxable disposition (as described above under Sale, Exchange, Redemption, Repurchase, Retirement or Other Taxable Disposition of Notes ).

If a U.S. holder receives solely stock in exchange for notes upon conversion, the U.S. holder generally will not recognize any income, gain or loss on the conversion, except with respect to cash received in lieu of a fractional share of common stock and the fair market value of any common stock attributable to accrued and unpaid interest. The U.S. holder s aggregate tax basis in the common stock (including any fractional share for which cash is paid, but excluding shares attributable to accrued interest) will equal the U.S. holder s tax basis in the note. The U.S. holder s holding period in the common stock (other than shares attributable to accrued interest) will include the holding period in the note. A U.S. holder s tax basis in common stock attributable to accrued interest will equal its fair market value on the date of receipt and the holding period for such stock will commence on the day after the date of receipt.

The U.S. federal income tax treatment of the conversion of a note into cash and common stock is uncertain, and U.S. holders should consult their tax advisors regarding the consequences of such a conversion. In general, the income tax treatment will depend on whether the conversion is treated as a recapitalization or alternatively as a conversion of a portion of the note for common stock and a taxable sale of a portion of the note for cash.

The conversion can only be treated as a recapitalization if the notes are treated as securities for U.S. federal income tax purposes. An instrument is a security for these purposes if, based on all the

facts and circumstances, the instrument constitutes a meaningful investment in the issuer of the instrument. Although there are a number of factors that may affect the determination of whether a debt instrument is a security, one of the most important factors is the original term of the instrument, or the length of time between the issuance of the instrument and its maturity. In general, instruments with an original term of more than ten years are likely to be treated as securities, and instruments with an original term of less than five years are less likely to be treated as securities. In addition, the convertibility of a debt instrument into stock of the issuer may argue in favor of security treatment because of the holder s possible equity participation in the issuer. If recapitalization treatment applies, a U.S. holder will recognize gain, but not loss, in an amount equal to the lesser of (i) the excess of the sum of the cash and the fair market value of the common stock received (other than amounts attributable to accrued interest, which will be treated as described above under Interest ) over the U.S. holder s adjusted tax basis in the notes converted and (ii) the amount of cash received (other than cash received in lieu of a fractional share or cash attributable to accrued interest). Any gain recognized on conversion generally will be capital gain and will be long-term capital gain if, at the time of the conversion, the note has been held for more than one year.

Cash received in lieu of a fractional share of our common stock upon a conversion of a note should be treated as a payment in exchange for the fractional share of our common stock. Accordingly, the receipt of cash in lieu of a fractional share of our common stock should generally result in capital gain or loss, if any, measured by the difference between the cash received for the fractional share of our common stock and the tax basis allocable to such fractional share of our common stock, as described below.

The tax basis of the shares of common stock received upon a conversion that is treated as a recapitalization (including any fractional share deemed to be received by the U.S. holder but excluding common stock attributable to accrued interest) generally will equal the tax basis of the note that was converted, reduced by the amount of any cash received (other than cash received in lieu of a fractional share or cash attributable to accrued interest), and increased by the amount of gain, if any, recognized (other than with respect to a fractional share). A U.S. holder s tax basis in a fractional share of our common stock will be determined by allocating such holder s tax basis in the shares of our common stock, as determined in accordance with the previous sentence, between the shares of our common stock actually received and the fractional share of our common stock deemed received upon conversion, in accordance with their respective fair market values. A U.S. holder s holding period for shares of common stock (other than common stock attributable to accrued interest) will include the period during which the U.S. holder held the notes. A U.S. holder s tax basis in common stock attributable to accrued interest will equal its fair market value on the date of receipt and the holding period for such stock will commence on the day after the date of receipt.

If the conversion of a note into cash and common stock were not treated as a recapitalization, under an alternative characterization the cash payment received may be treated as proceeds from the sale of a portion of the note taxable in the manner described under Sale, Exchange, Redemption, Repurchase, Retirement or Other Taxable Disposition of Notes above, and the common stock received on such a conversion (other than common stock attributable to accrued interest) may be treated as received upon a conversion of the other portion of the note, which generally would not be taxable to a U.S. holder. In that case, the U.S. holder s tax basis in the note would generally be allocated *pro rata* among the common stock received and the portion of the note that is treated as sold for cash, in accordance with their respective fair market values. The holding period for the common stock received in the conversion (other than common stock attributable to accrued interest) would include the holding period for the notes. A U.S. holder s tax basis in common stock attributable to accrued interest will equal its fair market value on the date of receipt and the holding period for such stock will commence on the day after the date of receipt.

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As described in Description of Notes Conversion Rights General, our delivery of cash, common stock or a combination of cash and shares of common stock will be deemed to satisfy our obligation with respect to accrued and unpaid interest on the notes. We intend to take the position that upon a conversion of notes accrued and unpaid interest is paid first by any cash paid upon such conversion (other than cash paid in lieu of a fractional share) and then by any shares of common stock.

***Exchange in Lieu of Conversion***

If a U.S. holder surrenders notes for conversion, we direct the notes to be offered to a financial institution for exchange in lieu of conversion, and the designated institution accepts the notes and delivers cash, common stock or a combination of cash and common stock in exchange for the notes, the U.S. holder will be taxed on the transfer as a sale or exchange of the notes, as described above under Sale, Exchange, Redemption, Repurchase, Retirement or Other Taxable Disposition of Notes. In such case, a U.S. holder s tax basis in the common stock received will equal the fair market value of the stock on the date of the exchange, and the U.S. holder s holding period in the shares of common stock received will begin the day after the date of the exchange.

***Possible Effect of a Merger or Consolidation or a Change in Conversion Consideration***

In certain situations, we may consolidate or merge into another entity (as described under Description of Notes Consolidation, Merger and Sale of Assets ). Moreover, in the event we undergo certain of the events described under Description of Notes Conversion Rights Recapitalizations, Reclassifications and Changes of Our Common Stock, the conversion rate and the related conversion consideration may be adjusted such that a U.S. holder would be entitled to convert its notes into the shares, property or assets described in such section. Depending on the facts and circumstances at the time of such event, such adjustment may result in a deemed exchange of the outstanding notes, which may be a taxable event for U.S. federal income tax purposes. Whether or not such an adjustment results in a deemed exchange of the outstanding notes, a subsequent conversion of the notes might be treated as a fully taxable disposition of the notes if the property into which the notes are convertible is no longer stock of the notes obligor. A U.S. holder should consult its tax advisor regarding the U.S. federal income tax consequences of such an adjustment.

***Constructive Distributions***

The conversion rate of the notes will be adjusted in certain circumstances. Adjustments (or failures to make adjustments) that have the effect of increasing a U.S. holder s proportionate interest in our assets or earnings may in some circumstances result in a deemed distribution to a U.S. holder for U.S. federal income tax purposes. Adjustments to the conversion rate made pursuant to a bona fide reasonable adjustment formula that has the effect of preventing the dilution of the interest of the holders of the notes, however, will generally not be considered to result in a deemed distribution to a U.S. holder. Certain of the possible conversion rate adjustments provided in the notes (including, without limitation, adjustments with respect to taxable dividends to holders of our common stock) will not qualify as being pursuant to a bona fide reasonable adjustment formula. If such adjustments are made, a U.S. holder will be deemed to have received a distribution even though the U.S. holder has not received any cash or property as a result of such adjustments. In addition, an adjustment to the conversion rate in connection with a make-whole fundamental change may be treated as a deemed distribution. Any deemed distributions will be taxable as a dividend, return of capital, or capital gain as described in Distributions below. However, U.S. holders should consult their own tax advisors as to whether a constructive dividend deemed paid to a non-corporate U.S. holder would be eligible for the preferential rates of U.S. federal income tax applicable in respect of certain dividends received and whether corporate U.S. holders would be entitled to claim the dividends received deduction with respect to any such constructive dividends. Because a constructive dividend deemed received by a

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U.S. holder would not give rise to any cash from which any applicable withholding could be satisfied, if backup withholding is paid on behalf of a U.S. holder (because such U.S. holder failed to establish an exemption from backup withholding), such backup withholding may be withheld from payments of cash and common stock payable on the notes (or, in certain circumstances, from any payments on the common stock).

***Distributions***

Distributions, if any, made on our common stock generally will be included in a U.S. holder s income as ordinary dividend income to the extent of our current or accumulated earnings and profits as determined for U.S. federal income tax purposes. However, with respect to dividends received by individuals, such dividends are generally taxed at the lower applicable to long-term capital gains rates, provided certain holding period and other requirements for treatment of such dividends as qualified dividend income are satisfied. Distributions in excess of our current and accumulated earnings and profits will be treated as a return of capital to the extent of a U.S. holder s tax basis in the common stock and thereafter as capital gain from the sale or exchange of such common stock. Dividends received by a corporation may be eligible for a dividends received deduction, subject to applicable limitations.

***Sale or Other Taxable Disposition of Common Stock***

Upon the sale or other taxable disposition of our common stock, a U.S. holder generally will recognize capital gain or loss equal to the difference between (i) the amount of cash and the fair market value of all other property received upon such disposition and (ii) the U.S. holder s tax basis in the common stock. Such capital gain or loss will be long-term capital gain or loss if a U.S. holder s holding period in the common stock is more than one year at the time of the taxable disposition. Long-term capital gains recognized by certain non-corporate U.S. holders (including individuals) will generally be subject to reduced rates of U.S. federal income tax. A U.S. holder s ability to deduct capital losses may be limited.

***Information Reporting and Backup Withholding***

Information reporting requirements generally will apply to payments of interest on the notes (including additional interest that we may be required to pay under circumstances described above under Description of Notes Events of Default ) and dividends on shares of common stock (including constructive dividends deemed paid) and to the proceeds of a sale of a note or share of common stock paid to a U.S. holder unless the U.S. holder is an exempt recipient (such as a corporation). Backup withholding (currently at a 24% rate) will apply to those payments if the U.S. holder fails to provide its correct taxpayer identification number, or certification of exempt status, or if the U.S. holder is notified by the IRS that it has failed to report in full payments of interest and dividend income. Any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against a U.S. holder s U.S. federal income tax liability provided the required information is furnished timely to the IRS.

**Consequences to Non-U.S. Holders**

***Payments of Interest***

U.S. federal income tax and the 30% U.S. federal withholding tax will not be applied to any payment of interest on a note to a non-U.S. holder provided that:

such interest is not effectively connected with the non-U.S. holder s conduct of a trade or business in the United States;

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the non-U.S. holder does not actually or constructively own 10% or more of the total combined voting power of all classes of our stock that are entitled to vote within the meaning of section 871(h)(3) of the Code;

the non-U.S. holder is not a controlled foreign corporation that is related to us (actually or constructively) through stock ownership; and

the non-U.S. holder provides its name and address, and certifies, under penalties of perjury, that it is not a U.S. person (which certification may be made on an IRS Form W-8BEN or W-8BEN-E (or other applicable form)) or the non-U.S. holder holds the notes through certain foreign intermediaries, and the non-U.S. holder and the foreign intermediaries satisfy the certification requirements of applicable Treasury Regulations.

Special certification rules apply to non-U.S. holders that are pass-through entities.

If a non-U.S. holder cannot satisfy the requirements described above, payments of interest will generally be subject to the 30% U.S. federal withholding tax, unless the non-U.S. holder provides the applicable withholding agent with a properly executed (1) IRS Form W-8BEN or IRS Form W-8BEN-E (or other applicable form) claiming an exemption from or reduction in withholding under the benefit of an applicable income tax treaty or (2) IRS Form W-8ECI (or other applicable form) stating that interest paid on the notes is not subject to withholding tax because it is effectively connected with the non-U.S. holder s conduct of a trade or business in the United States and includible in the non-U.S. holder s gross income. If a non-U.S. holder is engaged in a trade or business in the United States and interest on the notes is effectively connected with the conduct of that trade or business and, if required by an applicable income tax treaty, is attributable to a U.S. permanent establishment or a U.S. fixed base, then (although the non-U.S. holder will be exempt from the 30% withholding tax provided the certification requirements discussed above are satisfied) the non-U.S. holder will be subject to U.S. federal income tax on that interest on a net income basis generally in the same manner as if the non-U.S. holder were a U.S. holder. In addition, if a non-U.S. holder is a foreign corporation, it may be subject to a branch profits tax equal to 30% (or lesser rate under an applicable income tax treaty) of its earnings and profits for the taxable year, subject to adjustments, that are effectively connected with its conduct of a trade or business in the United States.

***Dividends and Constructive Distributions***

Any dividends paid to a non-U.S. holder with respect to the shares of common stock (and any deemed dividends resulting from certain adjustments, or failure to make adjustments, to the conversion rate, see Consequences to U.S. Holders Constructive Distributions above) will be subject to withholding tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. However, dividends that are effectively connected with a non-U.S. holder s conduct of a trade or business within the United States and, if required by an applicable income tax treaty, are attributable to a U.S. permanent establishment or a U.S. fixed base are not subject to the withholding tax, but instead are subject to U.S. federal income tax on a net income basis at applicable graduated individual or corporate rates. A non-U.S. holder must provide the applicable withholding agent with a properly executed IRS Form W-8ECI (or other applicable form) in order for effectively connected income to be exempt from withholding. Any such effectively connected income received by a foreign corporation may, under certain circumstances, be subject to an additional branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty.

Because a constructive dividend deemed received by a non-U.S. holder would not give rise to any cash from which any applicable withholding tax could be satisfied, if withholding taxes are paid on behalf of a non-U.S. holder, those withholding taxes may be withheld from payments of cash and common stock payable on the notes (or, in certain circumstances, from any payments on the common stock).

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A non-U.S. holder that wishes to claim the benefit of an applicable income tax treaty rate is required to satisfy applicable certification and other requirements, generally by providing IRS Form W-8BEN or W-8BEN-E to the applicable withholding agent. If a non-U.S. holder is eligible for a reduced rate of U.S. withholding tax pursuant to an income tax treaty, it may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

***Sale, Exchange, Redemption, Repurchase, Retirement or Other Taxable Disposition of Notes or Shares of Common Stock***

Subject to the discussion of backup withholding and foreign accounts below, any gain realized by a non-U.S. holder on the sale, exchange or other taxable disposition of a note or common stock (as well as upon the conversion of a note into cash and an exchange in lieu of conversion) will not be subject to U.S. federal income tax unless:

- that gain is effectively connected with a non-U.S. holder s conduct of a trade or business in the United States (and, if required by an applicable income tax treaty, is attributable to a U.S. permanent establishment or a U.S. fixed base);
- the non-U.S. holder is an individual who is present in the United States for 183 days or more in the taxable year of that disposition, and certain other conditions are met; or
- we are or have been a U.S. real property holding corporation , or a USRPHC , for U.S. federal income tax purposes during the shorter of the non-U.S. holder s holding period or the five-year period ending on the date of disposition of the notes or common stock, as the case may be, unless an exception applies.

If a non-U.S. holder s gain is described in the first bullet point above, such non-U.S. holder will be subject to tax at regular graduated U.S. federal income tax rates on the net gain derived from the sale, exchange, redemption, repurchase, retirement, conversion or other taxable disposition of a note or common stock, generally in the same manner as if such non-U.S. holder were a U.S. holder. If a non-U.S. holder is a foreign corporation that recognizes gain described in the first bullet point above, such non-U.S. holder may also be subject to the branch profits tax equal to 30% (or such lower rate as may be prescribed under an applicable U.S. income tax treaty) of its effectively connected earnings and profits. If a non-U.S. holder is described in the second bullet point above, such non-U.S. holder will be subject to a flat 30% tax on the gain recognized on the sale, exchange, redemption, repurchase, retirement, conversion or other taxable disposition of a note or common stock (which gain may be offset by certain U.S.-source capital losses), even though the non-U.S. holder is not considered a resident of the United States. Any amounts (including common stock) which a non-U.S. holder receives on a sale, exchange, redemption, repurchase, retirement, conversion or other taxable disposition of a note that are attributable to accrued interest will be taxable as interest and may be subject to the rules described above under Payments of Interest.

In general, we would be a USRPHC if the fair market value of our U.S. real property interests equals or exceeds 50% of the sum of the fair market value of our worldwide real property interests plus our other assets used or held for use in a trade or business. We believe that we are not, and we do not anticipate becoming, a USRPHC for U.S. federal income tax purposes. However, there can be no assurance that we will not become a USRPHC in the future.

***Conversion of notes***

A non-U.S. holder s conversion of a note into common stock or a combination of common stock and cash will be treated for U.S. federal income tax purposes as a non-taxable exchange or give rise to gain realized on the disposition of a note or a fractional share or interest, as described under

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Consequences to U.S. Holders Conversion of Notes . To the extent a non-U.S. holder realizes gain, such gain will be treated as described under Sale, Exchange, Redemption, Repurchase, Retirement or Other Taxable Disposition of Notes or Shares of Common Stock above. To the extent a non-U.S. holder receives amounts attributable to accrued interest, such amounts will be taxed in the manner described above under Payments of Interest.

***Information Reporting and Backup Withholding***

Generally, we or an applicable withholding agent must report annually to the IRS and to non-U.S. holders the amount of interest (including additional interest that we may be required to pay under circumstances described above under Description of Notes Events of Default ) and dividends paid to non-U.S. holders (including constructive dividends deemed paid as described above under Dividends and Constructive Distributions ) and the amount of tax, if any, withheld with respect to those payments. Copies of the information returns reporting such interest, dividends and withholding may also be made available to the tax authorities in the country in which a non-U.S. holder resides under the provisions of an applicable income tax treaty. In general, a non-U.S. holder will not be subject to backup withholding with respect to payments of interest or dividends that we make, provided the statement described above in the last bullet point under Payments of Interest has been received (and we or an applicable withholding agent does not have actual knowledge or reason to know that the holder is a U.S. person, as defined under the Code, that is not an exempt recipient). In addition, a non-U.S. holder will be subject to information reporting and, depending on the circumstances, backup withholding with respect to payments of the proceeds of the sale of a note or share of common stock within the United States or conducted through certain U.S.-related financial intermediaries, unless the statement described above has been received (and the payer does not have actual knowledge or reason to know that a non-U.S. holder is a U.S. person, as defined under the Code, that is not an exempt recipient) or the non-U.S. holder otherwise establishes an exemption. Any amounts withheld under the backup withholding rules will be allowed as a refund or a credit against a non-U.S. holder s U.S. federal income tax liability provided the required information is furnished timely to the IRS.

***Withholding on Foreign Accounts***

The Foreign Account Tax Compliance Act, or FATCA, imposes withholding at a 30% rate on certain types of withholdable payments (including interest paid on, and the gross proceeds from the sale or other disposition of, certain debt instruments, and dividends paid on, and the gross proceeds from the sale or other disposition of, stock in a U.S. corporation) made to a foreign financial institution or to a non-financial foreign entity (all as defined in the Code) (whether such foreign financial institution or non-financial foreign entity is the beneficial owner or an intermediary), unless (1) the foreign financial institution undertakes certain diligence and reporting obligations, (2) the nonfinancial foreign entity either certifies it does not have any substantial United States owners (as defined in the Code) or furnishes identifying information regarding each substantial United States owner or (3) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (1) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain U.S. persons or U.S.-owned foreign entities (as defined in applicable Treasury Regulations), annually report certain information about such accounts and withhold 30% on payments to noncompliant foreign financial institutions and certain other account holders. Foreign governments may enter into an agreement with the IRS to implement FATCA in a different manner.

Under Treasury Regulations and official guidance FATCA withholding currently applies to payments of interest on the notes and dividends on our common stock and will apply to payments of

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gross proceeds from the sale or other disposition of the notes or our shares on or after January 1, 2019. Prospective investors should consult their tax advisors regarding the application of FATCA to the notes and our common stock.

***Dividend Equivalents***

Section 871(m) of the Code requires withholding (of up to 30%, depending on whether a treaty applies) on certain financial instruments to the extent that the payments or deemed payments on the financial instruments are treated as being contingent upon or determined by reference to U.S.-source dividends. Under Treasury Regulations and other guidance issued in connection with Section 871(m), Section 871(m) will apply to financial instruments issued in 2018 only if they are delta-one. A delta-one instrument is one in which the ratio of the change in the fair market value of the instrument to a small change in the fair market value of the property referenced by the instrument is equal to 1.00. We do not believe that the notes are delta-one instruments. Accordingly, non-U.S. holders of the notes should not be subject to tax under Section 871(m). Non-U.S. holders should consult with their tax advisors regarding the application of Section 871(m) and the regulations thereunder in respect of their acquisition and ownership of the notes.

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## UNDERWRITING

We will enter into an underwriting agreement with Goldman Sachs & Co. LLC, Leerink Partners LLC and Wells Fargo Securities, LLC as representatives of the underwriters named below. Pursuant 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 from us, the principal amount of notes set forth opposite that underwriter s name.

| Underwriters | Principal Amount of Notes |
|---|---|
| Goldman Sachs & Co. LLC | |
| Leerink Partners LLC | |
| Wells Fargo Securities, LLC | |
| Total | $ 200,000,000 |

The underwriting agreement provides that the underwriters are obligated to purchase all of the notes if any are purchased. The obligations of the underwriters under the underwriting agreement are subject to the satisfaction of certain conditions. The offering of the notes by the underwriters is subject to receipt and acceptance and subject to the underwriters right to reject any order in whole or in part.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the underwriters may be required to make in respect of those liabilities.

### Option to Purchase Additional Notes

We have granted the underwriters an over-allotment option to purchase, exercisable within a 30-day period from the date of this prospectus supplement, up to an additional $30.0 million principal amount of notes from us to cover sales of the notes that exceed the principal amount of notes specified above. If any additional notes are purchased with this option, the underwriters will offer such additional notes on the same terms as those on which the notes are being offered.

### Underwriting Discounts and Expenses

The initial public offering price is set forth on the cover page of this prospectus supplement. Any notes sold by the underwriters to securities dealers may be sold at a discount from the initial public offering price of up to $ per note. Any such securities dealers may resell any notes purchased from the underwriters to certain other brokers or dealers at a discount from the initial public offering price set forth on the cover of this prospectus supplement.

The following table shows the underwriting discount to be received by the underwriters in connection with the sale of the notes, assuming both no exercise and full exercise of the option to purchase additional notes.

| | Without exercise of option | With full exercise of option |
|---|---|---|
| Per note | $ | $ |
| Total | $ | $ |

We estimate that our total expenses of the offering, excluding underwriting discounts, will be approximately $ .

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**New Issue of Notes**

The notes are a new issue of securities, and there is currently no established trading market for such notes. We do not intend to apply for the notes to be listed on any securities exchange or to arrange the notes to be quoted on any quotation system.

The underwriters have advised us that they intend to make a market in the notes, but they are not obligated to do so. The underwriters may discontinue any market-making in the notes at any time in their sole discretion without notice. Accordingly, we cannot assure you that a liquid trading market will develop for the notes. If an active trading market for the notes does not develop, the market price and liquidity of the notes may be adversely affected. If the notes are traded, they may trade at a discount from their initial offering price depending on prevailing interest rates, the market for similar securities, our performance and other factors.

**No Sale of Similar Securities**

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 the representatives for a period of 60 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 the representatives for a period of 60 days after the date of this prospectus supplement.

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The foregoing restrictions do not apply to:

- 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;

- 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, (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;

- 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;

- 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

- 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.

**Price stabilization and short positions; repurchase of common stock**

In connection with the offering of the notes, the underwriters may engage in over-allotment, stabilizing transactions and syndicate covering transactions in the notes and our common stock. Over-allotment involves sales in excess of the

offering size, which creates a short position for the underwriters. Stabilizing transactions involve bids to purchase the notes or our common stock in the open market for the purpose of pegging, fixing or maintaining the price of the notes. Syndicate covering transactions involve purchases of the notes or our common stock in the open market after the distribution has been completed in order to cover short positions. Stabilizing transactions and syndicate

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covering transactions may cause the price of the notes or our common stock to be higher than it would otherwise be in the absence of those transactions.

These acquisitions could have the effect of raising or maintaining the market price of our common stock above levels that would otherwise have prevailed, or preventing or retarding a decline in the market price of our common stock. See Use of Proceeds.

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 supplement in any jurisdiction where action for that purpose is required. The securities offered by this prospectus supplement may not be offered or sold, directly or indirectly, nor may this prospectus supplement 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 supplement comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus supplement. This prospectus supplement does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus supplement in any jurisdiction in which such an offer or a solicitation is unlawful.

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 supplement in any jurisdiction where action for that purpose is required. The securities offered by this prospectus supplement may not be offered or sold, directly or indirectly, nor may this prospectus supplement 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 supplement comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus supplement. This prospectus supplement does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus supplement in any jurisdiction in which such an offer or a solicitation is unlawful.

***Canada***

The offer of notes may be made 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 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of our notes 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 supplement (including any amendment thereto)

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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.

***PRIIPs Regulation/Prohibition of Sales to EEA Retail Investors***

The notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area, or EEA. For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU, as amended, MiFID II; or (ii) a customer within the meaning of Directive 2002/92/EC, as amended, the Insurance Mediation Directive, where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in Directive 2003/71/EC, as amended, the Prospectus Directive. Consequently no key information document required by Regulation (EU) No 1286/2014, as amended, the PRIIPs Regulation, for offering or selling the notes or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the notes or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPS Regulation.

Each underwriter has represented and agreed that:

(a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000, or FSMA) received by it in connection with the issue or sale of the Offered Notes in circumstances in which Section 21(1) of the FSMA does not apply to the Issuers or the Guarantors; and

(b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the offered notes in, from or otherwise involving the United Kingdom.

***Hong Kong***

The notes may not be offered or sold in Hong Kong by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32 of the Laws of Hong Kong), or Companies (Winding Up and Miscellaneous Provisions) Ordinance, or which do not constitute an invitation to the public within the meaning of the Securities and Futures Ordinance (Cap. 571 of the Laws of Hong Kong), or Securities and Futures Ordinance, or (ii) to professional investors as defined in the Securities and Futures Ordinance and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a prospectus as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance, and no advertisement, invitation or document relating to the notes may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to notes which are or are intended to be disposed of only to persons outside Hong Kong or only to professional investors in Hong Kong as defined in the Securities and Futures Ordinance and any rules made thereunder.

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***Singapore***

This prospectus supplement has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus supplement and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the notes may not be circulated or distributed, nor may the notes be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor (as defined under Section 4A of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA) under Section 274 of the SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA, in each case subject to conditions set forth in the SFA.

Where the notes are subscribed or purchased under Section 275 of the SFA by a relevant person which is a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor, the securities (as defined in Section 239(1) of the SFA) of that corporation shall not be transferable for six months after that corporation has acquired the notes under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer in that corporation s securities pursuant to Section 275(1A) of the SFA, (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore, or Regulation 32.

Where the notes are subscribed or purchased under Section 275 of the SFA by a relevant person which is a trust (where the trustee is not an accredited investor (as defined in Section 4A of the SFA)) whose sole purpose is to hold investments and each beneficiary of the trust is an accredited investor, the beneficiaries rights and interest (howsoever described) in that trust shall not be transferable for six months after that trust has acquired the notes under Section 275 of the SFA except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person (as defined in Section 275(2) of the SFA), (2) where such transfer arises from an offer that is made on terms that such rights or interest are acquired at a consideration of not less than S$200,000 (or its equivalent in a foreign currency) for each transaction (whether such amount is to be paid for in cash or by exchange of securities or other assets), (3) where no consideration is or will be given for the transfer, (4) where the transfer is by operation of law, (5) as specified in Section 276(7) of the SFA, or (6) as specified in Regulation 32.

***Japan***

The securities have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended), or the FIEA. The securities may not be offered or sold, directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale, directly or indirectly, in Japan or to or for the benefit of any resident of Japan, except pursuant to an exemption from the registration requirements of the FIEA and otherwise in compliance with any relevant laws and regulations of Japan.

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## LEGAL MATTERS

Cooley LLP, Seattle, Washington will pass upon the validity of the notes 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 financial statements and management s assessment of the effectiveness of internal control over financial reporting (which is included in Management s Annual Report on Internal Control Over Financial Reporting) incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2016 have been so incorporated in reliance on the report (which contains an explanatory paragraph relating to Alder BioPharmaceuticals, Inc. s liquidity as described in Note 1 to the consolidated financial statements) 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.

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## 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, 2016, filed with the SEC on February 23, 2017;
- the information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2016 from our Definitive Proxy Statement on Schedule 14A for our 2017 Annual Meeting of Stockholders, filed with the SEC on April 28, 2017;
- our Quarterly Report on Form 10-Q for the quarter ended March 31, 2017, filed with the SEC on April 27, 2017, our Quarterly Report on Form 10-Q for the quarter ended June 30, 2017, filed with the SEC on August 8, 2017, and our Quarterly Report on Form 10-Q for the quarter ended September 30, 2017, filed with the SEC on November 7, 2017;
- our Current Reports on Form 8-K filed with the SEC on January 31, 2017, April 4, 2017, May 26, 2017, June 13, 2017, June 30, 2017, July 14, 2017, November 7, 2017 (Item 5.02), January 8, 2010, January 11, 2018, and January 19, 2018; 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.

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**Prospectus**

**Common Stock**

**Preferred Stock**

**Debt Securities**

**Warrants**

From time to time, we may offer and sell any combination of the securities described in this prospectus, either individually or in combination with other securities. We may also offer common stock or preferred stock upon conversion of debt securities, common stock upon conversion of preferred stock, or common stock, preferred stock or debt securities upon the exercise of warrants.

We will provide the specific terms of these offerings and securities 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. The prospectus supplement and any related free writing prospectus may also add, update or change information contained in this prospectus. You should carefully read this prospectus, the applicable prospectus supplement and any related free writing prospectus, as well as the documents incorporated by reference, before buying any of the securities being offered.

Our common stock is listed on The NASDAQ Global Market under the trading symbol ALDR. On February 22, 2017, the last reported sale price of our common stock was $21.75 per share. The applicable prospectus supplement will contain information, where applicable, as to other listings, if any, on The NASDAQ Global Market or other securities exchange of the securities covered by the applicable prospectus supplement.

**Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading Risk Factors contained in the applicable prospectus supplement and in any free writing prospectuses we have authorized for use in connection with a specific offering, and under similar headings in the documents that are incorporated by reference into this prospectus.**

**This prospectus may not be used to consummate a sale of securities unless accompanied by a prospectus supplement.**

The securities may be sold directly to investors, through agents designated from time to time or to or through underwriters or dealers, on a continuous or delayed basis. For additional information on the methods of sale, you

should refer to the section titled Plan of Distribution in this prospectus. If any agents or underwriters are involved in the sale of any securities with respect to which this prospectus is being delivered, the names of such agents or underwriters and any applicable fees, commissions, discounts and over-allotment options 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.

**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 February 23, 2017.**

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## 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 the SEC, utilizing a shelf registration process. Under this shelf registration process, we may offer and sell shares of our common stock and preferred stock, various series of debt securities and/or warrants to purchase any of such securities, either individually or in combination with other securities, in one or more offerings. There is no limit on the aggregate amount of the securities that we may offer pursuant to the registration statement of which this prospectus is a part. This prospectus provides you with a general description of the securities we may offer.

Each time we offer securities 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 these offerings. The prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change any of the information contained in this prospectus or in the documents that we have incorporated by reference into this prospectus. We urge you to read carefully this prospectus, any applicable prospectus supplement and any free writing prospectuses we have authorized for use in connection with a specific offering, together with the information incorporated herein by reference as described under the heading Incorporation of Certain Information by Reference, before buying any of the securities being offered.

**This prospectus may not be used to consummate a sale of securities unless it is accompanied by a prospectus supplement.**

You should rely only on the information contained in, or incorporated by reference into, this prospectus and the applicable prospectus supplement, along with the information contained in any free writing prospectuses we have authorized for use in connection with a specific offering. We have not authorized anyone to provide you with different or additional information. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so.

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The information appearing in this prospectus, any applicable prospectus supplement and any related free writing prospectus is accurate only as of the date on the front of the document and any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus, the applicable prospectus supplement or any related free writing prospectus, or any sale of a security. Our business, financial condition, results of operations and prospects may have changed since those dates.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the section titled Where You Can Find More Information.

Unless the context otherwise requires, we use the terms Alder, company, we, us and our in this prospectus to ref Alder BioPharmaceuticals, Inc. and, where appropriate, our consolidated subsidiaries. Alder, Alder BioPharmaceuticals, 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.

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## PROSPECTUS SUMMARY

*This summary highlights selected information contained elsewhere in this prospectus or incorporated by reference in this prospectus, and does not contain all of the information that you need to consider in making your investment decision. You should carefully read the entire prospectus, the applicable prospectus supplement and any related free writing prospectus, including the risks of investing in our securities discussed under the heading Risk Factors contained in the applicable prospectus supplement and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus. You should also carefully read the information incorporated by reference into this prospectus, including our financial statements, and the exhibits to the registration statement of which this prospectus is a part.*

### Alder BioPharmaceuticals, Inc.

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. All of our product candidates were discovered and developed by Alder scientists using our proprietary antibody technology platform coupled with a deliberate approach to design and select candidates with properties that we believe optimize the therapeutic potential for patients and commercial competitiveness.

We are focusing our resources and development efforts principally on eptinezumab (ALD403), our most advanced product candidate, in order to maximize its therapeutic and commercial potential. Eptinezumab is our solely owned genetically engineered monoclonal antibody inhibiting calcitonin gene-related peptide (CGRP), a validated target that is understood to drive migraine initiation, maintenance and chronification. Designed to deliver a competitively differentiated approach to migraine prevention, we believe eptinezumab holds the potential to be a transformative therapeutic and meet a profound medical need, changing the migraine prevention treatment paradigm for physicians and patients living with migraine.

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.

### Description of Securities

We may offer shares of our common stock and preferred stock, various series of debt securities and/or warrants to purchase any of such securities, either individually or in combination with other securities, from time to time under this prospectus, together with the applicable prospectus supplement and any related free writing prospectus, at prices and on terms to be determined by market conditions at the time of any offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

- designation or classification;
- aggregate principal amount or aggregate offering price;

maturity date, if applicable;

original issue discount, if any;

rates and times of payment of interest or dividends, if any;

redemption, conversion, exercise, exchange or sinking fund terms, if any;

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ranking;

restrictive covenants, if any;

voting or other rights, if any;

conversion or exchange prices or rates, if any, and, if applicable, any provisions for changes to or adjustments in the conversion or exchange prices or rates and in the securities or other property receivable upon conversion or exchange; and

material or special U.S. federal income tax considerations, if any.

The applicable prospectus supplement and any related free writing prospectus that we may authorize to be provided to you may also add, update or change any of the information contained in this prospectus or in the documents we have incorporated by reference.

We may sell the securities directly to investors or to or through agents, underwriters or dealers. If we do offer securities to or through agents or underwriters, we will include in the applicable prospectus supplement:

the names of those agents or underwriters;

applicable fees, discounts and commissions to be paid to them;

details regarding over-allotment or other options, if any; and

the net proceeds to us, if any.

*Common Stock*. We may issue shares of our common stock from time to time. The holders of common stock are entitled to one vote per share on all matters to be voted on by the stockholders. Subject to the preferences of any outstanding shares of preferred stock, the holders of common stock are entitled to receive ratably any dividends our board of directors declares out of funds legally available for the payment of dividends. If we are liquidated, dissolved or wound up, the holders of common stock are entitled to share pro rata all assets remaining after payment of liabilities and liquidation preferences of any outstanding shares of preferred stock. Holders of common stock have no preemptive rights or rights to convert their common stock into any other securities. There are no redemption or sinking fund provisions applicable to the common stock. In this prospectus, we have summarized certain general features of the common stock under Description of Capital Stock Common Stock. We urge you, however, to read the applicable prospectus supplement (and any related free writing prospectus that we may authorize to be provided to you) related to any common stock being offered.

*Preferred Stock.* We may issue shares of our preferred stock from time to time, in one or more series. Under our certificate of incorporation, our board of directors has the authority to designate up to 10,000,000 shares of preferred

stock in one or more series and to fix the privileges, preferences and rights of each series of preferred stock, any or all of which may be greater than the rights of the common stock. If we sell any new series of preferred stock under this prospectus and any applicable prospectus supplement, our board of directors will determine the rights, preferences and privileges of the preferred stock being offered, as well as the qualifications, limitations or restrictions thereof, including dividend rights, conversion rights, voting rights, preemptive rights, terms of redemption or repurchase, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of any series. Preferred stock may be convertible into our common stock or other securities of ours, or may be exchangeable for debt securities. Conversion may be mandatory or at the holder s option and would be at prescribed conversion rates. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of the certificate of designation that describes the terms of the series of preferred stock being offered before the issuance of the related series of preferred stock. In this prospectus, we have summarized certain general features of the preferred stock under Description of Capital Stock Preferred Stock. We urge

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you, however, to read the applicable prospectus supplement (and any related free writing prospectus that we may authorize to be provided to you) related to the series of preferred stock being offered, as well as the complete certificate of designation that contains the terms of the applicable series of preferred stock.

*Debt Securities.* We may issue debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. The senior debt securities will rank equally with any other unsecured and unsubordinated debt. The subordinated debt securities will be subordinate and junior in right of payment, to the extent and in the manner described in the instrument governing the debt, to all of our senior indebtedness. Convertible debt securities will be convertible into or exchangeable for our common stock or our other securities. Conversion may be mandatory or at the holder s option and would be at prescribed conversion rates.

The debt securities will be issued under an indenture that we will enter into with a national banking association or other eligible party, as trustee. In this prospectus, we have summarized certain general features of the debt securities under Description of Debt Securities. We urge you, however, to read the applicable prospectus supplement (and any related free writing prospectus that we may authorize to be provided to you) related to the series of debt securities being offered, as well as the complete indenture and any supplemental indentures that contain the terms of the debt securities. We have filed the form of indenture as an exhibit to the registration statement of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

*Warrants.* We may issue warrants for the purchase of common stock, preferred stock and/or debt securities in one or more series. We may issue warrants independently or in combination with common stock, preferred stock and/or debt securities. In this prospectus, we have summarized certain general features of the warrants under Description of Warrants. We urge you, however, to read the applicable prospectus supplement (and any related free writing prospectus that we may authorize to be provided to you) related to the particular series of warrants being offered, as well as the form of warrant and/or the warrant agreement and warrant certificate, as applicable, that contain the terms of the warrants. We have filed the forms of the warrant agreements and forms of warrant certificates containing the terms of the warrants that we may offer as exhibits to the registration statement of which this prospectus is a part. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant and/or the warrant agreement and warrant certificate, as applicable, that contain the terms of the particular series of warrants we are offering, and any supplemental agreements, before the issuance of such warrants.

Warrants may be issued under a warrant agreement that we enter into with a warrant agent. We will indicate the name and address of the warrant agent, if any, in the applicable prospectus supplement relating to a particular series of warrants.

**Use of Proceeds**

Except as described in any applicable prospectus supplement or in any free writing prospectuses we have authorized for use in connection with a specific offering, we intend to use the net proceeds from the sale of the securities under this prospectus for general corporate purposes, which may include funding research and development, clinical trials, manufacturing activities and future commercialization activities, increasing our working capital, acquisitions or investments in businesses, products or technologies that are complementary to our own, and capital expenditures. See Use of Proceeds on page 5 of this prospectus.

**NASDAQ Global Market Listing**

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

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## RISK FACTORS

Investing in our securities involves a high degree of risk. Before deciding whether to invest in our securities, 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 seriously harmed. This could cause the trading price of our securities to decline, resulting in a loss of all or part of your investment. Please also carefully read the section below titled Forward-Looking Statements.

## FORWARD-LOOKING STATEMENTS

This prospectus and the documents we have filed with the SEC that are incorporated by reference contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These statements relate to future events or to our future operating or financial performance and involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Forward-looking statements may include, but are not limited to, statements about:

- our ability to obtain and maintain regulatory approval of eptinezumab or any other product candidates;
- our ability to successfully commercialize eptinezumab or any other 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 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.

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In some cases, you can identify forward-looking statements by terms such as anticipates, believes, could, estimates, expects, may, plans, potential, predicts, projects, should, would, will and similar expressions intende forward-looking statements. These statements reflect our current views with respect to future events, are based on assumptions and are subject to risks and uncertainties. Given these risks and uncertainties, you should not place undue reliance on these forward-looking statements. We discuss in greater detail, and incorporate by reference into this prospectus in their entirety, many of these risks and uncertainties under the section titled Risk Factors contained in the applicable prospectus supplement, in any free writing prospectus we may authorize 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. Also, these forward-looking statements represent our estimates and assumptions only as of the date of the document containing the applicable statement. Unless required by law, we undertake no obligation to update or revise any forward-looking statements to reflect new information or future events or developments. Thus, you should not assume that our silence over time means that actual events are bearing out as expressed or implied in such forward-looking statements. You should read this prospectus, the applicable prospectus supplement, together with the documents we have filed with the SEC that are incorporated by reference and any free writing prospectus we have authorized for use in connection with a specific offering completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in the foregoing documents by these cautionary statements.

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

## FINANCIAL RATIOS

The following table sets forth our ratio of earnings to fixed charges and the ratio of our earnings to combined fixed charges and preferred stock dividends to earnings for each of the periods presented. Our net losses were insufficient to cover fixed charges and combined fixed charges and preferred stock dividends for each of the periods presented, other than the year ended December 31, 2014. Because of these deficiencies, the ratio information is not applicable for those periods. The extent to which earnings were insufficient to cover fixed charges and combined fixed charges and preferred stock dividends for those periods is shown below. Amounts shown are in thousands, except for ratios.

| | Year Ended December 31, | | | | |
|---|---|---|---|---|---|
| | 2012 | 2013 | 2014 | 2015 | 2016 |
| Ratio of earnings to fixed charges[1] | N/A | N/A | 34.5 | N/A | N/A |
| Ratio of earnings to combined fixed charges and preferred stock dividends | N/A | N/A | 34.5 | N/A | N/A |
| Deficiency of earnings available to cover fixed charges | $ (17,806) | $ (20,613) | N/A | $ (85,470) | $ (156,059) |
| Deficiency of earnings available to cover combined fixed charges and preferred stock dividends | $ (17,806) | $ (20,613) | N/A | $ (85,470) | $ (156,059) |

(1) Fixed charges are comprised of interest expense and our estimate of interest within rental expense.

## USE OF PROCEEDS

Except as described in any applicable prospectus supplement or in any free writing prospectuses we have authorized for use in connection with a specific offering, we intend to use the net proceeds from the sale of the

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securities under this prospectus for general corporate purposes, which may include funding research and development, clinical trials, manufacturing activities and future commercialization activities, increasing our working capital, acquisitions or investments in businesses, products or technologies that are complementary to our own, and capital expenditures. We will set forth in the applicable prospectus supplement our intended use for the net proceeds received from the sale of any securities. Pending the use of the net proceeds, we intend to invest the net proceeds in short-term, investment-grade, interest-bearing securities.

## DESCRIPTION OF CAPITAL STOCK

As of the date of this prospectus, our 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 February 22, 2017, 50,409,220 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, 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*

The holders of our common stock are not entitled to preemptive rights and the holders of our common stock are not subject to conversion or redemption.

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When we issue shares of common stock under this prospectus, the shares will be fully paid and nonassessable.

**Preferred Stock**

Pursuant to our certificate of incorporation, our board of directors has the authority, without further action by the stockholders, to issue the shares of preferred stock in one or more series. Our board of directors also has the authority to fix the designations, powers, preferences, privileges and relative, participating, optional or special rights and the qualifications, limitations or restrictions of any preferred stock issued, including dividend rights, conversion rights, voting rights, terms of redemption and liquidation preferences, any or all of which may be greater than the rights of the common stock. Our board of directors, without stockholder approval, may issue preferred stock with voting, conversion or other rights that are superior to the voting and other rights of the holders of common stock. The issuance of preferred stock may have the effect of delaying, deferring or preventing a change of control of Alder without further action by the stockholders, and may have the effect of delaying or preventing changes in management of Alder. In addition, the issuance of preferred stock may have the effect of decreasing the market price of the common stock and may adversely affect the voting power of holders of common stock and reduce the likelihood that common stockholders will receive dividend payments and payments upon liquidation.

Our board of directors will determine the rights, preferences, privileges, qualifications, limitations or restrictions of the preferred stock of each series that we sell under this prospectus and applicable prospectus supplements in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of the certificate of designation that describes the terms of the series of preferred stock that we are offering before the issuance of the related series of preferred stock. This description will include:

- the title and stated value;
- the number of shares we are offering;
- the liquidation preference per share;
- the purchase price per share;
- the dividend rate per share, dividend period and payment dates and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;
- our right, if any, to defer payment of dividends and the maximum length of any such deferral period;

the procedures for any auction and remarketing, if any;

the provisions for a sinking fund, if any;

the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;

any listing of the preferred stock on any securities exchange or market;

whether the preferred stock will be convertible into our common stock or other securities of ours, including warrants, and, if applicable, the conversion period, the conversion price, or how it will be calculated, and under what circumstances it may be adjusted;

whether the preferred stock will be exchangeable for debt securities, and, if applicable, the exchange period, the exchange price, or how it will be calculated, and under what circumstances it may be adjusted;

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voting rights, if any, of the preferred stock;

preemption rights, if any;

restrictions on transfer, sale or other assignment, if any;

a discussion of any material or special U.S. federal income tax considerations applicable to the preferred stock;

the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;

any limitations on issuances of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock being issued as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and

any other specific terms, rights, preferences, privileges, qualifications or restrictions of the preferred stock.

When we issue shares of preferred stock under this prospectus, the shares will be fully paid and nonassessable.

Unless we specify otherwise in the applicable prospectus supplement, the preferred stock will rank, with respect to dividends and upon our liquidation, dissolution or winding-up:

senior to all classes or series of our common stock and to all of our equity securities ranking junior to the preferred stock;

on a parity with all of our equity securities the terms of which specifically provide that the equity securities rank on a parity with the preferred stock; and

junior to all of our equity securities the terms of which specifically provide that the equity securities rank senior to the preferred stock.

The term equity securities does not include convertible debt securities.

The General Corporation Law of the State of Delaware, the state of our incorporation, provides that the holders of preferred stock will have the right to vote separately as a class on any proposal involving fundamental changes in the rights of holders of that preferred stock. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

**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 prior to our initial public offering. 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.

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***Demand Registration Rights***

As of the date of this prospectus, the holders of an aggregate of approximately 3.7 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 3.7 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.

***Form S-3 Registration Rights***

The holders of an aggregate of approximately 3.7 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 $66\,^{2}/_{3}\%$ 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 $^{2}/_{3}$% 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

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directors, the size of the board, removal of directors, and actions by written consent. The affirmative vote of holders of at least 66 $^{2}/_{3}$% 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 fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of deterring 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.

***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.

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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.

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.

**NASDAQ Global Market 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 15th Avenue, Brooklyn, New York 11219.

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## DESCRIPTION OF DEBT SECURITIES

We may issue debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. While the terms we have summarized below will apply generally to any debt securities that we may offer under this prospectus, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. The terms of any debt securities offered under a prospectus supplement may differ from the terms described below. Unless the context requires otherwise, whenever we refer to the indenture, we also are referring to any supplemental indentures that specify the terms of a particular series of debt securities.

We will issue the debt securities under the indenture that we will enter into with the trustee named in the indenture. The indenture will be qualified under the Trust Indenture Act of 1939, as amended, or the Trust Indenture Act. We have filed the form of indenture as an exhibit to the registration statement of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of the debt securities being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports that we file with the SEC.

The following summary of material provisions of the debt securities and the indenture is subject to, and qualified in its entirety by reference to, all of the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplements and any related free writing prospectuses related to the debt securities that we may offer under this prospectus, as well as the complete indenture that contains the terms of the debt securities.

### General

The indenture does not limit the amount of debt securities that we may issue. It provides that we may issue debt securities up to the principal amount that we may authorize and may be in any currency or currency unit that we may designate. Except for the limitations on consolidation, merger and sale of all or substantially all of our assets contained in the indenture, the terms of the indenture do not contain any covenants or other provisions designed to give holders of any debt securities protection against changes in our operations, financial condition or transactions involving us.

We may issue the debt securities issued under the indenture as discount securities, which means they may be sold at a discount below their stated principal amount. These debt securities, as well as other debt securities that are not issued at a discount, may be issued with original issue discount, or OID, for U.S. federal income tax purposes because of interest payment and other characteristics or terms of the debt securities. Material U.S. federal income tax considerations applicable to debt securities issued with OID will be described in more detail in the applicable prospectus supplement.

We will describe in the applicable prospectus supplement the terms of the series of debt securities being offered, including:

- the title of the series of debt securities;
- any limit upon the aggregate principal amount that may be issued;

the maturity date or dates;

the form of the debt securities of the series;

the applicability of any guarantees;

whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;

whether the debt securities rank as senior debt, senior subordinated debt, subordinated debt or any combination thereof, and the terms of any subordination;

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if the price (expressed as a percentage of the aggregate principal amount thereof) at which such debt securities will be issued is a price other than the principal amount thereof, the portion of the principal amount thereof payable upon declaration of acceleration of the maturity thereof, or if applicable, the portion of the principal amount of such debt securities that is convertible into another security or the method by which any such portion shall be determined;

the interest rate or rates, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;

our right, if any, to defer payment of interest and the maximum length of any such deferral period;

if applicable, the date or dates after which, or the period or periods during which, and the price or prices at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemption provisions;

the date or dates, if any, on which, and the price or prices at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder s option to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;

the denominations in which we will issue the series of debt securities, if other than denominations of $1,000 and any integral multiple thereof;

any and all terms, if applicable, relating to any auction or remarketing of the debt securities of that series and any security for our obligations with respect to such debt securities and any other terms which may be advisable in connection with the marketing of debt securities of that series;

whether the debt securities of the series shall be issued in whole or in part in the form of a global security or securities; the terms and conditions, if any, upon which such global security or securities may be exchanged in whole or in part for other individual securities; and the depositary for such global security or securities;

if applicable, the provisions relating to conversion or exchange of any debt securities of the series and the terms and conditions upon which such debt securities will be so convertible or exchangeable, including the conversion or exchange price, as applicable, or how it will be calculated and may be adjusted, any mandatory or optional (at our option or the holders option) conversion or exchange features, the applicable conversion or exchange period and the manner of settlement for any conversion or exchange;

if other than the full principal amount thereof, the portion of the principal amount of debt securities of the series which shall be payable upon declaration of acceleration of the maturity thereof;

additions to or changes in the covenants applicable to the particular debt securities being issued, including, among others, the consolidation, merger or sale covenant;

additions to or changes in the events of default with respect to the securities and any change in the right of the trustee or the holders to declare the principal, premium, if any, and interest, if any, with respect to such securities to be due and payable;

additions to or changes in or deletions of the provisions relating to covenant defeasance and legal defeasance;

additions to or changes in the provisions relating to satisfaction and discharge of the indenture;

additions to or changes in the provisions relating to the modification of the indenture both with and without the consent of holders of debt securities issued under the indenture;

the currency of payment of debt securities if other than U.S. dollars and the manner of determining the equivalent amount in U.S. dollars;

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whether interest will be payable in cash or additional debt securities at our or the holders option and the terms and conditions upon which the election may be made;

the terms and conditions, if any, upon which we will pay amounts in addition to the stated interest, premium, if any and principal amounts of the debt securities of the series to any holder that is not a United States person for federal tax purposes;

any restrictions on transfer, sale or assignment of the debt securities of the series; and

any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, any other additions or changes in the provisions of the indenture, and any terms that may be required by us or advisable under applicable laws or regulations.

**Conversion or Exchange Rights**

We will set forth in the applicable prospectus supplement the terms on which a series of debt securities may be convertible into or exchangeable for our common stock or our other securities. We will include provisions as to settlement upon conversion or exchange and whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of shares of our common stock or our other securities that the holders of the series of debt securities receive would be subject to adjustment.

**Consolidation, Merger or Sale**

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the indenture will not contain any covenant that restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of our assets as an entirety or substantially as an entirety. However, any successor to or acquirer of such assets (other than a subsidiary of ours) must assume all of our obligations under the indenture or the debt securities, as appropriate.

**Events of Default under the Indenture**

Unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, the following are events of default under the indenture with respect to any series of debt securities that we may issue:

if we fail to pay any installment of interest on any series of debt securities, as and when the same shall become due and payable, and such default continues for a period of 90 days; provided, however, that a valid extension of an interest payment period by us in accordance with the terms of any indenture supplemental thereto shall not constitute a default in the payment of interest for this purpose;

if we fail to pay the principal of, or premium, if any, on any series of debt securities as and when the same shall become due and payable whether at maturity, upon redemption, by declaration or otherwise, or in any payment required by any sinking or analogous fund established with respect to such series; provided, however, that a valid extension of the maturity of such debt securities in accordance with the terms of any

indenture supplemental thereto shall not constitute a default in the payment of principal or premium, if any;

if we fail to observe or perform any other covenant or agreement contained in the debt securities or the indenture, other than a covenant specifically relating to another series of debt securities, and our failure continues for 90 days after we receive written notice of such failure, requiring the same to be remedied and stating that such is a notice of default thereunder, from the trustee or holders of at least 25% in aggregate principal amount of the outstanding debt securities of the applicable series; and

if specified events of bankruptcy, insolvency or reorganization occur.

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If an event of default with respect to debt securities of any series occurs and is continuing, other than an event of default specified in the last bullet point above, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the trustee if notice is given by such holders, may declare the unpaid principal of, premium, if any, and accrued interest, if any, due and payable immediately. If an event of default specified in the last bullet point above occurs with respect to us, the principal amount of and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the trustee or any holder.

The holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture. Any waiver shall cure the default or event of default.

Subject to the terms of the indenture, if an event of default under an indenture shall occur and be continuing, the trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the trustee reasonable indemnity. The holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee, or exercising any trust or power conferred on the trustee, with respect to the debt securities of that series, provided that:

- the direction so given by the holder is not in conflict with any law or the applicable indenture; and
- subject to its duties under the Trust Indenture Act, the trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

A holder of the debt securities of any series will have the right to institute a proceeding under the indenture or to appoint a receiver or trustee, or to seek other remedies only if:

- the holder has given written notice to the trustee of a continuing event of default with respect to that series;
- the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made written request, such holders have offered to the trustee indemnity satisfactory to it against the costs, expenses and liabilities to be incurred by the trustee in compliance with the request; and
- the trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, the debt securities.

We will periodically file statements with the trustee regarding our compliance with specified covenants in the indenture.

**Modification of Indenture; Waiver**

We and the trustee may change an indenture without the consent of any holders with respect to specific matters:

to cure any ambiguity, defect or inconsistency in the indenture or in the debt securities of any series;

to comply with the provisions described above under Description of Debt Securities Consolidation, Merger or Sale;

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to provide for uncertificated debt securities in addition to or in place of certificated debt securities;

to add to our covenants, restrictions, conditions or provisions such new covenants, restrictions, conditions or provisions for the benefit of the holders of all or any series of debt securities, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default or to surrender any right or power conferred upon us in the indenture;

to add to, delete from or revise the conditions, limitations, and restrictions on the authorized amount, terms, or purposes of issue, authentication and delivery of debt securities, as set forth in the indenture;

to make any change that does not adversely affect the interests of any holder of debt securities of any series in any material respect;

to provide for the issuance of and establish the form and terms and conditions of the debt securities of any series as provided above under Description of Debt Securities General to establish the form of any certifications required to be furnished pursuant to the terms of the indenture or any series of debt securities, or to add to the rights of the holders of any series of debt securities;

to evidence and provide for the acceptance of appointment under any indenture by a successor trustee; or

to comply with any requirements of the SEC in connection with the qualification of any indenture under the Trust Indenture Act.

In addition, under the indenture, the rights of holders of a series of debt securities may be changed by us and the trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, unless we provide otherwise in the prospectus supplement applicable to a particular series of debt securities, we and the trustee may make the following changes only with the consent of each holder of any outstanding debt securities affected:

extending the fixed maturity of any debt securities of any series;

reducing the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption of any series of any debt securities; or

reducing the percentage of debt securities, the holders of which are required to consent to any amendment, supplement, modification or waiver.

**Discharge**

Each indenture provides that we can elect to be discharged from our obligations with respect to one or more series of debt securities, except for specified obligations, including obligations to:

provide for payment;

register the transfer or exchange of debt securities of the series;

replace stolen, lost or mutilated debt securities of the series;

pay principal of and premium and interest on any debt securities of the series;

maintain paying agencies;

hold monies for payment in trust;

recover excess money held by the trustee;

compensate and indemnify the trustee; and

appoint any successor trustee.

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In order to exercise our rights to be discharged, we must deposit with the trustee money or government obligations sufficient to pay all the principal of, any premium, if any, and interest on, the debt securities of the series on the dates payments are due.

**Form, Exchange and Transfer**

We will issue the debt securities of each series only in fully registered form without coupons and, unless we provide otherwise in the applicable prospectus supplement, in denominations of $1,000 and any integral multiple thereof. The indenture provides that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company, or DTC, or another depositary named by us and identified in the applicable prospectus supplement with respect to that series. To the extent the debt securities of a series are issued in global form and as book-entry, a description of terms relating to any book-entry securities will be set forth in the applicable prospectus supplement.

At the option of the holder, subject to the terms of the indenture and the limitations applicable to global securities described in the applicable prospectus supplement, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indenture and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided in the debt securities that the holder presents for transfer or exchange, we will impose no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

If we elect to redeem the debt securities of any series, we will not be required to:

- issue, register the transfer of, or exchange any debt securities of that series during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or

- register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

**Information Concerning the Trustee**

The trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an

indenture, the trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs. Subject to this provision, the trustee is under no obligation to exercise any of the powers given it by the indenture at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

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**Payment and Paying Agents**

Unless we otherwise indicate in the applicable prospectus supplement, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that unless we otherwise indicate in the applicable prospectus supplement, we will make interest payments by check that we will mail to the holder or by wire transfer to certain holders. Unless we otherwise indicate in the applicable prospectus supplement, we will designate the corporate trust office of the trustee as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the trustee for the payment of the principal of or any premium or interest on any debt securities that remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the debt security thereafter may look only to us for payment thereof.

**Governing Law**

The indenture and the debt securities will be governed by and construed in accordance with the internal laws of the State of New York, except to the extent that the Trust Indenture Act is applicable.

## DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplement and free writing prospectus, summarizes the material terms and provisions of the warrants that we may offer under this prospectus, which may consist of warrants to purchase common stock, preferred stock or debt securities and may be issued in one or more series. Warrants may be offered independently or in combination with common stock, preferred stock or debt securities offered by any prospectus supplement. While the terms we have summarized below will apply generally to any warrants that we may offer under this prospectus, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement. The following description of warrants will apply to the warrants offered by this prospectus unless we provide otherwise in the applicable prospectus supplement. The applicable prospectus supplement for a particular series of warrants may specify different or additional terms.

We have filed forms of the warrant agreements and forms of warrant certificates containing the terms of the warrants that may be offered as exhibits to the registration statement of which this prospectus is a part. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of warrant and/or the warrant agreement and warrant certificate, as applicable, that contain the terms of the particular series of warrants we are offering, and any supplemental agreements, before the issuance of such warrants. The following summaries of material terms and provisions of the warrants are subject to, and qualified in their entirety by reference to, all the provisions of the form of warrant and/or the warrant agreement and warrant certificate, as applicable, and any supplemental agreements applicable to a particular series of warrants that we may offer under this prospectus. We urge you to read the applicable prospectus supplement related to the particular series of warrants that we may offer under this prospectus, as well as any related free writing prospectus, and the complete form of warrant and/or the warrant agreement and warrant certificate, as applicable, and any supplemental agreements,

that contain the terms of the warrants.

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**General**

We will describe in the applicable prospectus supplement the terms of the series of warrants being offered, including:

- the offering price and aggregate number of warrants offered;
- the currency for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreements and the warrants;
- the terms of any rights to redeem or call the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreements and warrants may be modified;
- a discussion of material or special U.S. federal income tax considerations, if any, of holding or exercising the warrants;
- the terms of the securities issuable upon exercise of the warrants; and

any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including:

in the case of warrants to purchase debt securities, the right to receive payments of principal of, or premium, if any, or interest on, the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture; or

in the case of warrants to purchase common stock or preferred stock, the right to receive dividends, if any, or payments upon our liquidation, dissolution or winding-up or to exercise voting rights, if any.

**Exercise of Warrants**

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. The warrants may be exercised as set forth in the prospectus supplement relating to the warrants offered. Unless we otherwise specify in the applicable prospectus supplement, warrants may be exercised at any time up to the close of business on the expiration date set forth in the prospectus supplement relating to the warrants offered thereby. After the close of business on the expiration date, unexercised warrants will become void.

Upon receipt of payment and the warrant or warrant certificate, as applicable, properly completed and duly executed at the corporate trust office of the warrant agent, if any, or any other office, including ours, indicated in the prospectus supplement, we will, as soon as practicable, issue and deliver the securities purchasable upon such exercise. If less than all of the warrants (or the warrants represented by such warrant certificate) are exercised, a new warrant or a new warrant certificate, as applicable, will be issued for the remaining warrants.

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**Governing Law**

Unless we provide otherwise in the applicable prospectus supplement, the warrants and any warrant agreements will be governed by and construed in accordance with the internal laws of the State of New York.

**Enforceability of Rights by Holders of Warrants**

Each warrant agent, if any, will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, its warrants.

## LEGAL OWNERSHIP OF SECURITIES

We may issue securities in registered form or in the form of one or more global securities. We describe global securities in greater detail below. We refer to those persons who have securities registered in their own names on the books that we or any applicable trustee, depositary or warrant agent maintain for this purpose as the holders of those securities. These persons are the legal holders of the securities. We refer to those persons who, indirectly through others, own beneficial interests in securities that are not registered in their own names, as indirect holders of those securities. As we discuss below, indirect holders are not legal holders, and investors in securities issued in book-entry form or in street name will be indirect holders.

**Book-Entry Holders**

We may issue securities in book-entry form only, as we will specify in the applicable prospectus supplement. This means securities may be represented by one or more global securities registered in the name of a financial institution that holds them as depositary on behalf of other financial institutions that participate in the depositary s book-entry system. These participating institutions, which are referred to as participants, in turn, hold beneficial interests in the securities on behalf of themselves or their customers.

Only the person in whose name a security is registered is recognized as the holder of that security. Securities issued in global form will be registered in the name of the depositary or its participants. Consequently, for securities issued in global form, we will recognize only the depositary as the holder of the securities, and we will make all payments on the securities to the depositary. The depositary passes along the payments it receives to its participants, which in turn pass the payments along to their customers who are the beneficial owners. The depositary and its participants do so under agreements they have made with one another or with their customers; they are not obligated to do so under the terms of the securities.

As a result, investors in a book-entry security will not own securities directly. Instead, they will own beneficial interests in a global security, through a bank, broker or other financial institution that participates in the depositary s book-entry system or holds an interest through a participant. As long as the securities are issued in global form, investors will be indirect holders, and not holders, of the securities.

**Street Name Holders**

We may terminate a global security or issue securities in non-global form. In these cases, investors may choose to hold their securities in their own names or in street name. Securities held by an investor in street name would be registered in the name of a bank, broker or other financial institution that the investor chooses, and the investor would hold only a beneficial interest in those securities through an account he or she maintains at that institution.

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For securities held in street name, we will recognize only the intermediary banks, brokers and other financial institutions in whose names the securities are registered as the holders of those securities, and we will make all payments on those securities to them. These institutions pass along the payments they receive to their customers who are the beneficial owners, but only because they agree to do so in their customer agreements or because they are legally required to do so. Investors who hold securities in street name will be indirect holders, not holders, of those securities.

**Legal Holders**

Our obligations, as well as the obligations of any applicable trustee and of any third parties employed by us or a trustee, run only to the legal holders of the securities. We do not have obligations to investors who hold beneficial interests in global securities, in street name or by any other indirect means. This will be the case whether an investor chooses to be an indirect holder of a security or has no choice because we are issuing the securities only in global form.

For example, once we make a payment or give a notice to the holder, we have no further responsibility for the payment or notice even if that holder is required, under agreements with depositary participants or customers or by law, to pass it along to the indirect holders but does not do so. Similarly, we may want to obtain the approval of the holders to amend an indenture, to relieve us of the consequences of a default or of our obligation to comply with a particular provision of the indenture or for other purposes. In such an event, we would seek approval only from the holders, and not the indirect holders, of the securities. Whether and how the holders contact the indirect holders is up to the holders.

**Special Considerations for Indirect Holders**

If you hold securities through a bank, broker or other financial institution, either in book-entry form or in street name, you should check with your own institution to find out:

the performance of third-party service providers;

how it handles securities payments and notices;

whether it imposes fees or charges;

how it would handle a request for the holders consent, if ever required;

whether and how you can instruct it to send you securities registered in your own name so you can be a holder, if that is permitted in the future;

how it would exercise rights under the securities if there were a default or other event triggering the need for holders to act to protect their interests; and

if the securities are in book-entry form, how the depositary s rules and procedures will affect these matters.

**Global Securities**

A global security is a security that represents one or any other number of individual securities held by a depositary. Generally, all securities represented by the same global securities will have the same terms.

Each security issued in book-entry form will be represented by a global security that we deposit with and register in the name of a financial institution or its nominee that we select. The financial institution that we select for this purpose is called the depositary. Unless we specify otherwise in the applicable prospectus supplement, DTC will be the depositary for all securities issued in book-entry form.

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A global security may not be transferred to or registered in the name of anyone other than the depositary, its nominee or a successor depositary, unless special termination situations arise. We describe those situations below under the section titled Special Situations When a Global Security Will Be Terminated in this prospectus. As a result of these arrangements, the depositary, or its nominee, will be the sole registered owner and holder of all securities represented by a global security, and investors will be permitted to own only beneficial interests in a global security. Beneficial interests must be held by means of an account with a broker, bank or other financial institution that in turn has an account with the depositary or with another institution that does. Thus, an investor whose security is represented by a global security will not be a holder of the security, but only an indirect holder of a beneficial interest in the global security.

If the prospectus supplement for a particular security indicates that the security will be issued in global form only, then the security will be represented by a global security at all times unless and until the global security is terminated. If termination occurs, we may issue the securities through another book-entry clearing system or decide that the securities may no longer be held through any book-entry clearing system.

**Special Considerations for Global Securities**

The rights of an indirect holder relating to a global security will be governed by the account rules of the investor s financial institution and of the depositary, as well as general laws relating to securities transfers. We do not recognize an indirect holder as a holder of securities and instead deal only with the depositary that holds the global security.

If securities are issued only in the form of a global security, an investor should be aware of the following:

- an investor cannot cause the securities to be registered in his or her name, and cannot obtain non-global certificates for his or her interest in the securities, except in the special situations we describe below;
- an investor will be an indirect holder and must look to his or her own bank or broker for payments on the securities and protection of his or her legal rights relating to the securities, as we describe above;
- an investor may not be able to sell interests in the securities to some insurance companies and to other institutions that are required by law to own their securities in non-book-entry form;
- an investor may not be able to pledge his or her interest in a global security in circumstances where certificates representing the securities must be delivered to the lender or other beneficiary of the pledge in order for the pledge to be effective;
- the depositary s policies, which may change from time to time, will govern payments, transfers, exchanges and other matters relating to an investor s interest in a global security;
- we and any applicable trustee have no responsibility for any aspect of the depositary s actions or for its records of ownership interests in a global security, nor do we or any applicable trustee supervise the

depositary in any way;

the depositary may, and we understand that DTC will, require that those who purchase and sell interests in a global security within its book-entry system use immediately available funds, and your broker or bank may require you to do so as well; and

financial institutions that participate in the depositary s book-entry system, and through which an investor holds its interest in a global security, may also have their own policies affecting payments, notices and other matters relating to the securities.

There may be more than one financial intermediary in the chain of ownership for an investor. We do not monitor and are not responsible for the actions of any of those intermediaries.

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**Special Situations When a Global Security Will Be Terminated**

In a few special situations described below, the global security will terminate and interests in it will be exchanged for physical certificates representing those interests. After that exchange, the choice of whether to hold securities directly or in street name will be up to the investor. Investors must consult their own banks or brokers to find out how to have their interests in securities transferred to their own name, so that they will be direct holders. We have described the rights of holders and street name investors above.

Unless we provide otherwise in the applicable prospectus supplement, the global security will terminate when the following special situations occur:

- if the depositary notifies us that it is unwilling, unable or no longer qualified to continue as depositary for that global security and we do not appoint another institution to act as depositary within 90 days;
- if we notify any applicable trustee that we wish to terminate that global security; or
- if an event of default has occurred with regard to securities represented by that global security and has not been cured or waived.

The applicable prospectus supplement may also list additional situations for terminating a global security that would apply only to the particular series of securities covered by the applicable prospectus supplement. When a global security terminates, the depositary, and not we or any applicable trustee, is responsible for deciding the names of the institutions that will be the initial direct holders.

## PLAN OF DISTRIBUTION

We may sell the securities from time to time pursuant to underwritten public offerings, at-the-market offerings, negotiated transactions, block trades or a combination of these methods. We may sell the securities to or through underwriters or dealers, through agents, or directly to one or more purchasers. We may distribute the securities from time to time in one or more transactions:

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

A prospectus supplement or supplements (and any related free writing prospectus that we may authorize to be provided to you) will describe the terms of the offering of the securities, including, to the extent applicable:

the name or names of the underwriters, if any;

the purchase price of the securities or other consideration therefor, and the proceeds, if any, we will receive from the sale;

any options under which underwriters may purchase additional securities from us;

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

any public offering price;

any discounts or concessions allowed or reallowed or paid to dealers; and

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

Only underwriters named in the prospectus supplement will be underwriters of the securities offered by the prospectus supplement.

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If underwriters are used in the sale, they will acquire the securities for their own account and may resell the securities from time to time in one or more transactions at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all of the securities offered by the prospectus supplement, other than securities covered by any option to purchase additional shares. Any public offering price and any discounts or concessions allowed or reallowed or paid to dealers may change from time to time. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement, naming the underwriter, the nature of any such relationship.

We may sell the securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities and we will describe any commissions payable to the agent in the prospectus supplement. Unless the prospectus supplement states otherwise, the agent will act on a best-efforts basis for the period of its appointment.

We may provide agents and underwriters with indemnification against civil liabilities, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to these liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

All securities we may offer, other than common stock, will be new issues of securities with no established trading market. Any underwriters may make a market in these securities, but will not be obligated to do so and may discontinue any market making at any time without notice. We cannot guarantee the liquidity of the trading markets for any securities.

Any underwriter may engage in over-allotment, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Over-allotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum price. Syndicate-covering or other short-covering transactions involve purchases of the securities, either through exercise of the option to purchase additional shares or in the open market after the distribution is completed, to cover short positions. 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 stabilizing or covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time.

Any underwriters that are qualified market makers on The NASDAQ Global Market may engage in passive market making transactions in the common stock on The NASDAQ Global Market in accordance with Regulation M under the Exchange Act, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the common stock. 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. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

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 the applicable prospectus supplement.

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## LEGAL MATTERS

Unless otherwise indicated in the applicable prospectus supplement, the validity of the securities offered by this prospectus, and any supplement thereto, will be passed upon for us by Cooley LLP, Seattle, WA. As of the date of this prospectus, an individual attorney at Cooley LLP beneficially owned 4,998 shares of our common stock.

## EXPERTS

The financial statements and management s assessment of the effectiveness of internal control over financial reporting (which is included in Management s Annual Report on Internal Control Over Financial Reporting) incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2016 have been so incorporated in reliance on the report (which contains an explanatory paragraph relating to Alder BioPharmaceuticals, Inc. s liquidity as described in Note 1 to the consolidated financial statements) 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 is part of the registration statement on Form S-3 we filed with the SEC under the Securities Act and does not contain all the information set forth or incorporated by reference in the registration statement. Whenever a reference is made in this prospectus to any of our contracts, agreements or other documents, the reference may not be complete and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated by reference into this prospectus for a copy of such contract, agreement or other document. Because we are subject to the information and reporting requirements of the Exchange Act, we file annual, quarterly and current 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, 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.

## 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. The information incorporated by reference is considered to be part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus, while information that we file later with the SEC will automatically update and supersede the information in this prospectus. We incorporate by reference into this prospectus and the registration statement of which this prospectus is a part the information or documents listed below that we have filed with the SEC (Commission File No. 000-36431):

- our Annual Report on Form 10-K for the year ended December 31, 2016, which was filed on February 23, 2017;

- the information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2015 from our Definitive Proxy Statement on Schedule 14A for our 2016 Annual Meeting of Stockholders, filed with the SEC on April 29, 2016;

our Current Report on Form 8-K, which was filed on January 31, 2017; and

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

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We also incorporate by reference any future filings (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items unless such Form 8-K expressly provides to the contrary) made with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act until we file a post-effective amendment that indicates the termination of the offering of the securities made by this prospectus and will become a part of this prospectus from the date that such documents are filed with the SEC. Information in such future filings updates and supplements the information provided in this prospectus. Any statements in any such future filings will automatically be deemed to modify and supersede any information in any document we previously filed with the SEC that is incorporated or deemed to be incorporated herein by reference to the extent that statements in the later filed document modify or replace such earlier statements.

We will furnish without charge to each person, including any beneficial owner, to whom a prospectus is delivered, upon written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents. Any such request may be made by writing or telephoning us at the following address or phone number:

Alder BioPharmaceuticals, Inc.

Attn: Investor Relations

11804 North Creek Parkway South

Bothell, WA 98011

(425) 205-2900

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$200,000,000

% Convertible Senior Notes due 2025

**Prospectus Supplement**

**Goldman Sachs & Co. LLC** **Leerink Partners** **Wells Fargo Securities**

, 2018