

Adamas Pharmaceuticals Inc  
Form 10-K  
February 23, 2016  
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

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FORM 10-K

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(Mark One)

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

For the Fiscal Year Ended December 31, 2015

or

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

Commission File Number: 001-36399

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ADAMAS PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

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Delaware  
(State or other  
jurisdiction of  
incorporation or  
organization)

2834  
(Primary Standard Industrial  
Classification Code Number)

42-1560076  
(I.R.S. Employer  
Identification  
Number)

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1900 Powell Street, Suite 750

Emeryville, CA 94608

(510) 450-3500

(Address, including zip code, and telephone number, including area code,  
of Principal Executive Offices)

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

Title of Each Class:	Name of Each Exchange on which Registered
Common Stock, par value \$0.001 per share	The NASDAQ Global Market

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Non accelerated filer Smaller reporting company

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(Do not check if a  
smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

The aggregate market value of the voting and non-voting common equity held by non-affiliates was \$346,001,821 computed by reference to the last sales price of \$26.22 as reported by the NASDAQ Global Market, as of the last business day of the registrant's most recently completed second fiscal quarter, June 30, 2015. This calculation does not reflect a determination that certain persons are affiliates of the registrant for any other purpose.

As of February 18, 2016, the number of outstanding shares of the registrant's common stock, par value \$0.001 per share, was 21,417,219.

DOCUMENTS INCORPORATED BY REFERENCE

Part III incorporates information by reference to the definitive proxy statement for the registrant's Annual Meeting of Stockholders to be held on or about June 3, 2016, to be filed within 120 days of the registrant's fiscal year ended December 31, 2015.

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ADAMAS PHARMACEUTICALS, INC.

ANNUAL REPORT ON FORM 10 K

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2015

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SPECIAL NOTE REGARDING FORWARD LOOKING STATEMENTS

This report, including the sections titled “Business,” “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” contains forward looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. In some cases you can identify these statements by forward looking words, such as “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “could,” “would,” “project,” “plan,” “potential,” “goal” or the negative or plural of these words or similar expressions. These forward looking statements include, but are not limited to, statements concerning the following:

- our expectation as to the therapeutic profile of our products and product candidates, including the safety and efficacy thereof;
- our anticipated ability to obtain and maintain regulatory approval of our product candidates;
  - our anticipated ability to successfully commercialize any of our products that are approved;
- the rate and degree of market acceptance of our products in the future;
- our estimates of our expenses, ongoing losses, future revenue, capital requirements and our needs for or ability to obtain additional financing;
- the anticipated scope, rate of progress and cost of our preclinical studies and clinical trials and other research and development activities;
- the potential cost of establishing clinical and commercial supplies of our product candidates and any products that we may develop;
- the anticipated cost and timing of regulatory submissions and approvals;
- our expectation as to the legal proceedings and related stays and terms of settlements;
- our expectation that our existing capital resources will be sufficient to enable us to complete our ongoing clinical studies;
- our anticipated ability to obtain and maintain intellectual property protection for our products and product candidates;
- the anticipated ability to negotiate manufacturing arrangements and scale up manufacturing of our product candidates to commercial scale;
- the anticipated performance by our collaboration partners over which we do not have control;
- the anticipated receipt and timing of any royalties from our collaborators;
- our anticipated ability to successfully establish and successfully maintain appropriate collaborations and derive significant revenue from those collaborations;
- the anticipated performance of third parties to conduct our clinical studies;
- the anticipated ability of third party contract manufacturers to manufacture and supply our product candidates for us;
- our anticipated ability to identify, develop, acquire and in license new products and product candidates;
- our anticipated ability to initiate sites and enroll patients in our clinical studies at the pace that we project;

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- our anticipated ability to retain and recruit key personnel;
- our expectations regarding the time during which we will be an emerging growth company under the Jumpstart Our Business Startups Act;
- our anticipated financial performance; and
- our anticipated developments and projections relating to our competitors or our industry.

These forward looking statements are subject to a number of risks, uncertainties and assumptions, including those described in “Risk factors.” Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward looking statements we may make. In light of these risks, uncertainties and assumptions, the forward looking events and circumstances discussed in this report may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward looking statements.

You should not rely upon forward looking statements as predictions of future events. Although we believe that the expectations reflected in the forward looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance, or events and circumstances reflected in the forward looking statements will be achieved or occur. Moreover, except as required by law, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward looking statements. We undertake no obligation to update publicly any forward looking statements for any reason after the date of this report to conform these statements to actual results or to changes in our expectations.

You should read this report and the documents that we reference in this report and have filed with the Securities and Exchange Commission as exhibits to this report with the understanding that our actual future results, levels of activity, performance, and events and circumstances may be materially different from what we expect.

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PART I

ITEM 1. BUSINESS

Overview

We are a pharmaceutical company focused on the development and commercialization of therapeutics targeting chronic disorders of the central nervous system (“CNS”). We seek to achieve this by enhancing the pharmacokinetic profiles of approved drugs to create novel therapeutics for use alone and in fixed-dose combination products. Our business strategy is twofold. We intend to develop and commercialize our wholly-owned products directly. In addition, we may form partnerships with companies that have an already established CNS market presence.

We are developing our lead wholly-owned product candidate, ADS-5102 (amantadine hydrochloride), for multiple indications, including: a complication associated with the treatment of Parkinson’s disease known as levodopa-induced dyskinesia (“LID”), for major symptoms associated with multiple sclerosis in patients with walking impairment, and potentially as a treatment for one or more additional CNS indications. ADS-5102 is an extended-release version of amantadine that is intended for once daily administration at bedtime. ADS-5102 is designed to improve upon the pharmacokinetic profile of immediate-release amantadine, with the aim of enhancing efficacy without compromising the known tolerability profile.

After successful completion of a Phase 2/3 clinical study in LID in 2013, we initiated two confirmatory Phase 3 trials and a separate open-label safety study in 2014. We completed enrollment in the larger of these trials, EASE LID, in July 2015, and the smaller, EASE LID 3, in December 2015. We announced top-line results of EASE LID in December 2015 and expect to announce top-line results of EASE LID 3 in the first half of 2016. The EASE LID study showed a statistically significant reduction ( $p = 0.0009$ ) in LID at 12 weeks for patients who received ADS-5102 versus placebo as assessed by the Unified Dyskinesia Rating Scale (UDysRS). This represents a 23% reduction in LID for ADS-5102-treated patients compared to placebo. The reduction in LID was maintained at 24 weeks ( $p = 0.0008$ ), a key secondary analysis. There were four additional key secondary analyses based on patient diary data, and all achieved statistical significance. Notably, at week 12, ADS-5102 significantly increased ON time without troublesome dyskinesia by 2.7 hours versus placebo and reduced OFF time by 0.9 hours. These effects were maintained at week 24. The reported adverse events in the EASE LID study associated with ADS-5102 were consistent with the known safety profile of amantadine, as well as the safety results from our earlier placebo-controlled trial.

We expect to submit a New Drug Application (“NDA”) to the U.S. Food and Drug Administration (“FDA”) for ADS-5102 for the treatment of LID in 2016.

We are also exploring the utility of ADS-5102 for the treatment of major symptoms associated with multiple sclerosis in patients with walking impairment and initiated a Phase 2 clinical study in June 2015. We expect to announce data from this Phase 2 trial in the first half of 2016, and if successful, will discuss the results with the FDA and potentially



pursue Phase 3 registration studies for this indication. We may also explore the development of ADS-5102 in additional indications, as well as in combinations with other drugs.

We have also commenced development of ADS-4101, an extended-release version of an FDA-approved single-agent compound for the treatment of epilepsy (partial onset seizures). We expect that this new program will progress into clinical trials in 2016.

We plan to commercialize ADS-5102, and potentially other wholly-owned product candidates, if approved, by developing a small CNS commercial organization, including a sales force to reach leading neurologists and movement disorder specialists in the United States, and in other markets through distribution agreements and collaborations with CNS-focused pharmaceutical companies.

Through a partnership with Forest Laboratories Holdings Limited (“Forest Laboratories”), an indirect wholly-owned subsidiary of Allergan plc, our portfolio also includes two drugs commercially available in the United States for indications relating to Alzheimer’s disease: Namzaric™ (memantine hydrochloride and donepezil hydrochloride) extended-release capsules (formerly MDX-8704) and Namenda XR® (memantine hydrochloride) extended release capsules, launched in May 2015 and June 2013, respectively. Namenda XR is a controlled release version of the approved CNS drug memantine. Namzaric is a once daily fixed dose combination of Namenda XR and the approved

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CNS drug donepezil. Forest currently sells these memantine-based therapeutics for the treatment of moderate to severe dementia related to Alzheimer's disease, subject to our license agreement. Under our license agreement with Forest, we received a \$65 million upfront payment in November 2012 and since then a total of \$95 million of development and regulatory milestones. Commencing five years after the launch of each of Namzaric and Namenda XR, we will be entitled to receive royalties from the sales of these products.

We have developed our current portfolio of late stage therapeutics in a capital efficient manner. As of December 31, 2015, we had raised a total of \$139.5 million from equity financings and had received \$160.0 million in upfront and milestone payments and \$3.8 million in development funding from our partnership with Forest. At December 31, 2015, we had \$120.0 million in cash, cash equivalents, investments and no debt obligations. In January 2016, we raised an additional \$61.8 million in net proceeds from the sale of 2,875,000 shares of common stock.

### Our strategy

Our goal is to build an independent, CNS focused pharmaceutical company that creates and commercializes novel therapeutics that address significant unmet clinical needs. This goal is supported by a product development strategy that allows us to discover, patent, develop, and commercialize novel therapeutics in a capital efficient manner.

### Product development strategy

Our integrated process combines a number of capabilities that together allow us to identify, enhance, patent, and then develop proprietary controlled release and fixed dose combination products. These capabilities include in depth knowledge of CNS markets and unmet medical needs, pharmacokinetic and pharmacodynamic competencies, and regulatory expertise. Our goal is to develop products that are clinically differentiated from approved drugs that in turn create significant benefits for patients, caregivers, physicians, and payers.

The key elements of this strategy are:

- Market attractiveness. We identify approved products that are sub optimally utilized due to tolerability issues driven by factors other than the peak concentration of the drug in the blood stream. We believe that these products, with pharmacokinetic enhancements, can significantly improve the treatment of chronic CNS conditions. For products to be successful, this improvement must be recognized by patients, caregivers, physicians, and payers. A key element of this strategy is targeting conditions treated by a concentrated prescriber base.

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- Intellectual property. We seek to discover novel pharmacokinetic and pharmacodynamic relationships and to obtain patent protection for a range of dose strengths, pharmacokinetic profiles, timing of administration, and drug combinations as opposed to protecting just specific formulations. Pharmacokinetics refers to the manner in which a drug is absorbed, distributed, metabolized, and excreted by the body. Pharmacodynamics refers to the biochemical and physiological effects of a drug on the body.
- Regulatory pathways. We intend to use the regulatory pathway provided by Section 505(b)(2) of the U.S. Federal Food, Drug and Cosmetic Act to pursue approval for novel therapeutics based on existing drugs in a manner that we believe will be more time and capital efficient than the standard Section 505(b)(1) pathway used for new chemical entities. While the Section 505(b)(2) pathway is commonly used to obtain approval for fairly simple reformulations of existing drugs, it can also be used to obtain approval for new versions of a drug that enhance the efficacy or tolerability of the drug or that allow the drug to be used in a new indication, as well as for a novel fixed dose combination. By using the Section 505(b)(2) pathway in this way, we are able to pursue approval for novel therapeutics that we believe have improved clinical utility as compared to the existing drug with less time and expense than are typically associated with the Section 505(b)(1) pathway.
- Research and development. We have developed a core competency in identifying, formulating, and manufacturing controlled release drug products utilizing coated pellet technology. We believe this expertise will enable us to first develop controlled release drugs and then leverage this experience to further develop these drugs in fixed dose combinations with other CNS therapeutics.

### Strategic focus

We are implementing our strategy by focusing on the following key objectives:

- Obtain FDA approval of ADS 5102 for the treatment of LID. We are in the latter stages of conducting Phase 3 trials of ADS 5102 in LID in order to support the submission of an NDA. We completed enrollment in 2015 and, if the program is successful, expect to submit an NDA for ADS 5102 for the treatment of LID in 2016.
- Develop ADS 5102 for the treatment of additional CNS indications, including major symptoms associated with multiple sclerosis in patients with walking impairments. In 2015, we initiated a Phase 2 trial in multiple sclerosis and expect to complete that trial in the first half of 2016. Depending on its results, we may choose to progress into a Phase 3 registration program. We may also increase the number of potential indications for ADS 5102 by initiating additional Phase 2 trials in one or more other CNS indications.
- Continue development of ADS-4101, an extended-release version of an FDA-approved single-agent compound for the treatment of epilepsy (partial onset seizures). In 2016, we expect that this new program will enter into clinical trials with a Phase 1 study.
- Commercialize our products by developing a commercial organization to reach leading neurologists and movement disorder specialists in the United States. Assuming ADS 5102 is approved for the treatment of LID, we would expect to commercialize it in the United States by developing a commercial organization, including an approximately 30 to 60 person sales force that would target the approximately 4,000 neurologists and movement disorder specialists who treat over 60% of late stage Parkinson's disease patients. If ADS 5102 is approved in additional indications, this sales force could be expanded to target the physicians who focus on patients with those conditions. Furthermore, we also believe a targeted sales force will allow us to more effectively compete for future acquisitions and in licensing opportunities.
- Develop additional novel therapeutics based on existing CNS drugs. We have identified several areas of significant unmet clinical need that we believe could be addressed by fixed dose combination products incorporating ADS 5102 and other existing CNS drugs, and intend to initiate development efforts in these areas in the future. We also intend to apply our product development approach to other CNS drugs with pharmacokinetic profiles that limit their dosing and efficacy. These could present potential opportunities



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for improved drugs to be developed with partners or wholly-owned products that we may choose to develop and commercialize on our own.

## Our market opportunity

We estimate that approximately 36 million people in the United States suffer from chronic CNS disorders such as Alzheimer's disease, Parkinson's disease, multiple sclerosis, epilepsy, psychosis, and depression. CNS diseases are frequently treated with multiple medications having different mechanisms of action with the goal of maximizing symptomatic benefits for patients. Existing CNS drugs often require frequent dosing and may have tolerability issues that limit the amount of the drug that can be taken each day. We believe that many CNS disorders could be better treated if the concentrations of existing CNS drugs as a function of time, or the pharmacokinetic profiles, were altered to increase efficacy while maintaining tolerability and if these enhanced drugs were then combined with other existing CNS drugs to improve and streamline the management of these complicated conditions.

## Therapeutic approach and portfolio

Our product and product candidates are based on pharmacokinetic enhancements of approved CNS drugs. We selected aminoadamantanes as our initial area of focus because they have the ability to modulate multiple neurotransmitter systems, which are the molecular pathways that control brain function, and we believe aminoadamantanes potentially have broader therapeutic utility than previously realized. We believe our product development strategy is broadly applicable to addressing limitations of multiple CNS drugs whose pharmacokinetic profiles limit dosing, and we intend to initiate additional clinical programs in this area. The following table describes our therapeutics portfolio:

Product and Product Candidates	Target Indication(s)	Development Status	Commercial Rights
Wholly-Owned			
ADS 5102 (amantadine HCl)	Levodopa Induced Dyskinesia	Phase 3	Adamas, worldwide
	Multiple Sclerosis symptoms	Phase 2	Adamas, worldwide
	Third indication (not disclosed)	Research	Adamas, worldwide
ADS-8801 (fixed dose combination of amantadine HCl/not disclosed)	Not disclosed	Research	Adamas, worldwide
ADS-4101 (not disclosed single-compound)	Epilepsy (Partial Onset Seizures)	Preclinical	Adamas, worldwide
Partnered			
Namzaric (Memantine/Donepezil)	Moderate to severe Alzheimer's dementia	Marketed	U.S. only; licensed to Forest Laboratories
Namenda XR (Memantine)	Moderate to severe Alzheimer's dementia	Marketed	U.S. only; licensed to Forest Laboratories

Wholly owned product candidates

ADS-5102 (Amantadine HCl)

Our most advanced wholly-owned product candidate is ADS 5102, an extended release version of amantadine hydrochloride that is intended for once daily administration at bedtime. ADS-5102 is designed to improve upon the pharmacokinetic profile of immediate-release amantadine, with the aim of enhancing efficacy without compromising the known tolerability profile. In pharmacokinetic studies, ADS-5102 has been shown to achieve high plasma amantadine concentrations in the early morning that are sustained throughout the afternoon and are lower in the evening, potentially providing therapeutic benefit when needed most.

ADS 5102 for Levodopa-induced Dyskinesia associated with Parkinson's disease

We are developing ADS-5102 initially for the treatment of LID in patients with Parkinson's disease. LID is a movement disorder that frequently occurs in patients with Parkinson's disease after long term treatment with levodopa, the most widely used drug for Parkinson's disease. Patients with LID suffer from involuntary non purposeful

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movements and reduced control over voluntary movements. We estimate that in 2011 approximately 260,000 Parkinson's disease patients in the United States suffered from motor complications as a result of levodopa therapy and approximately 140,000 of these patients suffered from LID. There are no drugs for the treatment of LID that have been approved for marketing in the United States or Europe. As a result, clinicians typically manage LID by decreasing the dose of levodopa, which can exacerbate symptoms of the underlying Parkinson's disease. In April 2015, the FDA granted orphan drug status to ADS-5102 for the treatment of LID associated with Parkinson's disease.

In our Phase 2/3 clinical study, EASED, completed in June 2013, ADS 5102 met its primary endpoint, reduction of LID, and several key secondary endpoints. Subsequently, we initiated two confirmatory Phase 3 trials and a separate open-label safety study in 2014. We completed enrollment in the larger of these trials, EASE LID, in July 2015, and the smaller, EASE LID 3, in December 2015. In December 2015, we announced top-line results of EASE LID, in which we met our primary and all key secondary endpoints, and expect to announce top-line results of EASE LID 3 in the first half of 2016.

The EASE LID study enrolled 126 Parkinson's disease patients, who were randomized in a 1:1 ratio to the two treatment groups: placebo and 340 mg ADS 5102. The top-line results of the study showed a statistically significant reduction ( $p = 0.0009$ ) in LID at 12 weeks for patients who received ADS-5102 versus placebo as assessed by the Unified Dyskinesia Rating Scale (UDysRS). This represents a 23% reduction in LID for ADS-5102-treated patients compared to placebo. The reduction in LID was maintained at 24 weeks ( $p = 0.0008$ ), a key secondary analysis.

There were four additional key secondary analyses based on patient diary data and all achieved statistical significance. Notably, at week 12, ADS-5102 significantly increased ON time without troublesome dyskinesia by 2.7 hours versus placebo and reduced OFF time by 0.9 hours. These effects were maintained at week 24.

The reported adverse events associated with ADS-5102 were consistent with the known safety profile of amantadine as well as the safety results from our earlier placebo-controlled trial. The most common adverse events (occurring in at least five percent of ADS-5102-treated patients) were: hallucinations, peripheral edema, dizziness, dry mouth, constipation, falls, urinary tract infections, anxiety, contusion, livedo reticularis, abnormal dreams, depression and headaches. Four subjects discontinued treatment due to adverse events in the placebo group versus 13 in the ADS-5102 group.

We expect to submit an NDA to the FDA for ADS-5102 for the treatment of LID in 2016

### Overview of Parkinson's disease and LID

Parkinson's disease is a chronic, progressive motor disorder that causes tremors, rigidity, slowed movements, and postural instability. The Parkinson's Disease Foundation estimates that there were approximately one million people living with Parkinson's disease in the United States in 2014. Prevalence of Parkinson's disease increases with age, with approximately 1.6% of people 65 years old or older having the disease compared with 0.3% of people in the general population. As the U.S. population ages, the number of people living with Parkinson's disease in the United States is expected to grow at approximately 3% per year.

The most commonly prescribed treatments for Parkinson's disease are levodopa based therapies. Levodopa is converted to dopamine in the body to replace the dopamine loss caused by the disease. Levodopa is generally effective in providing at least partial relief from the symptoms of Parkinson's disease, but fails to modify the underlying disease process. Patients initially take levodopa therapy approximately three times daily and receive relief from symptoms of Parkinson's disease for much of the day. This period of relief is known as ON time. As the effects of levodopa wear off, the symptoms of Parkinson's disease return. This is known as OFF time. By properly managing the timing of levodopa administration, patients with early stage Parkinson's disease can largely avoid OFF time during

the day.

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The table below defines the various terms that are used to describe the fluctuating symptoms of Parkinson's disease.

Term	Definition
ON time	ON time refers to periods of adequate control of Parkinson's disease symptoms.
OFF time	OFF time refers to periods of the day when medication is not working well, causing return of Parkinson's disease symptoms.
Dyskinesia	Involuntary twisting, turning movements and loss of control of voluntary movements.
LID	Levodopa induced dyskinesia, which is a side effect of administration of levodopa and occurs during ON time.
Troublesome LID	LID that interferes with the patient's daily function or causes meaningful discomfort.
ON with troublesome LID	Periods of adequate control of Parkinson's disease symptoms but with troublesome LID.
ON without troublesome LID	Periods of adequate control of Parkinson's disease symptoms without troublesome LID.

Over time, as Parkinson's disease progresses and dopaminergic neurons further degenerate, most patients require increasing doses of levodopa to achieve equivalent therapeutic benefit. Even with increased doses of levodopa, patients may begin to exhibit unpredictable OFF episodes throughout the day. In the later stages of the disease, many patients will suffer from LID. Patients with LID suffer from involuntary non purposeful movements and reduced control over voluntary movements. The cause of LID is unknown, but it is associated with the pulsatile administration of levodopa treatment, degeneration of key brain structures, the duration of levodopa treatment, total levodopa exposure, and other factors. LID can become severely disabling, rendering patients unable to perform routine daily tasks and increasing their risk of falling and social isolation. As Parkinson's disease progresses, the symptoms of LID worsen in frequency and severity. Eventually the total time that a patient spends either OFF or ON with troublesome LID can become a significant portion of his or her day. In addition, many Parkinson's disease patients at this stage have difficulty swallowing solid food or pills.

The chart below illustrates the fluctuating symptoms that an early and a late stage Parkinson's disease patient may experience during a two dose cycle of levodopa taken during a portion of the waking hours.

LID can be managed by decreasing the amount of levodopa administered to a patient, but this change can result in an increase in OFF time and a decrease in ON time. Many patients would rather endure periodic episodes of LID than face unpredictable OFF episodes. As a result, these patients will choose to maintain their dose of levodopa even though they will experience times when they are ON but suffering from troublesome LID. We estimate that half of Parkinson's disease patients in the United States develop motor complications within five years of initiating levodopa therapy, and approximately 70% of these patients suffer from LID.

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### Limitations of existing Parkinson's treatments

There are currently no medications that are approved for marketing in the United States or Europe for the treatment of LID, a motor complication associated with use of the levodopa based therapies. As a result, clinicians sometimes attempt to manage LID with existing Parkinson's disease products designed to increase the levels of dopamine activity in the brain. Examples include Azilect® (Teva), Requip XL™ (GSK), Mirapex ER™ (BI), Neupro® Patch (UCB), Comtan® (Novartis), Duopa™ (Abbvie), and Rytary™ (IMPAX). These Parkinson's therapies produce clinically relevant reductions in OFF time ranging from 0.7–1.9 hours, which mostly translate into increases in ON time without troublesome LID. However, none of these products reduce LID and some actually increase LID.

Physicians may also attempt to use the immediate release form of amantadine to treat LID, even though it is only approved for the treatment of Parkinson's disease, and not LID specifically. This approach is supported by a number of investigator initiated clinical studies and case studies, which suggest that it may be effective for the treatment of LID. However, these studies were not well controlled clinical trials that meet evidence based clinical or regulatory standards.

In addition to the limited data regarding its effectiveness, we believe that the use of the immediate-release form of amantadine to treat LID has also been limited by potential side effects at dose levels considered to be effective. The majority of Parkinson's disease patients tolerate twice daily dosing of 100 mg of amantadine, but often this dosing regimen is insufficient to provide adequate symptom relief. The available literature on amantadine for the treatment of LID indicates that higher doses of amantadine produce a greater reduction in LID symptoms. However, the increased frequency of adverse events at higher doses, in particular CNS events and sleep disturbances, generally limits the use of amantadine at doses greater than 200 mg per day. Immediate release versions of amantadine are absorbed relatively rapidly by the body with peak concentrations in the blood being reached two to four hours after administration. We believe that the side effects associated with immediate release amantadine are associated with this rapid rise in concentration within a few hours after dosing.

### The Adamas Solution—ADS 5102

ADS 5102 is a controlled release version of amantadine that addresses many of the limitations of immediate release amantadine by allowing higher daily doses of amantadine to be administered once daily at bedtime without a significant increase in side effects. In patients taking ADS 5102, the amantadine plasma concentration achieved in the early morning through mid day is estimated to be approximately two times that reached following administration of immediate release amantadine, providing symptomatic relief to patients as they engage in their daily activities. Further, the lower concentrations occur in the evening, reducing the potential negative impact of amantadine's sleep related side effects. In addition, ADS 5102 capsules can be opened to sprinkle the contents on food for use by Parkinson's disease patients who have difficulty swallowing due to their illness.

### ADS 5102 Phase 1 data—pharmacokinetic profile

Our development of ADS 5102 was driven by the discovery that the side effects of amantadine are not caused solely by the absolute levels of amantadine in the blood, but rather by the speed at which the maximum concentrations are reached. Immediate release amantadine is rapidly absorbed by the body, with its maximum concentration in the blood being reached in two to four hours. This rapid increase in blood concentration levels is associated with an increased level of CNS side effects. In contrast, the same amount of ADS 5102 is absorbed more slowly with the maximum concentration being achieved many hours later. This slower increase in blood concentration levels is believed to be associated with fewer CNS side effects than a more rapid one.

Because of this improved tolerability due to the novel pharmacokinetic profile, we were able to investigate ADS 5102 in clinical studies at dose strengths from 1.3 to 2.1 times greater than the 100 mg twice daily dose typically used with immediate release amantadine.

Based on our clinical experience, we are developing a 340 mg dose of ADS 5102 to be taken once daily at bedtime. With this regimen, highest amantadine plasma concentration would be achieved from the early morning through mid day, providing relief to patients as they engage in their daily activities, and the lowest concentrations would occur in the evening, reducing the potential for sleep related side effects.

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We have completed ten Phase 1 pharmacokinetic studies in healthy subjects with two controlled release versions of amantadine having slightly different release rates. The most frequently occurring adverse events reported in the Phase 1 studies were headache, fatigue, and dizziness, occurring in 5-10% of subjects, and the majority of adverse events were categorized as mild.

ADS 5102 Phase 2/3 (EASED Study)

In 2013, we completed a successful Phase 2/3 clinical trial of ADS 5102 for the treatment of LID. This trial, called EASED, was designed to investigate the safety and efficacy of three dose levels of ADS 5102 administered once daily at bedtime for the treatment of LID in Parkinson's disease. The study enrolled 83 Parkinson's disease patients, who were randomized in a 1:1:1:1 ratio to the four treatment groups: placebo, 260 mg ADS 5102, 340 mg ADS 5102, and 420 mg ADS 5102. The chart below shows the change in the Unified Dyskinesia Rating Scale, or UDysRS, score for each group in the EASED study. Both the 340 mg and 420 mg dose levels significantly reduced LID as measured by the change in the UDysRS total score over eight weeks versus placebo, meeting the primary endpoint for the clinical study ( $p=0.005$  and  $p=0.013$ , respectively). The magnitude of the change for the 340 mg ADS 5102 group was a 43% reduction versus baseline and a 27% reduction versus placebo.

In addition, ADS 5102 significantly increased ON time without troublesome LID at the 260 mg, 340 mg, and 420 mg dose levels from baseline to week eight relative to placebo by 3.3, 3.0 and 2.7 hours per day, respectively, as measured by patient diaries after eight weeks of treatment (least square means,  $p=0.004$ ,  $p=0.008$  and  $p=0.018$ , respectively). At the 340 mg dose level, OFF time was reduced by 0.9 hours per day from baseline relative to placebo after 8 weeks of treatment, though this latter result was not statistically significant ( $p=0.199$ ).

Based on analysis of the pharmacokinetic, safety, and efficacy data from the Phase 2/3 study, we selected 340 mg ADS 5102 taken once daily at bedtime as the recommended dose regimen and are using that dose in our ongoing Phase 3 trials. We believe that this dose offers the best benefit/risk ratio of the doses we have studied.

Treatment with ADS 5102 did not result in worsening of Parkinson's disease symptoms, as measured by the MDS UPDRS combined score, a standard measurement of Parkinson's disease related disability. The adverse events reported in this study were typically mild to moderate in severity and consistent with Parkinson's disease and the known amantadine adverse event profile. Five patients had serious adverse events. The most common adverse events,

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occurring in more than 10% of the subjects or by more than two subjects in any ADS 5102 group, were constipation, dizziness, hallucination, dry mouth, fall, confusional state, headache, nausea, and asthenia.

ADS 5102 Phase 3 trials for LID

EASE LID was initiated in June 2014. In July 2015, the study completed enrollment of 126 subjects in a 26 week multi center, randomized, double blind, placebo controlled study assessing the efficacy of a 340 mg dose of ADS 5102 administered once daily at bedtime for the treatment of LID in individuals with Parkinson's disease. The primary endpoint of this study was a reduction in LID as assessed at 12 weeks by changes in the Unified Dyskinesia Rating Scale (UDysRS) along with supporting data from secondary endpoints. The secondary endpoints include changes in the UDysRS as assessed at 24 weeks, ON time without troublesome dyskinesia and OFF time based on home diaries, the Unified Parkinson's Disease Rating Scale (MDS UPDRS), and the clinician's global impression of change in overall Parkinson's disease symptoms.

EASE LID 2 is an open label safety study that was initiated in July 2014. The study is planned to enroll approximately 250 subjects in a 52 week trial.

EASE LID 3 was initiated in October 2014. In December 2015, the study completed enrollment of 77 subjects in a 13 week multi center, randomized, double blind, placebo controlled study assessing the efficacy of a 340 mg dose of ADS 5102 administered once daily at bedtime for the treatment of LID in individuals with Parkinson's disease. The primary endpoint of this study is a reduction in LID as assessed at 12 weeks by changes in the Unified Dyskinesia Rating Scale (UDysRS) along with supporting data from secondary endpoints, which includes changes in ON time without troublesome dyskinesia and OFF time based on home diaries, the Unified Parkinson's Disease Rating Scale (MDS UPDRS), and the clinician's global impression of change in overall Parkinson's disease symptoms.

Phase 3 data (EASE LID Study)

We announced results from the EASE LID study in December 2015. The study showed a statistically significant reduction ( $p = 0.0009$ ) in LID at 12 weeks for patients who received ADS-5102 versus placebo as assessed by the Unified Dyskinesia Rating Scale (UDysRS). The reduction in LID was maintained at 24 weeks ( $p = 0.0008$ ), a key secondary analysis. The time profile of the change in UDysRS score is shown below, indicating that the effect is seen at the first post-baseline visit at week 2, and is maintained through week 24. The placebo corrected percentage change in UDysRS at week 12 is 23%.

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The patient diary secondary outcome measures also achieved statistical significance. Notably, at week 12, ADS-5102 significantly increased ON time without troublesome dyskinesia by 2.7 hours versus placebo and reduced OFF time by 0.9 hours. These effects were maintained at week 24.

Additional key endpoint	Change from baseline (placebo adjusted)
ON time without troublesome LID	+ 2.7 hours at week 12 (p<0.0001)
ON time without troublesome LID	+ 2.2 hours at week 24 (p=0.0007)
OFF time	- 0.9 hours at week 12 (p=0.0171)
OFF time	- 0.8 hours at week 24 (p=0.0406)

Finally, for the pre-specified population of subjects who contributed PD diary data at baseline and week 12, a synchronized time profile diary analysis was generated as shown below. These graphs elucidate the complex and dynamic pattern of motor complications over the course of a day for clinical trial subjects in the EASE LID study. Subjects awoken primarily in the OFF state, followed by ON without troublesome LID, and then by variable episodes of OFF and ON with troublesome LID. In this analysis, ADS-5102 treatment improved the quality of ON time by increasing ON time without troublesome LID from morning to late afternoon and evening hours, as well as reducing the OFF time during the day.

The reported adverse events associated with ADS-5102 were consistent with the known safety profile of amantadine as well as the safety results from our earlier placebo-controlled trial. The most common adverse events (occurring in at least five percent of ADS-5102-treated patients) were: hallucinations, peripheral edema, dizziness, dry mouth, constipation, falls, urinary tract infections, anxiety, contusion, livedo reticularis, abnormal dreams, depression and headaches. Four subjects discontinued treatment due to adverse events in the placebo group versus 13 in the ADS-5102 group. There were 17 subjects who experienced severe adverse events, four in the placebo group and 13 in the ADS-5102 group. Of these, one subject in the placebo group and three subjects in the ADS-5102 group had an event assessed to be study drug related. There were 10 subjects who experienced serious adverse events, three subjects in the placebo group and seven subjects in the ADS-5102 group. None of the serious adverse events were assessed to be study drug related.

We expect to submit an NDA to the FDA for ADS-5102 for the treatment of LID in 2016.

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### Commercialization plan for ADS 5102 in LID

We intend to commercialize ADS 5102 in the United States, subject to FDA approval, by developing our own sales force and in other markets through distribution agreements and collaborations with CNS focused pharmaceutical companies. We plan to focus our commercial efforts on the approximately 4,000 neurologists and movement disorder specialists in the United States who are responsible for the treatment of greater than 60% of the patients with late-stage Parkinson's disease. As these physician specialists are heavily concentrated in major urban markets, we believe an approximately 30 to 60 member sales force will provide adequate reach and frequency of communication for successful commercialization.

We will be responsible for negotiating coverage, reimbursement, and formulary placement decisions for ADS 5102 in the United States. We believe that if ADS 5102 is approved as the first product indicated in the United States for the treatment of LID, most payers are likely to extend coverage to it and that its placement on payer formularies and the amount of reimbursement will be influenced by the availability and pricing of branded treatments for symptoms of Parkinson's disease, branded treatments for other forms of dyskinesia, generic amantadine, and surgical treatments for symptoms of Parkinson's disease.

We intend to hold a pre-NDA meeting with the FDA to determine the contents of the NDA submission for ADS 5102. In addition, we intend to meet with regulators in certain markets outside the United States to determine the regulatory pathways for access to those markets.

### ADS-5102 for major symptoms associated with multiple sclerosis in patients with walking impairment

Amantadine has shown promising results in several other CNS indications, and in May 2015 we initiated a Phase 2 study of ADS-5102 for the treatment of major symptoms associated with multiple sclerosis in patients with walking impairment. We selected multiple sclerosis as the second target indication for ADS-5102 based on observations from small investigator-sponsored trials with immediate-release amantadine in Parkinson's disease and multiple sclerosis, which suggest improvement in symptoms, encouraging data from Adamas' preclinical studies in multiple sclerosis models, and encouraging data from the Phase 2/3 study of ADS-5102 in LID. We expect to announce data from this Phase 2 trial in the first half of 2016, and if successful, will discuss the results with the FDA and potentially pursue Phase 3 registration studies for this indication.

### Additional indications for ADS 5102

We intend to continue to review the results of preclinical studies, clinical trials, and case reports published in peer reviewed medical journals to evaluate additional potential CNS indications for ADS 5102, including hypokinetic movement disorders such as post-stroke deficits, and hyperkinetic movement disorders similar to LID, such as Huntington's chorea and tardive dyskinesia, and other neuropsychiatric disorders, such as depression, attention deficit hyperactivity disorder, and Alzheimer's disease. We anticipate that by using the 505(b)(2) regulatory pathway, we will be able to initiate the clinical development of ADS 5102 in new indications typically with Phase 2 studies and will not need to conduct any Phase 1 studies prior to initiating such Phase 2 studies. As a result, we expect to retain substantial flexibility in our development plans and may be able to respond to new clinical data and changes in the commercial environment.

### ADS 8800 series (ADS 5102 based fixed-dose combination products)

Using a similar product development strategy we employed with memantine, we are investigating and will potentially develop additional combination products based upon combining ADS 5102 with second agents. We have identified certain approved CNS drugs that we believe have the potential to be combined with ADS 5102 to treat chronic CNS

conditions, including Parkinson's disease, Alzheimer's disease, multiple sclerosis, psychosis, and depression. Each combination will be designed to provide clinical benefits in specific indications in which it appears that combination therapy including ADS 5102 can address a significant unmet clinical need. We believe we will be able to use the 505(b)(2) regulatory pathway to initiate clinical development of these product candidates. Additional drug drug interaction studies to assess the potential for interaction between ADS 5102 and the second agent may be required unless the two agents have been previously studied. We anticipate progressing into Phase 2/3 studies in combination therapies with minimal additional work.

ADS-4101 (Undisclosed) for treatment of epilepsy



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As part of our ADS-4000 development program, which comprises single-agent compounds outside of aminoadamantanes, we are developing ADS-4101, an extended-release version of an FDA-approved drug for the treatment of epilepsy. Epilepsy affects nearly 2.2 million people in the United States and 50 million people globally, with the U.S. anti-epileptic drug ("AED") market estimated to be \$4 billion and growing. Adequate seizure control is difficult to achieve, with 49% controlled with first mono therapy and 68% with combination therapy. In addition, titration and tolerability make AED compliance difficult, with 20-40% adverse event rates being typical even with careful titration. To date, extended-release drugs have primarily addressed convenience, not titration and tolerability.

We have identified a pharmacokinetic modification of an approved antiepileptic drug, which is intended to provide improved efficacy in treating partial onset epileptic seizures while maintaining tolerability. Formulation development is currently underway and we expect preclinical dose-finding studies to be complete in 2016. If the results of those studies are supportive, we plan to initiate clinical testing by the end of 2016 in a Phase 1 pharmacokinetic study.

### Additional Programs (ADS-4000 and ADS 9000 series)

We believe our product development strategy is broadly applicable to addressing limitations of other CNS drugs beyond aminoadamantanes whose pharmacokinetic profiles limit dosing. We are continuing to evaluate several different approved CNS drugs to enhance pharmacokinetics for such drugs alone (ADS-4000 series) or in fixed dose combinations with other approved drugs (ADS-9000 series) for potential use in a range of CNS indications.

### Other wholly owned product candidates

#### ADS-8704 (memantine HCl/donepezil HCl, outside of the United States only)

We have retained the rights and continue to evaluate potential development and commercialization pathways for ADS-8704, a fixed-dose combination of our proprietary controlled release version of memantine and donepezil for the treatment of moderate to severe dementia related to Alzheimer's disease in various non-U.S. markets.

#### ADS 8902 for severe influenza

We developed ADS 8902, a triple combination antiviral drug therapy for influenza, which is designed to inhibit viral replication at multiple points in the virus proliferation pathway. ADS 8902 is a proprietary fixed dose combination product containing three FDA approved products, amantadine, oseltamivir, and ribavirin. The National Institutes of Health, is currently conducting a multi center, 700 patient Phase 2/3 trial of amantadine, oseltamivir, and ribavirin for the treatment of severe influenza. The trial was initiated in 2011 and as of December 2015, it had randomized 472 patients. As the rate of enrollment in the trial is heavily dependent on the incidence and severity of seasonal influenza each year, we have not projected an anticipated completion date for the trial. If the National Institutes of Health trial is successful, we may seek to license rights to ADS 8902 to pharmaceutical companies for which the treatment of influenza is a commercial focus. In 2010, we suspended further internal activities on ADS 8902, due to the expected length of the clinical trial and a change in our strategic focus.

### Partnered products

#### Namenda XR and Namzaric

Through a partnership with Forest Laboratories, our portfolio includes two drugs commercially available in the United States: Namzaric (memantine hydrochloride extended-release and donepezil hydrochloride) capsules (formerly MDX-8704) and Namenda XR (memantine hydrochloride) extended release capsules, launched in May 2015 and June 2013, respectively. Under the terms of the license agreement, entered into in November 2012, Forest Laboratories substantially controls the commercialization of these products in the United States and the intellectual property rights

subject to the license agreement, including the prosecution, maintenance, and enforcement of such rights, in the United States.

#### Overview of Alzheimer's disease dementia

Alzheimer's disease dementia is a progressive neurodegenerative condition that affects over 5 million people in the United States. There is no known cure for Alzheimer's disease or any of the other conditions that cause dementia. Existing pharmaceutical therapies are approved for the treatment of symptoms of the disease, but have not been shown to alter disease progression. Even if disease modifying therapies are developed and approved, we believe it is likely that there will be a continuing need for symptomatic treatments. In 2014, approximately 2.7 million people in the United States were treated for Alzheimer's disease dementia, and U.S. sales of pharmaceutical treatments for Alzheimer's disease were approximately \$2.9 billion. We believe that the number of people treated for Alzheimer's disease will

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continue to increase as the number of elderly people in the United States increases, diagnosis of dementia becomes more common, and health care reform improves access to treatments.

### Existing treatments for Alzheimer's disease dementia

The only two classes of drugs approved for the treatment of Alzheimer's disease dementia are acetylcholinesterase inhibitors, or AChEIs, and NMDA receptor antagonists. Donepezil is the leading AChEI, and forms of memantine are the only NMDA receptor antagonists approved for Alzheimer's disease. Memantine is currently marketed by Forest in the United States in an immediate release version under the brand name Namenda and in a controlled release version under the brand name Namenda XR. Donepezil is sold by Pfizer and Eisai under the brand name Aricept and as a generic drug by a number of manufacturers. Namenda XR is approved for the treatment of moderate to severe dementia related to Alzheimer's disease, and donepezil is approved for the treatment of dementia in patients with mild to severe Alzheimer's disease.

Both memantine and donepezil are considered to be generally safe and well tolerated. The most common side effects of memantine are headache, diarrhea, and dizziness. The most common side effects of donepezil are nausea, diarrhea, not sleeping well, vomiting, muscle cramps, feeling tired, and not wanting to eat.

### Treatment of moderate to severe Alzheimer's disease dementia with combination therapy

The concurrent use of memantine and donepezil is a well established treatment option for patients with moderate to severe dementia related to Alzheimer's disease. The current treatment recommendations from the American Association of Geriatric Psychiatry encourage the use of an AChEI for the treatment of mild Alzheimer's disease and then to add memantine when patients progress to the moderate phase of the disease. Of the approximately 1,200,000 patients treated with Namenda/Namenda XR annually in the U.S., we estimate that approximately 70% of these patients also receive an AChEI treatment.

Concurrent use of memantine and donepezil is supported by clinical data, which shows that in patients with moderate to severe Alzheimer's disease, combination therapy resulted in a statistically significant improvement in the Severe Impairment Battery, or SIB, a commonly used outcome measure, as compared to treatment with donepezil alone. A second study demonstrated that concurrent use of Namenda XR and an AChEI also demonstrated a statistically significant improvement in the SIB as compared to treatment with donepezil alone.

Concurrent treatment with memantine and donepezil is generally safe and well tolerated with the most common side effects seen in clinical trials being dizziness, headache, and diarrhea. Of these side effects, incidence of dizziness with concurrent treatment is 5% as compared with 1% for treatment with donepezil alone.

### The Namzaric solution

In conjunction with Forest, we developed and launched Namzaric, a once daily fixed dose combination of Namenda XR and donepezil, to simplify the co administration of these drugs by a patient or caregiver with the goal of increasing compliance and adherence to the prescribed regimen. Namenda XR exhibits a much lower initial rise in plasma concentration when compared to immediate release memantine, which we believe is central to its dosing protocol of once daily administration and at a higher daily dose as compared to immediate release memantine. By improving the tolerability and formulating a once daily preparation of memantine, we have enabled a once daily fixed dose combination of memantine with donepezil. In addition, Namzaric capsules can be opened to sprinkle the contents on food. Forest made Namzaric available in two dose strengths, a combination of 28 mg memantine ER and 10 mg donepezil and a combination of 14 mg memantine ER and 10 mg donepezil. We believe that Namzaric has the potential to be adopted by patients already taking combination therapy, as well as moderate to severe patients

currently taking donepezil alone.

Forest has submitted a supplemental application to expand the indication for Namzaric to include patients who are on a stable dose of 10 mg donepezil and are ready to initiate treatment with Namzaric. This supplemental application will include manufacturing information to support two additional Namzaric doses: a fixed dose combination of 7 mg Namenda XR/10 mg donepezil and a fixed dose combination of 21 mg Namenda XR/10 mg donepezil. These additional dose combinations will allow patients who are receiving a stable dose of 10 mg donepezil but are naïve to Namenda XR to initiate treatment with Namzaric while utilizing the same three step titration that is currently approved for Namenda XR.

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### Research and Development

We continue to maintain our commitment to research and development, and a significant portion of our operating expenses is related to research and development. See “Item 8. Financial Statements and Supplementary Data” of this Annual Report on Form 10 K for costs and expenses related to research and development, and other financial information for each of the fiscal years 2015, 2014 and 2013.

### Intellectual property

Our success will significantly depend upon our ability to obtain and maintain patent and other intellectual property and proprietary protection for our drug candidates, including usage, pharmacokinetic, composition of matter, and formulation patents, as well as patent and other intellectual property and proprietary protection for our novel discoveries and other important technology inventions and know how. In addition to patents, we rely upon unpatented trade secrets, know how, and continuing technological innovation to develop and maintain our competitive position.

We seek to protect our proprietary information, in part, by using confidentiality agreements with our commercial partners, collaborators, employees, and consultants and invention assignment agreements with our employees and selected consultants. Despite these measures, any of our intellectual property and proprietary rights could be challenged, invalidated, circumvented, infringed, or misappropriated, or such intellectual property and proprietary rights may not be sufficient to permit us to take advantage of current market trends or otherwise to provide competitive advantages. For more information, please see “Risk factors—Risks related to intellectual property.”

Our current products and product candidates are based on novel discoveries related to the clinical implications of the timing of administration of drugs and pharmacokinetic and pharmacodynamic relationships. These discoveries led us to modify the pharmacokinetic profile of existing drugs in a manner that enables increased tolerability of higher doses as compared to immediate release versions. We are able to apply these pharmacokinetic and pharmacodynamic insights to the development of novel fixed dose combination therapeutics, potentially yielding significant clinical benefits. As such, our intellectual property covers the novel pharmacokinetic properties of our formulations and combinations and their methods of use.

As of February 15, 2016, we owned 24 issued U.S. patents, 15 U.S. patent applications and additional patents and patent applications in other jurisdictions. The patent portfolios for Namenda XR, Namzaric, ADS-8704, and ADS 5102 as of February 15, 2016 are summarized below:

#### Namenda XR, Namzaric and ADS-8704

Namenda XR and Namzaric are covered by a total of 13 of our issued U.S. patents containing method and compositions claims relating to their pharmacokinetic profile and method claims relating to dosing of memantine. These patents expire as late as 2029 and are exclusively licensed to Forest. We also own additional foreign patents and patent applications covering Namenda XR, Namzaric, and ADS-8704.

#### ADS 5102

ADS 5102 is currently covered by a total of nine issued U.S. patents and 11 additional patent applications containing method and composition claims relating to their pharmacokinetic profile and dosing of amantadine. These patents expire as late as 2030. These patents and patent applications are wholly owned by us and are not subject to any license agreements. We also own additional foreign patent applications covering ADS 5102.

### Sales and marketing

We intend to commercialize ADS 5102 in the United States, subject to FDA approval, by developing our own sales force and in other markets through distribution agreements and collaborations with CNS focused pharmaceutical companies. We plan to focus our commercial efforts on the approximately 4,000 neurologists and movement disorder specialists who are responsible for the treatment of approximately 60% of the patients in the United States with LID. As these physician specialists are heavily concentrated in major urban markets, we believe an approximately 30 to 60 member sales force will provide adequate reach and frequency of communication for successful commercialization. We intend that the members of our sales force will have proven experience and be able to effectively communicate the clinical value and pharmacoeconomic advantage of ADS 5102. To complement the sales force, we will recruit experienced sales management, marketing, and third party reimbursement professionals to support our

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commercialization efforts. We believe a targeted sales force will allow us to more effectively compete for future acquisitions and in licensing opportunities.

### License agreement with Forest

In November 2012, we entered in a license agreement with a wholly owned subsidiary of Forest. Subject to the terms of the license agreement, we granted Forest: an exclusive license, with the right to sublicense, under the relevant elements of our intellectual property, to commercialize human therapeutics containing memantine in the United States; a co-exclusive license along with us, with the right to sublicense, to develop and manufacture such products in the United States; and a non-exclusive license, with a right to sublicense, to develop and manufacture (but not commercialize) such products outside of the United States solely in support of the development or commercialization of such products within the United States. The license agreement established a joint development committee consisting of representatives from us and Forest to oversee the development of a fixed-dose memantine-donepezil product, such as Namzaric, in the United States with Forest having final decision making authority with certain restrictions. Forest is required to use commercially reasonable efforts to develop such a product in accordance with development and regulatory plans that we and Forest have mutually agreed upon that may be modified by the joint development committee or by Forest pursuant to the terms of the agreement. Forest is responsible for paying all costs associated with such development and reimburses us on a cost-plus basis for work performed by us at its request in support of the development. In addition, Forest is required at its expense to use commercially reasonable efforts to commercialize fixed-dose memantine-donepezil products in the United States.

Under our license agreement with Forest, we received a \$65 million upfront payment in November 2012 and since 2012, a total of \$95 million of development and regulatory milestones, including a final \$30 million milestone payment in the fourth quarter of 2014. Commencing five years after the initial launch of a fixed-dose memantine-donepezil product in the United States, such as Namzaric, which Forest launched in May 2015, we are entitled to receive royalties at rates ranging from the low double digits to the mid-teens on the net sales by Forest, its affiliates, and any sublicensees of such products in the United States. In addition, commencing in June of 2018, we are entitled to receive low to mid-single digit royalties on net sales in the United States by Forest, its affiliates, or any of its sublicensees of controlled-release versions of memantine, such as Namenda XR, or any other product covered by the terms of the license agreement. Forest's obligation to pay royalties with respect to fixed-dose memantine-donepezil products continues until the later of (i) 15 years after the commercial launch of the first fixed-dose memantine-donepezil product by Forest in the United States or (ii) the expiration of the Orange Book listed patents for which Forest obtained rights from us covering such product. Forest's obligations to pay royalties with respect to controlled-release versions of memantine or any other product covered by the agreement continue until the expiration of our Orange Book listed patents covering such product. Forest's obligations to pay royalties are subject to reduction in certain circumstances. In addition, Forest shall have no obligation to pay any royalty with respect to any product covered by the license agreement in any quarter in which there is significant competition from generic products, as defined in the agreement, in the United States. Under the terms of the license agreement, Forest substantially controls the commercialization of the products and the intellectual property rights subject to the license agreement, including the prosecution, maintenance, and enforcement of such rights. If we or our affiliates develop or commercialize the licensed products outside of the United States (other than in Japan) or otherwise enable a third party to do so, and such development or commercialization requires the use of or reference to certain data generated pursuant to the development plan, we will be obligated to make certain payments to Forest.

The license agreement terminates on a product-by-product basis upon the expiration of all royalty obligations with respect to each product and terminates in its entirety upon the expiration of all royalty obligations with respect to all products covered by the license agreement. Upon expiration of the license agreement with respect to a product, all licenses, and other rights granted to Forest by us with respect to that product become fully paid up and irrevocable. In addition, Forest may terminate the license agreement with respect to fixed-dose memantine-donepezil products by

delivering to us notice of its intent to cease development and commercialization of such products.

As Forest has fully paid all the milestone payments to us under the license agreement, our rights to participate in and influence the prosecution, maintenance, and enforcement of the intellectual property rights subject to the license has decreased. In addition, our remedy for any breach of the license agreement by Forest is to seek damages or equitable relief, not termination of the license agreement. Furthermore, we have no right to terminate the license agreement with respect to controlled release version of memantine or other products that are not fixed dose memantine donepezil products.

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### Competition

Our industry is highly competitive and subject to rapid and significant technological change. While we believe that our development experience and scientific knowledge provide us with competitive advantages, we may face competition from large pharmaceutical and biotechnology companies, smaller pharmaceutical and biotechnology companies, specialty pharmaceutical companies, generic drug companies, academic institutions, government agencies and research institutions, and others.

Many of our competitors may have significantly greater financial, technical, and human resources than we have. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. Our commercial opportunity could be reduced or eliminated if our competitors develop or market products or other novel technologies that are more effective, safer, or less costly than any that will be commercialized by us, or obtain regulatory approval for their products more rapidly than we may obtain approval for ours. Our success will be based in part on our ability to identify, develop, and manage a portfolio of drugs that are safer, more efficacious, and/or more cost effective than alternative therapies.

### ADS 5102

Currently, there are no FDA or EMA drug therapies approved for the treatment of LID. While a number of pharmaceutical companies, including Merck, Novartis, Osmotica Pharmaceuticals, Avanir Pharmaceuticals, Newron Pharmaceuticals, Neurolix Inc, Amarantus BioScience, Addex Pharma, and Neurim Pharmaceuticals Ltd have had programs aimed at developing treatments for LID, we believe ADS 5102 is one of the most advanced. Other products in late stage development for Parkinson's disease include product candidates from Kyowa Hakko, Acorda, Neuroderm, Acadia, Bial Portela CSA, Biotie Therapies Corp, Genervon Biopharmaceuticals, Pharma Two B, and Depomed. Products approved to treat late stage Parkinson's disease include Azilect (Teva), Requip XL (GlaxoSmithKline), Mirapex ER (Boehringer Ingelheim), Neupro Patch (UCB), Comtan (Novartis), Sinemet® (Merck & Co., Inc.), Parcopa® (Jazz Pharmaceuticals, Inc.), Apokyn® (Bertek), Bromocriptine (Mylan Laboratories, Inc.), Zelapar™ (Valeant Pharmaceuticals International), Eldepryl® (Somerset Pharmaceuticals Inc.), Tasmar® (Valeant Pharmaceuticals International), Cogentin® (Oaks Pharma Akorn), Exelon® (Novartis Pharmaceuticals Corp.), Stalevo® (Novartis), Rytary (Impax), Duopa (Abbvie), and generic versions of amantadine and other drugs. Physicians may use these drugs to attempt to manage LID. In selective cases for late stage patients, physicians and patients/caregivers will consider neurosurgical intervention, such as deep brain stimulation.

### Namenda XR/Namzaric

In the market for Alzheimer's disease treatments, Namenda XR and Namzaric compete or will compete with generic products such as galatamine, rivastigmine, and donepezil, as well as branded products such as the Exelon patch (Novartis) and Aricept 23 mg (Eisai). In addition, Forest currently markets Namenda, the immediate release version of memantine, which physicians and patients may favor instead of Namenda XR, the controlled release version. In addition, generic versions of Namenda became available in 2015. Several generic manufacturers are currently seeking regulatory approval to market generic versions of Namenda XR and Namzaric. We are also aware that Lundbeck, Otsuka and other biopharmaceutical companies are developing treatments for Alzheimer's disease that may compete with Namenda XR and Namzaric.

### Third party reimbursement

Sales of pharmaceutical products depend in significant part on the availability of coverage and adequate reimbursement by third party payers, such as state and federal governmental authorities, including those that administer the Medicare and Medicaid programs, managed care organizations and private insurers. Decisions

regarding the extent of coverage and amount of reimbursement to be provided for Namenda XR, Namzaric and ADS 5102 are or will be made on a plan by plan basis. Each plan determines whether or not it will provide coverage for a drug, what amount it will pay the manufacturer for the drug, and on what tier of its formulary the drug will be placed. The position of a drug on the formulary generally determines the co payment that a patient will need to make to obtain the drug and can strongly influence the adoption of a drug by patients and physicians. Patients who are prescribed treatments for their conditions and providers performing the prescribed services generally rely on third party payers to reimburse all or part of the associated healthcare costs. Patients are unlikely to use our products unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of our products. Additionally, a third party payer's decision to provide coverage for a drug does not imply that an adequate reimbursement rate will be approved. Also, third party payers are developing increasingly sophisticated methods of controlling healthcare costs. As a result,

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coverage, reimbursement, and placement determinations are complex, take time, and are often the subject of extensive negotiations between the payer and the maker of the drug.

Forest is responsible for obtaining coverage and negotiating reimbursement amounts and formulary placement for Namenda XR and Namzaric. Under our agreement with Forest, we will be entitled to receive payments from Forest based on future net sales of these products. The amount of revenue we will receive under the agreement is therefore significantly dependent on the extent to which Forest is able to obtain favorable coverage, reimbursement, and formulary placement decisions from payers.

We will be responsible for negotiating coverage, reimbursement, and formulary placement decisions for ADS 5102, if approved. Coverage, reimbursements, and placement decisions for a new product are based on many factors including the coverage, reimbursement, and placement of already marketed branded drugs for the same or similar indications, the safety and efficacy of the new product, availability of generics for similar indications, and the clinical need for the new product. Currently, there are no drugs approved for the treatment of LID, and generic amantadine is not approved for this indication.

We have had preliminary discussions regarding the potential coverage, reimbursement, and placement of ADS 5102 with consultants and representatives of payers, but have not begun formal negotiations with any payers. Based on these discussions, we believe that if ADS 5102 is approved as the first product indicated for the treatment of LID, most payers are likely to extend coverage to it and that its placement on payer formularies and the amount of reimbursement will be influenced by the aforementioned products, generic amantadine, and generic and branded treatments for symptoms of Parkinson's disease. Within the Medicare program, as self administered drugs, Namzaric and ADS 5102 would be, and Namenda XR is, reimbursed under the expanded prescription drug benefit, known as Medicare Part D. This program is a voluntary Medicare benefit administered by private plans that operate under contracts with the federal government. These Part D plans negotiate discounts with drug manufacturers, which are passed on to each of the plan's enrollees. Historically, Part D beneficiaries have been exposed to significant out of pocket costs after they surpass an annual coverage limit and until they reach a catastrophic coverage threshold. However, changes made by recent legislation will reduce this patient coverage gap, known as the "donut hole", by transitioning patient responsibility in that coverage range from 100% in 2010 to only 25% in 2020. To help achieve this reduction, since 2011, pharmaceutical manufacturers are required to pay quarterly discounts of 50% off the negotiated price of branded drugs issued to Medicare Part D patients in the donut hole.

If a drug product is reimbursed by Medicare or Medicaid, pricing and rebate programs must comply with the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, as applicable, as well as with the Medicaid rebate requirements of the Omnibus Budget Reconciliation Act of 1990, or the OBRA, and the Veterans Health Care Act of 1992, or the VHCA, each as amended. Among other things, the OBRA requires drug manufacturers to pay rebates on prescription drugs to state Medicaid programs and empowers states to negotiate rebates on pharmaceutical prices, which may result in prices for our future products that will likely be lower than the prices we might otherwise obtain. If products are made available to authorized users of the Federal Supply Schedule of the General Services Administration, additional laws and requirements apply.

An ongoing trend has been for third party payers, including the U.S. government, to apply downward pressure on the reimbursement of pharmaceutical products. Also, the trend towards managed health care in the United States and the concurrent growth of organizations such as health maintenance organizations may result in lower reimbursement for pharmaceutical products. We expect that these trends will continue as these payers implement various proposals or regulatory policies, including various provisions of the recent health reform legislation that affects reimbursement of these products. There are currently, and we expect that there will continue to be, a number of federal and state proposals to implement controls on reimbursement and pricing, directly and indirectly.

## Manufacturing

We currently have no manufacturing facilities and limited personnel with manufacturing experience. We rely on third party manufacturers to produce bulk drug substance and drug products required for our clinical trials of ADS 5102. We plan to continue to rely upon contract manufacturers to manufacture commercial quantities of our ADS 5102 and other product candidates if and when we receive approval for marketing by the applicable regulatory authorities.

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Our current products and product candidates are based upon controlled release coated pellet products that are quite difficult to manufacture. As shown below, these products consist of an inert core, a drug layer, an optional seal coating, and controlled release coatings. Our products are made in a fluidized bed coating machine in sequential steps. At each step, the intermediate product is assayed and released if it meets the particular specification for that step. Once the extended or controlled release coating is applied, the assay includes a step to insure that the desired dissolution rate is achieved. These coatings are relatively thin, and susceptible to changes in raw materials, temperature, humidity, and other manufacturing process parameters. We have invested significant time and money to understand and manipulate drug release, and will continue to do so.

We have clinical supplies of ADS 5102 manufactured for us by a contract manufacturing organization under a development agreement, and have put in place a commercial supply agreement. We are seeking to qualify one or more additional manufacturers. Contract manufacturers often encounter difficulties involving production yields, quality control, and quality assurance, as well as shortages of qualified personnel, resources, and equipment. Qualifying and negotiating long term contracts with manufacturers and providers of packaging services is a lengthy process. If at any time one or more of our qualified contract organizations were not able to manufacture our drug substance or provide the requisite services, our business and financial condition would be materially adversely affected.

Forest is responsible for all manufacturing related to Namenda XR and Namzaric.

Our third party manufacturers, their facilities, and all lots of drug substance and drug products used in our clinical trials are required to be in compliance with current Good Manufacturing Practices, or cGMP. The cGMP regulations include requirements relating to organization of personnel, buildings and facilities, equipment, control of components and drug product containers and closures, production and process controls, packaging and labeling controls, holding and distribution, laboratory controls, records and reports, and returned or salvaged products. The manufacturing facilities for our products must meet cGMP requirements and FDA satisfaction before any product is approved and we can manufacture commercial products. Our third party manufacturers are also subject to periodic inspections of facilities by the FDA and other authorities, including procedures and operations used in the testing and manufacture of our products to assess our compliance with applicable regulations. Failure to comply with statutory and regulatory requirements subjects a manufacturer to possible legal or regulatory action, including warning letters, the seizure or recall of products, injunctions, consent decrees placing significant restrictions on or suspending manufacturing operations, and civil and criminal penalties. These actions could have a material impact on the availability of our products.

### Government regulation

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

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

- nonclinical laboratory and animal tests, including some that must be conducted in accordance with Good Laboratory Practices;
- submission of an IND, which must become effective before clinical trials may begin;
- adequate and well controlled human clinical trials to establish the safety and efficacy of the proposed drug candidate for its intended use;
- pre-approval inspection of manufacturing facilities and selected clinical investigators for their compliance with Good Manufacturing Practices, or cGMP, and Good Clinical Practices; and
- FDA approval of an NDA to permit commercial marketing for particular indications for use.

The testing and approval process requires substantial time, effort, and financial resources. Prior to commencing the first clinical trial with a product candidate, we must submit an IND to the FDA. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30 day time period, raises safety concerns or questions about the conduct of the clinical trial by imposing a clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. Submission of an IND may not result in FDA authorization to commence a clinical trial. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development. Further, an independent institutional review board for each medical center proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial commences at that center. Regulatory authorities or an institutional review board or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk. Some studies also include a data safety monitoring board, which receives special access to unblinded data during the clinical trial and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy.

In general, for purposes of NDA approval, human clinical trials are typically conducted in three sequential phases that may overlap.

- Phase 1—Studies are initially conducted to test the product candidate for safety, dosage tolerance, absorption, metabolism, distribution, and excretion in healthy volunteers or patients.
- Phase 2—Studies are conducted with groups of patients with a specified disease or condition to provide enough data to evaluate the preliminary efficacy, optimal dosages and dosing schedule, and expanded evidence of safety. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
- Phase 3—These clinical trials are undertaken in larger patient populations to further evaluate dosage, to provide statistically significant evidence of clinical efficacy, and to further test for safety in an expanded patient population at multiple clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the product and provide an adequate basis for product labeling. These trials may be done globally to support global registrations.

Our product development strategy often relies on using Phase 2/3 studies as a central element of our clinical development plans. Typically these studies involve the testing of two or more doses of a product candidate, as is characteristic of a Phase 2 study, and also include a sufficient number of patients so that statistically significant evidence of efficacy can be obtained, as is characteristic of a Phase 3 study. In addition, we conduct the studies in a manner that we believe is consistent with the requirements for a Phase 3 study. We believe this approach has the potential to significantly shorten the time frame required for clinical development. The FDA generally requires that sponsors successfully complete two Phase 3 studies to obtain approval for a new drug, though in certain circumstances a single Phase 3 study is sufficient. We design and conduct our Phase 2/3 studies in a manner that is intended to allow the study to qualify as a Phase 3 study for the purposes of approval. The FDA has broad discretion in determining

whether or not

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a completed Phase 2/3 study will be considered the equivalent of a Phase 3 study for the purposes of approval, and there can be no assurance that the FDA will agree with our assessment that the design, conduct, and results of a Phase 2/3 study are such that the study should be treated as a Phase 3 study.

The FDA may require, or companies may pursue, additional clinical trials after a product is approved. These so called Phase 4 studies may be made a condition to be satisfied after approval. The results of Phase 4 studies can confirm the effectiveness of a product candidate and can provide important safety information.

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

### ANDA approval process

The Drug Price Competition and Patent Term Restoration Act of 1984, commonly known as the Hatch Waxman Act, established abbreviated FDA approval procedures for drugs that are shown to be equivalent to proprietary drugs previously approved by the FDA through its NDA process. Approval to market and distribute these drugs is obtained by filing an abbreviated NDA, or ANDA, with the FDA. An ANDA is a comprehensive submission that contains, among other things, data and information pertaining to the active pharmaceutical ingredient, drug product formulation, specifications, and stability of the generic drug, as well as analytical methods, manufacturing process validation data, and quality control procedures. Premarket applications for generic drugs are termed abbreviated because they generally do not include preclinical and clinical data to demonstrate safety and effectiveness. Instead, a generic applicant must demonstrate that its product is bioequivalent to the innovator drug. In certain situations, an applicant may obtain ANDA approval of a generic product with a strength or dosage form that differs from a referenced innovator drug pursuant to the filing and approval of an ANDA suitability petition. The FDA will approve the generic product as suitable for an ANDA application if it finds that the generic product does not raise new questions of safety and effectiveness as compared to the innovator product. A product is not eligible for ANDA approval if the FDA determines that it is not equivalent to the referenced innovator drug, if it is intended for a different use, or if it is not subject to an approved suitability petition. However, such a product might be approved under an NDA, with supportive data from clinical trials.

### 505(b)(2) approval process

Section 505(b)(2) of the FDCA provides an alternate regulatory pathway to FDA approval for new or improved formulations or new uses of previously approved drug products. Specifically, Section 505(b)(2) permits the filing of an NDA where at least some of the information required for approval comes from studies not conducted by or for the applicant and for which the applicant has not obtained a right of reference. The applicant may rely upon the FDA's findings of safety and effectiveness for an approved product that acts as the Reference Listed Drug, or RLD. The FDA may also require 505(b)(2) applicants to perform additional studies or measurements to support the change from the RLD. The FDA may then approve the new product candidate for all or some of the labeled indications for which the referenced product has been approved, as well as for any new indication sought by the Section 505(b)(2) applicant.

Our current and anticipated product candidates based upon ADS 5102 are or will be based on already approved active pharmaceutical ingredients, or APIs, rather than new chemical entities, and a formulation that has been through Phase 1 studies. Accordingly, we expect to be able to rely on information from previously conducted studies



involving our ADS 5102 formulation in our clinical development plans and our NDA submissions. For product candidates that involve novel fixed dose combinations of existing drugs or for studies of an existing product or product candidate in a new indication, we expect that we will generally be able to initiate Phase 2/3 studies without conducting any new non clinical or Phase 1 studies. In those instances where our product candidate is a pharmacokinetically enhanced version of an approved API, we will need to conduct certain non clinical and Phase 1 studies to confirm the pharmacokinetic profile of the product candidate prior to conducting Phase 2/3 studies.

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### Orange Book listing

In seeking approval for a drug through an NDA, including a 505(b)(2) NDA, applicants are required to list with the FDA certain patents whose claims cover the applicant's product. Upon approval of an NDA, each of the patents listed in the application for the drug is then published in Approved Drug Products with Therapeutic Equivalence Evaluations, also known as the Orange Book. Any applicant who files an ANDA seeking approval of a generic equivalent version of a drug listed in the Orange Book or a 505(b)(2) NDA referencing a drug listed in the Orange Book must certify to the FDA that (1) no patent information on the drug product that is the subject of the application has been submitted to the FDA; (2) such patent has expired; (3) the date on which such patent expires; or (4) such patent is invalid or will not be infringed upon by the manufacture, use, or sale of the drug product for which the application is submitted. This last certification is known as a Paragraph IV certification. If the competitor has provided a Paragraph IV certification to the FDA, the competitor must also send notice of the Paragraph IV certification to the holder of the NDA for the RLD and the patent owner once the application has been accepted for filing by the FDA. The NDA holder or patent owner may then initiate a patent infringement lawsuit in response to the notice of the Paragraph IV certification. The filing of a patent infringement lawsuit within 45 days of the receipt of a Paragraph IV certification prevents the FDA from approving the application until the earlier of 30 months from the date of the lawsuit, expiration of the patent, settlement of the lawsuit, or a decision in the infringement case that is favorable to the applicant. The applicant may also elect to submit a "Section VIII" statement certifying that its proposed label does not contain, or carves out, any language regarding the patented method of use rather than certify to a listed method of use patent. We and Forest have received notices of ANDAs submitted to the FDA requesting permission to manufacture and market generic versions of Namenda XR, and we, Forest, Forest Laboratories Holdings Ltd., Merz Pharma GmbH & Co. KGaA, and Merz Pharmaceuticals GmbH are currently in litigation with the notifying parties. For further information, see "Item 3. Legal proceedings."

### NDA submission and review by the FDA

The results of product development, nonclinical studies, and clinical trials are submitted to the FDA as part of an NDA. The submission of an NDA requires payment of a substantial user fee to the FDA. The FDA may convene an advisory committee to provide clinical insight on application review questions. The FDA reviews applications to determine, among other things, whether a product is safe and effective for its intended use and whether the manufacturing controls are adequate to assure and preserve the product's identity, strength, quality, and purity. Before approving an NDA, the FDA will inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Once the NDA submission has been accepted for filing, which occurs, if at all, within 60 days after submission of the NDA, the FDA's goal for a non priority review of a 505(b)(2) NDA is ten months to complete the review process for the application and respond to the applicant, which can take the form of either a Complete Response Letter or Approval. The review process is often significantly extended by FDA requests for additional information, studies, or clarification. The FDA may delay or refuse approval of an NDA if applicable regulatory criteria are not satisfied, require additional testing or information, and/or require post marketing testing and surveillance to monitor safety or efficacy of a product. FDA approval of any NDA submitted by us will be at a time the FDA chooses. Also, if regulatory approval of a product is granted, such approval may entail limitations on the indicated uses for which such product may be marketed. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing regulatory standards is not maintained or if problems occur after the product reaches the marketplace. In addition, the FDA may require Phase 4 post marketing studies to monitor the effect of approved products, and may limit further marketing of the product based on the results of these post marketing studies.

### Post approval requirements

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

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

Moreover, the recently enacted Drug Supply Chain Security Act imposes new obligations on manufacturers of pharmaceutical products related to product and tracking and tracing. Among the requirements of this new legislation, manufacturers will be required to provide certain information regarding the drug products to individuals and entities to which product ownership is transferred, label drug product with a product identifier, and keep certain records regarding the drug product. The transfer of information to subsequent product owners by manufacturers will eventually be required to be done electronically. Manufacturers will also be required to verify that purchasers of the manufacturers' products are appropriately licensed. Further, under this new legislation, manufactures will have drug product investigation, quarantine, disposition, and notification responsibilities related to counterfeit, diverted, stolen, and intentionally adulterated products, as well as products that are the subject of fraudulent transactions or which are otherwise unfit for distribution such that they would be reasonably likely to result in serious health consequences or death.

### Other healthcare regulations

Our business activities, including but not limited to, research, sales, promotion, distribution, medical education, and other activities following product approval will be subject to regulation by numerous regulatory and law enforcement authorities in the United States in addition to the FDA, including potentially the Department of Justice, the Department of Health and Human Services and its various divisions, including the Centers for Medicare and Medicaid Services, and state and local governments. Our business activities must comply with numerous healthcare laws, including but not limited to, the federal Anti Kickback Statute, the False Claims Act, the Veterans Health Care Act, and similar state laws.

The federal Anti Kickback Statute prohibits, among other things, any person or entity from knowingly and willfully offering, paying, soliciting, or receiving any remuneration, directly or indirectly, overtly or covertly, in cash or in kind, to induce or in return for purchasing, leasing, ordering, or arranging for the purchase, lease, or order of any item or service reimbursable under Medicare, Medicaid, or other federal healthcare programs. The term remuneration has been interpreted broadly to include anything of value. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution. The exceptions and safe harbors are drawn narrowly and practices that involve remuneration that may be alleged to be intended to induce prescribing, purchasing, or recommending may be subject to scrutiny if they do not qualify for an exception or safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per se illegal under the Anti Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case by case basis based on a cumulative review of all of its facts and circumstances.

The federal False Claims Act prohibits, among other things, any person or entity from knowingly presenting, or causing to be presented, a false claim for payment to, or approval by, the federal government or knowingly making, using, or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government.

We and our business activities are subject to the civil monetary penalties statute, which imposes penalties against any person or entity who, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent.

Additionally, the federal Physician Payments Sunshine Act within the Patient Protection and Affordable Care Act, or PPACA, and its implementing regulations, require certain manufacturers of drugs, devices, biological, and medical supplies for which payment is available under Medicare, Medicaid, or the Children's Health Insurance Program (with certain exceptions) to report information related to certain payments or other transfers of value made or distributed to physicians and teaching hospitals, or to entities or individuals at the request of, or designated on behalf of, the

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physicians and teaching hospitals and to report annually certain ownership and investment interests held by physicians and their immediate family members.

In addition, we may be subject to data privacy and security regulation by both the federal government and the states in which we conduct our business. The Health Insurance Portability and Accountability Act of 1996, or HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and its implementing regulations, imposes certain requirements relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH makes HIPAA's privacy and security standards directly applicable to business associates— independent contractors or agents of covered entities that receive or obtain protected health information in connection with providing a service on behalf of a covered entity. HITECH also created four new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable business associates and possibly other persons, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions. In addition, state laws govern the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

The Veterans Health Care Act of 1992 requires manufacturers of "covered drugs" to offer those drugs for sale to certain federal agencies, including but not limited to, the Department of Veterans Affairs, on the Federal Supply Schedule, which requires compliance with applicable federal procurement laws.

Depending on the circumstances, failure to comply with these laws can result in penalties, including criminal, civil, and/or administrative criminal penalties, damages, fines, disgorgement, exclusion of products from reimbursement under government programs, "qui tam" actions brought by individual whistleblowers in the name of the government, refusal to allow us to enter into supply contracts, including government contracts, reputational harm, diminished profits, and future earnings, and the curtailment or restructuring of our operations, any of which could adversely affect our business.

The United States and some foreign jurisdictions are considering or have enacted a number of legislative and regulatory proposals designed to change the healthcare system in ways that could affect our ability to sell our products profitably. Among policy makers and payers in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives.

For example, in March 2010, the PPACA was passed, which has the potential to substantially change health care financing by both governmental and private insurers, and to significantly impact the U.S. pharmaceutical industry. The PPACA, among other things, revised the methodology by which rebates owed by manufacturers to the state and federal government for covered outpatient drugs under the Medicaid Drug Rebate Program are calculated, increased the minimum Medicaid rebates owed by most manufacturers under the Medicaid Drug Rebate Program, extended the Medicaid Drug Rebate program to utilization of prescriptions of individuals enrolled in Medicaid managed care organizations, subjected manufacturers to new annual fees and taxes for certain branded prescription drugs, and provided incentives to programs that increase the federal government's comparative effectiveness research.

### The Foreign Corrupt Practices Act

The Foreign Corrupt Practices Act, or FCPA, prohibits any U.S. individual or business from paying, offering, or authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party, or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or

business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with accounting provisions requiring the company to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations.

Federal laws providing for patent term extensions and data exclusivity

Provisions of various federal laws may allow a company to extend market exclusivity for a product beyond the expiration dates of the patents covering the product by either extending the term of the patents or limiting the right of a

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competitor to reference the company's data in a regulatory submission. These laws include the Hatch Waxman Act and the Best Pharmaceuticals for Children Act of 2002. We do not anticipate materially benefiting from these provisions.

### Foreign regulation

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

### Employees

As of December 31, 2015, we had 62 full time equivalent employees. Of these employees, 31 were engaged in research and development. Our employees are not represented by labor unions or covered by collective bargaining agreements. We consider our relationship with our employees to be good.

### Corporate and other Information

We were incorporated in Delaware in November 2000 under the name NeuroMolecular, Inc. In December 2004, we changed our name to NeuroMolecular Pharmaceuticals, Inc., and in July 2007 we changed our name to Adamas Pharmaceuticals, Inc.

Our principal executive offices are located at 1900 Powell Street, Suite 750, Emeryville, California 94608, and our telephone number is (510) 450 3500. Our website address is [www.adamaspharma.com](http://www.adamaspharma.com). References to our website address do not constitute incorporation by reference of the information contained on the website, and the information contained on the website is not part of this document.

We make available, free of charge on our corporate website, copies of our Annual Reports on Form 10 K, Quarterly Reports on Form 10 Q, Current Reports on Form 8 K, Proxy Statements, and all amendments to these reports, as soon as reasonably practicable after such material is electronically filed with or furnished to the Securities and Exchange Commission pursuant to Section 13(a) or 15(d) of the Securities Exchange Act. We also show detail about stock trading by corporate insiders by providing access to SEC Forms 3, 4 and 5. The public may also read and copy any materials filed by us with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Room 1580, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. This information may also be obtained from the SEC's on line database, which is located at [www.sec.gov](http://www.sec.gov). Our common stock is traded on the NASDAQ Stock Market under the symbol "ADMS".

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012. As such, we are eligible for exemptions from various reporting requirements applicable to other public companies that are not emerging growth companies, including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes Oxley Act of 2002 and reduced disclosure obligations regarding executive compensation. We will remain an emerging growth company until the earlier of (1) December 31, 2019, (2) the last day of the fiscal year (a) in which we have total annual gross revenue of at least \$1.0 billion or (b) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non affiliates exceeds \$700 million as of the prior June 30th, and (3) the date on which we have issued more than \$1.0 billion in non convertible debt securities during the prior three year period.





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### Item 1A. Risk Factors

We have identified the following risks and uncertainties that may have a material adverse effect on our business, financial condition, results of operations and future growth prospects. Our business could be harmed by any of these risks. The risks and uncertainties described below are not the only ones we face. The trading price of our common stock could decline due to any of these risks, and you may lose all or part of your investment. In assessing these risks, you should also refer to the other information contained in this Annual Report on Form 10-K, including our condensed consolidated financial statements and related notes.

#### Risks related to our financial condition and need for additional capital

Although we reported net income for the fiscal years ended December 31, 2014, 2013, and 2012, we incurred significant losses in prior years and the fiscal year ended December 31, 2015, and expect to incur substantial losses in the future.

We are a clinical-stage pharmaceutical company and do not currently directly market any products. We currently exclusively license U.S. patent rights for two approved products, Namzaric (formerly known as MDX-8704) and Namenda XR, to Forest Laboratories Holdings Limited, or Forest, an indirect wholly-owned subsidiary of Allergan plc, and Forest markets Namzaric and Namenda XR in the United States, but we do not currently receive royalties on the sales of those products. We continue to incur significant research and development and general and administrative expenses related to our product candidates and our operations. Although we reported net income for the fiscal years ended December 31, 2014, 2013, and 2012, this was almost entirely due to milestone payments we received pursuant to our license agreement with Forest. We incurred significant operating losses in 2015, 2011, and prior years and as we received our final milestone payment in 2014 pursuant to our license agreement with Forest, we expect to incur substantial and increasing losses for the foreseeable future. As of December 31, 2015, we had an accumulated deficit of \$62.2 million.

We have financed our operations primarily through our collaboration with Forest, public and private equity offerings, and, to a lesser extent, government grants, venture debt, and benefits from tax credits made available under a federal stimulus program supporting drug development. We have devoted substantially all of our efforts to research and development, including clinical studies, but have not completed development of any product candidates. We anticipate that our expenses will increase substantially as we:

- establish a CNS sales force and distribution and marketing capabilities to commercialize products for which we may obtain regulatory approval;
- enhance operational, financial, and information management systems and hire more personnel, including personnel to support development of our product candidates and, if a product candidate is approved, our commercial operations;
- complete the Phase 3 program of our lead wholly-owned product candidate, ADS-5102 in levodopa-induced dyskinesia, or LID;
- conduct clinical trials of ADS-5102 for the treatment of major symptoms associated with multiple sclerosis, or MS, in patients with walking impairment and potentially other indications;
- conduct preclinical and clinical trials of ADS-4101 for the treatment of epilepsy (partial onset seizures);
- seek regulatory approvals for our product candidates that successfully complete clinical studies;
- continue the research, development, and manufacture of our current product candidates; and
- seek to discover or in-license additional product candidates.

To be profitable in the future, we or our current and future potential collaboration partners must succeed in developing and commercializing products with significant market potential. This will require us or our partners to be successful in a range of activities, including advancing product candidates into clinical trials, completing clinical studies, and

obtaining regulatory approvals related to those product candidates, and manufacturing, marketing, and selling those

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products for which regulatory approvals are obtained. We or our partners may not succeed in these activities, and, as a result, we may never generate revenue that is sufficient to be profitable in the future. We will not be entitled to receive any royalty payments with respect to sales of Namzaric until May 2020 and Namenda XR until June 2018.

Even if we attain profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to achieve or sustain profitability would cause cash generated from operations to be inadequate to fund future operations and could depress the value of our stock and impair our ability to raise capital, expand our business, diversify our product candidates, market our product candidates, if approved, or continue our operations.

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 may fluctuate significantly in the future, which makes it difficult for us to predict our future operating results. We received our final milestone payment under our license agreement with Forest in 2014. Any future revenue will depend on the establishment of potential future collaboration and license agreements, if any, and the achievement of any upfront or milestone payments provided thereunder and sales of our product candidates, if approved. Accordingly, 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. Furthermore, 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 level of demand for our products, should any of our product candidates receive regulatory approval, which may vary significantly as they are launched and compete for position in the marketplace;
- pricing and reimbursement policies with respect to our products candidates, if approved, and the competitive response from existing and potential future therapeutic approaches that compete with our product candidates;
- the cost of manufacturing our product candidates, which may vary due to a number of factors, including the terms of our agreements with contract manufacturing organizations, or CMOs;
- the timing, cost, level of investment, and success or failure of research and development activities relating to our preclinical and clinical-stage product candidates, which may change from time to time;
- expenditures that we may incur to acquire and develop additional product candidates and technologies;
- the timing and success or failure of clinical studies for competing product candidates, or any other change in the competitive landscape of our industry, including consolidation among our competitors or partners;
- future accounting pronouncements or changes in our accounting policies; and
- changing or volatile U.S., European, and global economic environments.

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 and/or earnings guidance that we may provide.

We may need additional funds and, if we cannot raise additional capital when needed, we may have to curtail or cease operations.

We are seeking to advance multiple product candidates through the research and clinical development process. The completion of the development and the potential commercialization of our product candidates, should they receive

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approval, will require substantial funds. If such additional funding is not available on favorable terms or at all, we may need to delay or reduce the scope of our research and clinical development programs. As of December 31, 2015, we had approximately \$120.0 million in cash, cash equivalents, and investments. In January 2016, we raised an additional \$61.8 million from the sale of 2,875,000 shares of common stock. We believe that our available cash, cash equivalents, and investments will be sufficient to fund our anticipated level of operations for at least the next 12 months, but there can be no assurance that this will be the case. Our future financing requirements will depend on many factors, some of which are beyond our control, including:

- the rate of progress and cost of our clinical studies;
- the initiation of additional clinical studies or new programs;
- the timing of, and costs involved in, seeking and obtaining approvals from the U.S. Food and Drug Administration, or FDA, and potentially other regulatory authorities;
- the costs of commercialization activities related to our product candidates, if approved, including initiating and expanding our sales, marketing, and distribution activities in anticipation of commercialization;
- the degree and rate of market acceptance of any approved products launched by us, Forest, or any future partners;
- the coverage of our products, if approved, by third-party payers and the formulary tier in which health plans and other payers place our products and the rate at which the products are reimbursed;
- 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 therapeutic approaches or other adverse market developments.

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

### Risks related to the development and commercialization of our current and future products

Our success depends heavily on the approval and successful commercialization of ADS-5102 as well as the successful U.S. commercialization by Forest of Namzaric and Namenda XR. If we are unable to successfully commercialize ADS-5102 or Forest is unable to successfully commercialize Namzaric and Namenda XR in the U.S., or if either we or Forest experience significant delays in doing so, our business will be materially harmed.

We have invested a significant portion of our efforts and financial resources into the development of ADS-5102, an oral once daily controlled-release version of the FDA-approved drug amantadine, and Namzaric, a fixed-dose combination of the FDA-approved drugs memantine and donepezil. Namzaric has been exclusively licensed to Forest in the United States. In addition, we have granted Forest a royalty-bearing license under certain of our patents to commercialize Namenda XR, a controlled-release version of memantine, in the United States. Our ability to generate

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product and royalty revenue will depend heavily on the successful development, regulatory approval and eventual commercialization of ADS-5102 and successful commercialization of Namzaric and Namenda XR. Under the terms of our license agreement with Forest, we will not be entitled to receive royalty payments on the sale of Namzaric until May 2020 and Namenda XR until June 2018. The success of these drugs and drug candidates will depend on numerous factors, including:

- successfully completing the development program for ADS-5102 in a timely manner;
- receiving marketing approval for ADS-5102 from the FDA in a timely manner so as to obtain orphan exclusivity and, to a lesser extent, similar regulatory authorities outside the United States for our product candidates;
- successfully establishing and maintaining commercial manufacturing with third parties;
- launching commercial sales of any of the product candidates that may be approved;
- the medical community and patients accepting any approved product;
- the placement of any approved products on payers' formulary tiers and the reimbursement rates established for the approved products;
- effectively competing with other therapies;
- any approved products continuing to have an acceptable safety profile following approval; and
- obtaining, maintaining, enforcing, and defending intellectual property rights and claims.

If we or Forest 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 materially harm our business.

Forest's ability to successfully commercialize Namzaric and Namenda XR will depend in part on its ability to transition patients currently being prescribed the immediate-release version of memantine, known as Namenda IR, to Namenda XR and subsequently or directly to Namzaric. Other factors, including the availability of generic memantine, may negatively impact Forest's ability to successfully commercialize Namzaric and Namenda XR, our future royalty income could be materially adversely affected.

ADS-5102 is our only product candidate in clinical trials. We cannot give any assurance that the Phase 3 clinical program for LID or development program for any of our product candidates will be successful or completed in a timely or effective manner. If clinical studies of ADS-5102 or our other product candidates fail to demonstrate sufficient 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. Our failure to successfully complete our Phase 3 program for ADS-5102, or otherwise adequately demonstrate the safety and effectiveness of this product candidate or our other product candidates will prevent us from receiving regulatory approval and would have a material and adverse impact on our business.

ADS-5102 is our only product candidate in clinical trials. Before obtaining regulatory approval for the sale of our product candidates in any targeted indication, we must conduct extensive clinical studies and in some instances, extensive preclinical testing, including in certain indications, reproductive toxicology and carcinogenicity studies, to demonstrate the safety and efficacy of our product candidates in humans. Preclinical and clinical studies are expensive, are difficult to design and implement, can take many years to complete and are uncertain as to outcome. A failure of one or more of our preclinical or clinical studies could occur at any stage of testing. The outcome of



preclinical testing and early clinical studies may not be predictive of the success of later preclinical or clinical studies, and interim results of a clinical study do not necessarily predict final results. For example, the successful results of our Phase 2/3 EASED study and Phase 3 EASE LID study of ADS-5102 for the treatment of LID may not be confirmed in our remaining Phase 3

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study. Top-line results from EASE-LID 3 are expected in the first half of 2016, and we continue to obtain long-term safety data from our EASE LID 2 trial. Additional safety or efficacy results from these studies may prove to be less favorable than our prior studies for a variety of reasons, including differences in design, treatment period or sample size. Accordingly, the reduction in LID compared to baseline prior to the administration of ADS-5102 may vary from our earlier studies. A number of companies in the pharmaceutical industry have suffered significant setbacks in clinical trials, even in advanced clinical trials after showing promising results in earlier clinical trials. A 2009 study completed by the Tufts Center for the Study of Drug Development estimated that less than 47% of certain CNS drugs in Phase 3 clinical trials proceeded to regulatory review.

If the data from our development program fail to adequately demonstrate the safety and effectiveness of ADS-5102, we may not be able to pursue or obtain regulatory approval, which would have a material and adverse impact on our business.

We may experience numerous unforeseen events during, or as a result of, clinical studies that could delay or prevent our ability to receive regulatory approval or commercialize our product candidates, including that:

- clinical studies of our product candidates may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical studies or abandon product development programs;
- even if clinical studies demonstrate statistically significant efficacy and acceptable safety, the FDA or similar authorities outside the United States may not consider the results of our studies to be sufficient for approval of ADS-5102 or any of our product candidates in their proposed indications;
- the number of patients required for clinical studies of our product candidates may be larger than we anticipate, enrollment in these clinical studies may be insufficient or slower than we anticipate, or patients may drop out of these clinical studies at a higher rate than we anticipate;
- the cost of clinical studies of our product candidates may be greater than we anticipate;
- the conduct of clinical studies of our product candidates may require more resources than we anticipate: for example, our Phase 3 program for ADS-5102 for LID includes a large number of sites in the United States and Europe, compliance with a variety of foreign and domestic governmental regulations and new initiatives and processes for which we do not have prior experience implementing;
- our clinical sites and clinical investigators may fail to comply with, or inconsistently apply, the trial protocols, regulatory requirements including Good Clinical Practices, contractual obligations and the rating assessments;
- our patients or their caregivers may fail to comply with their treatment instructions or home diaries;
- our third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- we might have to suspend or terminate clinical studies 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 proposed clinical development plans or may require costly modifications to such plans;
- regulators or institutional review boards may not authorize us or our investigators to commence a clinical study or conduct a clinical study at a prospective study site;
- regulators or institutional review boards may require that we or our investigators suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements; and



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

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

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

Our product development costs will increase if we experience delays in testing or approvals. Significant clinical study delays also could shorten any periods during which we may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before we do, which would impair our ability to commercialize our product candidates and harm our business and results of operations.

Our product candidates have never been manufactured on a commercial scale, and there are risks associated with developing manufacturing and packaging processes and scaling them up to commercial scale on a timely basis.

Our product candidates have never been manufactured on a commercial scale, and there are risks associated with developing manufacturing and packaging processes and scaling them up 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 or equipment. Furthermore, there is no assurance we will be able to negotiate or maintain contracts with CMOs for long-term supply on acceptable terms or on a timely basis to ensure adequate supply for commercialization or our other needs. These risks could delay an NDA for ADS-5102 and adversely affect regulatory approval of a product candidate. In addition, even if we could otherwise obtain regulatory approval for any product candidate, there is no assurance that CMOs with which we contract will be able to manufacture the approved product to specifications acceptable to the FDA or other regulatory authorities or to produce it in sufficient quantities to meet the requirements for the potential launch of the product to meet potential future demand on a timely basis. If our CMOs are unable to produce sufficient quantities of the approved product, our regulatory approval or commercialization efforts would be significantly impaired, which would have an adverse effect on our business, financial condition, results of operations, and growth prospects.

Our product candidates, including ADS-5102, and both Namzaric and Namenda XR are complex to manufacture, and manufacturing disruptions may occur.

Our product candidates, including ADS-5102, and both Namzaric and Namenda XR include controlled-released versions of existing drugs, and some are combinations of existing drugs. The manufacture and packaging of controlled-release versions of existing drugs or combinations of existing drugs are substantially more complex than the manufacture and packaging of the immediate-release versions of drugs alone. Even after the manufacturing process for a controlled-release or combination product has been scaled to commercial levels and numerous commercial lots have been produced, manufacturing disruptions may occur. Such problems may prevent the production of lots that meet the specifications required for sale of the product and may be difficult and expensive to resolve. For example, in November 2013, Forest recalled three packaged lots of Namenda XR because Forest's dissolution testing revealed a failure to meet specification throughout shelf life. Namenda XR is one of the components of Namzaric. If any such issues were to arise with respect

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to our product candidates or future products, if any, or if Forest's sales of Namzaric or Namenda XR were to be negatively impacted by such issues, our business, financial results or stock price could be adversely affected.

If generic manufacturers use litigation and regulatory means to obtain approval for generic versions of products on which our future revenue depends, our business will suffer.

Under the U.S. Food, Drug and Cosmetic Act, or FDCA, the FDA can approve an Abbreviated New Drug Application, or ANDA, for a generic version of a branded drug without the ANDA applicant undertaking the clinical testing necessary to obtain approval to market a new drug. In place of such clinical studies, an ANDA applicant usually needs only to submit data demonstrating that its product has the same active ingredient(s) and is bioequivalent to the branded product, in addition to any data necessary to establish that any difference in strength, dosage form, inactive ingredients, or delivery mechanism does not result in different safety or efficacy profiles, as compared to the reference drug.

The FDCA requires that an applicant for approval of a generic form of a branded drug certify either that its generic product does not infringe any of the patents listed by the owner of the branded drug in the Approved Drug Products with Therapeutic Equivalence Evaluations, also known as the Orange Book, or that those patents are not enforceable. This process is known as a paragraph IV challenge. Upon receipt of the paragraph IV notice, the owner has 45 days to bring a patent infringement suit in federal district court against the company seeking ANDA approval of a product covered by one of the owner's patents. The discovery, trial, and appeals process in such suits can take several years. If this type of suit is commenced, the FDCA provides a 30-month stay on the FDA's approval of the competitor's application. This type of litigation is often time-consuming and costly and may result in generic competition if the patents at issue are not upheld or if the generic competitor is found not to infringe the owner's patents. If the litigation is resolved in favor of the ANDA applicant or the challenged patent expires during the 30-month stay period, the stay is lifted and the FDA may thereafter approve the application based on the standards for approval of ANDAs.

For example, several companies have submitted ANDAs to the FDA requesting permission to manufacture and market generic versions of Namenda XR, on which we are entitled to receive royalties from Forest beginning in June 2018. In the notices, these companies allege that the patents associated with Namenda XR, one of which is owned by Forest, one of which is exclusively licensed to Forest by Merz Pharma GmbH & Co. KGaA, and others of which are owned by us and licensed by us exclusively to Forest in the United States, are invalid, unenforceable, or will not be infringed by the companies' manufacture, use or sale of generic versions of Namenda XR. We, Forest, Merz Pharma GmbH & Co. KGaA, and Merz Pharmaceuticals GmbH (together Merz) filed lawsuits for infringement of the relevant patents against several of these companies that had then submitted ANDAs. We and Forest have entered into a series of settlement agreements with the Namenda XR ANDA filers, except for two remaining defendants. The earliest date on which any of these agreements grants a license to market generic version of Namenda XR is January 31, 2020 or in the alternative, an option to launch an authorized generic version of Namenda XR beginning on January 31, 2021.

In January 2016, the Delaware District Court issued a claim construction (Markman) ruling in the Namenda XR litigation that includes findings of indefiniteness as to certain claim terms in our asserted patents, which may negatively impact at least some of the patent claims. We and Forest continue to review the ruling to determine how it may also affect our litigation regarding Namzaric, which is described below.

In February 2016, Forest proceeded to trial against one defendant with respect to one of its asserted patents. A case schedule has yet to be established for the second proceeding, which involves a second defendant. Forest is in control of these litigations, and we have been informed that Forest anticipates appealing any adverse District Court rulings at the appropriate time.

Several companies have submitted ANDAs requesting permission to manufacture and market generic versions of Namzaric, on which we are entitled to receive royalties from Forest beginning in May 2020. We and Forest have begun to file lawsuits alleging infringement of the relevant patents against Namzaric ANDA filers in the same court and seeking comparable relief as in the Namenda XR case. The Markman hearing is scheduled for November 2016 and the trial is scheduled for October 2017.

Because these Namenda XR and Namzaric lawsuits were filed within the requisite 45-day period provided in the FDCA, there are stays preventing FDA approval of the ANDAs for 30 months or until a court decision adverse to the patents. The 30-month stays for these Namenda XR and Namzaric ANDAs will expire beginning in June 2016 and January 2018, respectively.

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For various strategic and commercial reasons, manufacturers of generic medications frequently file ANDAs shortly after FDA approval of a branded drug regardless of the perceived strength and validity of the patents associated with such product. Based on these past practices, we believe it is likely that one or more such generic manufacturers will file ANDAs with respect to ADS-5102, if approved by the FDA, prior to the expiration of the patents related to those compounds.

The filing of an ANDA as described above with respect to any of our products could have an adverse impact on our stock price. Moreover, if any such ANDAs were to be approved and the patents covering the relevant products were not upheld in litigation, or if a generic competitor is found not to infringe these patents, the resulting generic competition would negatively affect our business, financial condition and results of operations.

Any product candidate that we are able to commercialize may become subject to unfavorable pricing regulations, third-party coverage or reimbursement practices or healthcare reform initiatives, thereby harming our business.

The regulations that govern marketing approvals, pricing, coverage, 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 might obtain regulatory approval for a product in a particular country, but then be subject to price regulations that delay our commercial launch of the product and negatively impact the revenue we are able to generate from the sale of the product in that country. In particular, in many countries, including many major European markets, therapies that are based on existing generic drugs, such as Namenda XR (memantine) and ADS-5102 (amantadine), or combinations of existing generic drugs, such as Namzaric, generally are not well-reimbursed. As a result, we anticipate that the commercial success of Namzaric, Namenda XR, and ADS-5102, will be largely dependent on their success in the U.S. market.

Our ability to commercialize any products successfully in the United States will depend in part on the extent to which coverage and reimbursement for these products becomes available from third-party payers, including government health administration authorities, such as those that administer the Medicare and Medicaid programs, and private health insurers. Third-party payers decide which medications they will cover by placement on their formularies and at what reimbursement levels. A primary trend in the U.S. healthcare industry is cost containment. Third-party payers have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. Increasingly, third-party payers are requiring that companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. We cannot assure you that coverage and reimbursement will be available for any product that we commercialize and, if reimbursement is available, what the level of reimbursement will be. Coverage and reimbursement may impact the demand for, or the price of, any product for which we obtain marketing approval. If coverage and reimbursement is not available or is available only to limited levels, we may not be able to successfully commercialize any product candidate that we successfully develop and Forest may be unable to successfully market Namzaric or Namenda XR.



There may be significant delays in obtaining coverage and reimbursement for approved products, and coverage may be more limited than the purposes for which the product is approved by the FDA. Moreover, eligibility for reimbursement does not imply that any product will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, distribution, marketing, and sale. Interim payments for new products, if applicable, may also not be sufficient to cover our 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 third-party payers 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. In the United States, private third-party payers often rely upon Medicare coverage and reimbursement policies and payment limitations in setting their own coverage and reimbursement policies. Our inability to promptly obtain coverage, reimbursement and profitable payment rates from both government funded and private third-party payers for new products that we develop, or products developed or marketed by Forest under our license agreement, could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize products, and our overall financial condition.

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If serious or other adverse side effects are identified during the development of ADS-5102 or any other product candidates, we may need to abandon our development of that product candidate, which would materially and adversely harm our business.

Our product candidate ADS-5102, along with our other earlier stage product candidates, are still in clinical or preclinical development. The risk of failure during development is high. It is impossible to predict when or if any of our product candidates will prove safe and tolerable enough to receive regulatory approval. For example, amantadine, the active pharmaceutical ingredient in ADS-5102, carries the risk of blurred vision, dizziness, lightheadedness, faintness, trouble sleeping, depression or anxiety, hallucinations, swelling of the hands, legs, or feet, difficulty urinating, shortness of breath, and rash. These side effects may be the cause of the relatively low rate of acceptance of amantadine by physicians and patients. There can be no assurance that our Phase 3 program for LID, our Phase 2 program in major symptoms associated with MS or future studies in other indications will not fail due to safety or tolerability issues. In such an event, we might need to abandon development of ADS-5102 entirely or for certain indications. If we are forced to abandon development of our product candidates, our business, results of operations, and financial condition will be materially and adversely harmed.

Safety issues with Namzaric, Namenda XR, or ADS-5102, or the parent drugs or other components of Namzaric, Namenda XR, or ADS-5102, or with approved products of third parties that are similar to Namzaric, Namenda XR, or ADS-5102, could decrease the potential sales of Namzaric, Namenda XR, or ADS-5102 or give rise to delays in the regulatory approval process, restrictions on labeling, or product withdrawal.

Discovery of previously unknown problems, or increased focus on a known problem, with an approved product may result in restrictions on its permissible uses, including withdrawal of the medicine from the market. The labels for Namzaric and Namenda XR both list potential side effects, such as headache, diarrhea, and dizziness. Side effects have been observed in clinical trial subjects taking ADS-5102, such as constipation, dizziness, hallucination, dry mouth, fall, confusion, headache, nausea, and weakness.

If we or others identify additional undesirable side effects caused by Namzaric, Namenda XR or by ADS-5102 after approval:

- regulatory authorities may require the addition of labeling statements, specific warnings, contraindications, or field alerts to physicians and pharmacies;
- regulatory authorities may withdraw their approval of the product and require Forest or us to take our approved drugs off the market;
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Forest or we may be required to change the way the product is administered, conduct additional clinical trials, change the labeling of the product, or implement a Risk Evaluation and Mitigation Strategy;

- Forest or we may have limitations on how we promote our drugs;
- third-party payers may limit coverage or reimbursement for Forest's or our drugs;
- sales of products may decrease significantly;
- Forest or we may be subject to litigation or product liability claims; and
- our reputation may suffer.

Any of these events could prevent Forest or us from achieving or maintaining market acceptance of the affected product and could substantially increase our commercialization costs and expenses, which in turn could delay or prevent us from generating significant revenue from its sale.

Namzanic, Namenda XR, or ADS-5102 may also be affected by the safety and tolerability of their parent drugs or drugs with similar mechanisms of action. Although memantine, which is a component of Namzanic and Namenda XR, donepezil, which is a component Namzanic, and amantadine, which is a component of ADS-5102, have been used in patients for many years, newly observed toxicities or worsening of known toxicities in preclinical studies or in subjects

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in clinical studies receiving memantine, donepezil, or amantadine, or reconsideration of known toxicities of compounds in the setting of new indications, could result in increased regulatory scrutiny of our products and product candidates. The FDA has substantial discretion in the NDA approval process and may refuse to approve any application if the FDA concludes that the risk/benefit analysis of a potential drug treatment for a specific indication does not warrant approval. Thus, although the parent drug for, or a drug related to, one of our product candidates may be approved by the FDA in a particular indication, the FDA may conclude that our product candidate's risk/benefit profile does not warrant approval in a different indication, and the FDA may refuse to approve our product candidate. Such conclusion and refusal would prevent us from developing and commercializing our product candidates and severely harm our business and financial condition. Following consumption, Namzaric, Namenda XR, and ADS-5102 first are broken down by the body's natural metabolic processes, during which time the active drug and other breakdown substances are released into the bloodstream. While these breakdown substances are generally regarded as safe, it is possible that there could be unexpected toxicity associated with them that will cause Namzaric, Namenda XR, or ADS-5102 to be poorly tolerated by, or toxic to, humans. Any unexpected toxicity of, or suboptimal tolerance to, the product or product candidates could reduce their sales of approved products and delay or prevent commercialization of our product candidates.

In addition, problems with approved products marketed by third parties that utilize the same therapeutic target or that belong to the same therapeutic class as memantine, amantadine, or donepezil could adversely affect the commercialization of Namzaric, Namenda XR, and ADS-5102. For example, the product withdrawals of Vioxx from Merck and Bextra from Pfizer due to safety issues have caused other drugs that have the same therapeutic target, such as Celebrex from Pfizer, to receive additional scrutiny from regulatory authorities.

The marketing of ADS-5102, if approved, will be limited to use in the treatment of specific indications, and if we want to expand the indications for which this product candidate may be marketed, additional regulatory approvals will need to be obtained, which may not be granted.

We are currently planning to seek regulatory approval of ADS-5102 for the treatment of LID, if our Phase 3 program is successful. If this product candidate is approved, the FDA will restrict our ability to market or advertise the product for other indications, which could limit physician and patient adoption. We may attempt to develop, promote, and commercialize new treatment indications and protocols for ADS-5102 in the future, but we cannot predict when or if the clearances required to do so will be received. In addition, we would be required to conduct additional clinical trials or studies to support approvals for additional indications for ADS-5102, which would be time consuming and expensive, and may produce results that do not support regulatory approvals. If we do not obtain additional regulatory approvals, our ability to expand our business will be limited.

If our product candidates are approved for marketing and we are found to have improperly promoted off-label uses, or if physicians misuse our products or use our products off-label, we may become subject to prohibitions on the sale or marketing of our products, significant fines, penalties, and sanctions, product liability claims, and our image and reputation within the industry and marketplace could be harmed.

The FDA and other regulatory agencies strictly regulate the marketing and promotional claims that are made about drug products, such as ADS-5102, if approved. In particular, a product may not be promoted for uses or indications that are not approved by the FDA or such other regulatory agencies as reflected in the product's approved labeling. For example, if we receive marketing approval for ADS-5102 for the treatment of LID, the first indication we are pursuing, we cannot prevent physicians from using our ADS-5102 products on their patients in a manner that is inconsistent with the approved label. If we are found to have promoted such off-label uses prior to FDA approval for an additional indication, we may receive warning letters and become subject to significant liability, which would materially harm our business. The federal government has levied large civil and criminal fines against companies for alleged improper promotion and has enjoined several companies from engaging in off-label promotion. If we become the target of such an investigation or prosecution based on our marketing and promotional practices, we could face similar sanctions, which would materially harm our business. In addition, management's attention could be diverted from our business operations, significant legal expenses could be incurred, and our reputation could be damaged. The FDA has also requested that companies enter into consent decrees or permanent injunctions under which specified promotional conduct is changed or curtailed. If we are deemed by the FDA to have engaged in the promotion of our products for off-label use, we could be subject to FDA prohibitions on the sale or marketing of our products or significant fines and penalties, and the imposition of these sanctions could also affect our reputation and position within the industry.

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Physicians may also misuse our products, potentially leading to adverse results, side effects or injury, which may lead to product liability claims. If our products are misused, we may become subject to costly litigation by our customers or their patients. Product liability claims could divert management's attention from our core business, be expensive to defend, and result in sizable damage awards against us that may not be covered by insurance. Furthermore, the use of our products for indications other than those cleared by the FDA may not effectively treat such conditions, which could harm our reputation in the marketplace among physicians and patients. Any of these events could harm our business and results of operations and cause our stock price to decline.

We currently have no sales or distribution personnel and only limited marketing capabilities. If we are unable to develop a sales and marketing and distribution capability, we will not be successful in commercializing ADS-5102 or other future approved products.

We do not have a significant sales or marketing infrastructure and have no experience in the sale, marketing, or distribution of therapeutic products. To achieve commercial success for any approved product, we must either develop a sales and marketing organization or outsource these functions to third parties. We expect that the primary focus of our commercialization efforts will be the United States, and we intend to develop our own sales force to commercialize ADS-5102 and our other wholly-owned future approved products in the United States. Commercialization of ADS-5102 and other future approved products outside of the United States, to the extent pursued, is likely to require collaboration with one or more third parties.

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 product launch. If the commercial launch of a product candidate for which we recruit a sales force and establish a commercial infrastructure and 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 cannot retain or reposition our sales and marketing personnel.

In addition, our existing arrangements for the commercialization of Namzaric and Namenda XR may not be successful and we also may not be successful entering into new arrangements with third parties to sell and market our future approved products or may be unable to do so on terms that are favorable to us. We have and will in the future be likely to 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 fail to appropriately estimate the size of sales force required to market our products, our commercialization efforts will be adversely affected. If we do not establish sales and marketing capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our future approved products.

Our future products may fail to achieve the degree of market acceptance by physicians, patients, healthcare payers, and others in the medical community necessary for commercial success.

Our future products may fail to gain sufficient market acceptance by physicians, hospital administrators, patients, healthcare payers, and others in the medical community. The degree of market acceptance of our products, after being approved for commercial sale, will depend on a number of factors, including:

- the prevalence and severity of any side effects;
- efficacy, duration of response, and potential advantages compared to alternative treatments;
- the price we charge;
- the willingness of physicians to change their current treatment practices;
- 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 therapies;
- the strength of marketing and distribution support; and

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- the availability of third-party coverage or reimbursement.

For example, the absence of approved therapeutics to treat LID may require us to educate healthcare providers and patients about LID.

We face substantial competition, which may result in others discovering, developing, or commercializing products before or more successfully than we do.

The development and commercialization of new therapeutic products is highly competitive. We face competition with respect to our current product candidates, and will face competition with respect to any products that we may seek to develop or commercialize in the future, from major pharmaceutical companies, specialty pharmaceutical companies, and biotechnology companies worldwide. For example, in the market for Alzheimer's disease treatments Namenda XR and Namzaric compete or will compete with generic products, such as galatamine, rivastigmine, and donepezil, as well as branded products, such as the Exelon patch (Novartis Pharmaceuticals Corp.) and Aricept 23 mg (Eisai Inc.). ADS-5102, if approved, for the treatment of LID, may face competition from various drugs approved for treatment of Parkinson's disease, though not LID, such as Azilect (Teva Pharmaceuticals Industries, Ltd.), Requip XL (GlaxoSmithKline plc.), Mirapex ER (Boehringer Ingelheim Pharmaceuticals Inc.), Neupro Patch (UCB, Inc.), Comtan (Novartis Pharmaceuticals Corp.), Sinemet (Merck & Co., Inc.), Parcopa (Jazz Pharmaceuticals, Inc.), Apokyn (Bertek), Bromocriptine (Mylan Laboratories, Inc.), Zelapar (Valeant Pharmaceuticals International), Eldepryl (Somerset Pharmaceuticals Inc.), Tasmar (Valeant Pharmaceuticals International), Cogentin (Oaks Pharma Akorn), Exelon (Novartis Pharmaceuticals Corp.), Stalevo (Novartis Pharmaceuticals Corp.), Rytary (Impax), and Duopa (Abbvie). ADS-5102 may also face competition from drugs currently in development for LID from a number of pharmaceutical companies, such as Merck, Novartis, Osmotica Pharmaceutical Corporation, or Osmotica, Avanir Pharmaceuticals, Newron Pharmaceuticals S.p.A, Neurolix Inc, Amarantus BioScience, Addex Pharma, and Neurim Pharmaceuticals Ltd. Other products in late stage development for Parkinson's disease includes product candidates from Kyowa Hakko, Acorda, Neuroderm, Acadia, Bial-Portela CSA, Biotie Therapies Corp, Genervon Biopharmaceuticals, Pharma Two B, and Depomed.

ADS-5102 may also face competition from generic versions of amantadine and from other controlled-release versions of amantadine that may be in development. For example, one competitor, Osmotica, has posted a notice on clinicaltrials.gov regarding its conduct of two Phase 3 clinical trials of extended release amantadine for LID. Potential competitors also include academic institutions, government agencies, and other public and private research organizations that conduct research, seek patent protection, and establish collaborative arrangements for research, development, manufacturing, and commercialization. Many of these competitors are attempting to develop therapeutics for our target indications. In addition, many of our competitors are large pharmaceutical companies that will have a greater ability to reduce prices for their competing drugs in an effort to gain market share and undermine the value proposition that we might otherwise be able to offer to payers.

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 and selling approved products than we do. Mergers and acquisitions in the pharmaceutical, biotechnology, and diagnostic 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 study sites, and patient registration for clinical studies, as well as in acquiring technologies and products complementary to, or necessary for, our programs.

Our competitors could obtain orphan drug exclusivity for their drug products in certain of our target indications, which could delay any marketing approval of our drug product candidates in those target indications.

Under the Orphan Drug Act, the FDA may designate a drug product as an orphan drug if it is a drug or biologic intended to treat a rare disease or condition. For example, in July 2015, the FDA granted Osmotica orphan drug designation for its amantadine hydrochloride product candidate for the treatment of LID, for which it has recently announced plans to file a NDA in 2016. Generally, if a drug product with an orphan drug designation subsequently receives the first marketing approval for the indication for which it has such designation, the drug product is entitled to a

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period of marketing exclusivity, which may preclude the FDA from approving another marketing application for the same drug product for the same therapeutic indication. The applicable period of exclusivity is up to seven years in the United States. Even though we have orphan drug designation for ADS-5102 for the treatment of LID, we may not be the first to obtain marketing approval. If Osmotica or any of our other competitors obtain orphan drug exclusivity for their product candidate in one of our target indications, the marketing application for our drug product in that target indication could be delayed for so long as the competitor has orphan drug exclusivity for its product.

Even if we are first to obtain marketing approval for ADS-5102 for the treatment of LID, the FDA could still subsequently approve the same drug with the same active moiety for the same condition, if the FDA concludes that the later drug is safer, more effective, or makes a major contribution to patient care. Orphan drug designation does not shorten a drug's development or regulatory review time, nor does it give the drug any advantage in the regulatory review or approval process.

Product liability lawsuits against us could cause us to incur substantial liabilities and 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 studies and will face an even greater risk upon commercial sale of any products that are ultimately approved. 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 may develop;
- the inability to commercialize any products that we may develop;
- injury to our reputation and significant negative media attention;
- withdrawal of patients from clinical studies or cancellation of studies;
- significant costs to defend the related litigation;
- substantial monetary awards to patients; and
- loss of revenue.

We currently hold \$10.0 million in product liability insurance coverage, which may not be adequate to cover all liabilities that we may incur at our current stage of development. Insurance coverage is increasingly expensive. If and when our product candidates are approved and we launch such products commercially, we may not be able to obtain insurance coverage at a reasonable cost or in amounts adequate to satisfy any liability or associated costs that may arise in the future.

We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications 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 on research programs and product candidates for specific indications. As a result, we may forego or delay pursuit of opportunities with other product candidates or other indications that 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 indications may not yield any commercially viable products.

If we do not accurately evaluate the commercial potential or target market for a particular product candidate, 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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Risks related to our reliance on third parties

We have entered into a license agreement with Forest with respect to Namzaric and Namenda XR, and may enter into additional license or collaboration agreements. These arrangements may place the development of these product candidates and commercialization of any approved products outside our control, may require us to relinquish important rights, or may otherwise be on terms unfavorable to us, and if our collaborations are not successful, these product candidates or approved products may not reach their full market potential. As Forest substantially controls the intellectual property rights subject to the license agreement and accordingly, the current ANDA litigation and settlement thereof, and has economic interests different from ours, Forest may manage the litigation and settlements on terms which may have a material and negative impact on our business.

In November 2012, we entered into a license agreement with Forest pursuant to which we granted Forest a co-exclusive right to develop and an exclusive right to commercialize fixed-dose memantine-donepezil products, such as Namzaric, in the United States, and granted Forest a license covering controlled-release versions of memantine, such as Namenda XR. Under the terms of the license agreement, Forest substantially controls the commercialization of these products and the intellectual property rights subject to the license agreement, including the prosecution, maintenance and enforcement of such rights. Collaborations involving our current or future products, such as our agreement with Forest, are subject to numerous risks, which may include that:

- collaborators 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 study 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 studies, provide insufficient funding for a clinical study program, stop a clinical study, abandon a product candidate, repeat or conduct new clinical studies, 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, manufacturing, and distribution rights to one or more products may not commit sufficient resources to or otherwise not perform satisfactorily in carrying out these activities;
- we could grant exclusive rights to our collaborators that would prevent us from collaborating with others;

- Forest and future 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;
- Forest and future collaborators may not aggressively or adequately pursue litigation against ANDA filers or may settle such litigation on unfavorable terms, and as Forest substantially controls the current ANDA litigation and terms of settlement and has different economic interests than ours, Forest may grant licenses to generic manufacturers that permit them to make and sell generic versions of Namenda XR, which would negatively impact the royalties we receive under our license with Forest;
  - disputes may arise between us and a collaborator that causes the delay or termination of the research, development or commercialization of our current or future products or that results in costly litigation or arbitration that diverts management attention and resources;
- collaborations may be terminated, sometimes at-will, without penalty, such as with Forest, and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable current or future products;

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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; and
- a collaborator's sales and marketing activities or other operations may not be in compliance with applicable laws resulting in civil or criminal proceedings.

Beginning in 2014, Forest has been involved in a series of acquisitions, first by Actavis and then by Allergan and most recently, an acquisition of Allergan by Pfizer, was announced and is expected to close in 2016. We cannot predict whether any of these acquisitions will have a negative impact on our business, the pursuit of the ANDA litigations and potential settlements thereof, or on the license agreement with Forest or the intellectual property rights subject thereto.

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

We do not independently conduct clinical studies of our product candidates. Instead, we rely on third parties, such as 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. For example, the FDA requires us to comply with standards, commonly referred to as Good Clinical Practice, for conducting, recording, and reporting the results of clinical studies to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of patients in clinical studies are protected, even though we are not in control of these processes. These third parties may also have relationships with other entities, some of which may be our competitors. If these third parties do not successfully carry out their contractual duties, meet expected deadlines, or conduct our clinical studies 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 product candidates.

We also rely on other third parties to store and distribute supplies for our clinical studies. 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 revenue.

We rely on third-party contract manufacturing organizations to manufacture and supply our product candidates for us. 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. We may also face delays in the development and commercialization of our product candidates.

We currently have limited experience in, and we do not own facilities for, clinical-scale manufacturing of our product candidates and we rely upon third-party contract manufacturing organizations to manufacture and supply drug product for our clinical studies. The manufacture of pharmaceutical products in compliance with the FDA's current Good Manufacturing Practices, or cGMPs, 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 study materials could delay the completion of our clinical studies, increase the costs associated with maintaining our clinical study programs and, depending upon the period of delay, require us to commence new studies at significant additional expense or terminate the studies 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

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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 studies, regulatory submissions, approvals or commercialization of our product candidates, entail higher costs, or impair our reputation.

We currently rely on single source suppliers for each of our product candidates and continue to seek additional long-term supply agreements. A failure to qualify at least one manufacturer on a timely basis would delay our anticipated NDA for ADS-5102. Although we believe alternative sources of supply exist, the number of third-party suppliers with the necessary manufacturing and regulatory expertise and facilities is limited, and it could be expensive and take a significant amount of time to arrange and negotiate acceptable long-term contracts, which would adversely affect our business. New suppliers of any product candidate would be required to qualify under applicable regulatory requirements and would need to have sufficient rights under applicable intellectual property laws to the method of manufacturing the product candidate. Obtaining the necessary FDA approvals or other qualifications under applicable regulatory requirements and ensuring non-infringement of third-party intellectual property rights 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. Qualifying and negotiating long term contracts with manufacturers and providers of packaging services is a lengthy process. If at any time, one or more of our qualified contract organizations were not able to manufacture our drug substance or provide the requisite services, our business and financial condition would be materially adversely affected.

### Risks related to the operation of our business

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

We are highly dependent on our chief executive officer and the other members of our executive and scientific teams. Our executives may terminate their employment with us at any time. The loss of the services of any of these people could impede the achievement of our research, development, and commercialization objectives. We maintain "key person" insurance for our chief executive officer, but not for any other executives or employees. Any insurance proceeds we may receive under this "key person" insurance would not adequately compensate us for the loss of our chief executive officer's services.

Recruiting and retaining qualified scientific, clinical, manufacturing, and sales and marketing personnel will also be critical to our success. We may not be able to attract and retain these personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In



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

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

As of December 31, 2015, we had 62 full time equivalent employees. Over the next several years, we expect to experience significant growth in the number of our employees and the scope of our operations, particularly in sales and marketing. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational, and financial systems, expand our facilities, and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The physical expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

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

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

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

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

Any future operations or business arrangements with entities outside the United States present risks that could materially adversely affect our business.

If we obtain approval to commercialize any approved products or utilize CMOs outside of the United States, a variety of risks associated with international operations could materially adversely affect our business. If any product candidates that we may develop are approved for commercialization outside the United States, we will be subject to additional risks related to entering into international business relationships, 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;
  - difficulties in assuring compliance with foreign corrupt practices laws;
- 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 revenue, and other obligations incident to doing business in another country;

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- workforce uncertainty in countries where labor unrest is more common than in the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geopolitical actions, including war and terrorism, or natural disasters, including earthquakes, hurricanes or typhoons, floods, and fires.

Our internal computer systems, or those of our CROs, CMOs, 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, CMOs, 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 or commercialization efforts. For example, the loss of clinical study data from completed or ongoing clinical studies 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. While we back-up our internal computer systems periodically and store such data off-site, we can offer no assurance that such off-site storage of data will allow us to continue our business without interruptions to our operations, which could result in a material disruption of our drug development programs or commercialization efforts. 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 intellectual property

Our ability to successfully commercialize our technology and products may be materially adversely affected if we are unable to obtain and maintain effective intellectual property rights for our technologies and product candidates.

Our success depends in large part on our ability to obtain and maintain patent and other intellectual property protection in the United States and in other countries with respect to our proprietary technology and products. In some circumstances, we may not have the right to control the preparation, filing, and prosecution of patent applications, or to maintain or enforce the patents, covering technology or products that we license to third parties or that we may 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 or from us fail to maintain such patents, or lose rights to those patents, the rights we have licensed may be reduced or eliminated.

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. In addition, we may not pursue or obtain patent protection in all relevant markets. 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. Our pending and future patent applications may not result in patents being issued which protect our technology or products, in whole or in part. In addition, 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 pharmaceutical and biotechnology companies generally is highly uncertain and involves complex legal and factual questions for which many 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 patent rights are highly uncertain. Our pending and future patent applications may not result in patents being issued in the United States or in other jurisdictions 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. In addition, 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

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18 months after filing, or in some cases not at all. Therefore, we cannot be certain that we were the first to make the inventions claimed in our patents or pending patent applications, or that we were the first to file for patent protection of such inventions. In addition, the United States Patent and Trademark Office, or USPTO, might require that the term of a patent issuing from a pending patent application be disclaimed and limited to the term of another patent that is commonly owned or names a common inventor. As a result, the issuance, scope, validity, enforceability, and commercial value of our patent rights is highly uncertain.

Recent or future patent reform legislation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents. In March 2013, under the recently enacted Leahy-Smith America Invents Act, or America Invents Act, the United States moved from a “first to invent” to a “first-to-file” system. Under a “first-to-file” system, assuming the other requirements for patentability are met, the first inventor to file a patent application generally will be entitled to a patent on the invention regardless of whether another inventor had made the invention earlier. The America Invents Act includes a number of other significant changes to U.S. patent law, including provisions that affect the way patent applications are prosecuted, redefine prior art and establish a new post-grant review system. The effects of these changes are currently unclear, as the USPTO only recently developed new regulations and procedures in connection with the America Invents Act and many of the substantive changes to patent law, including the “first-to-file” provisions, only became effective in March 2013. In addition, the courts have yet to address any of these provisions and the applicability of the act and new regulations on specific patents discussed herein have not been determined and would need to be reviewed. However, the America Invents Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could have a material adverse effect on our business and financial condition.

From time to time, we may become involved in opposition, interference, derivation, inter partes review, or other 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 or Forest, without payment to us.

Even if our 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 the patent claims of our owned or licensed patents 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 new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our 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 not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting, and defending patents on all of our product candidates throughout the world would be prohibitively expensive. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products and, further, may export otherwise infringing products to territories where we have patent protection but where enforcement is not as strong as in the United States. These products may compete with our product candidates in jurisdictions where we do not have any issued patents, and our patent claims or other intellectual property rights may not be effective or sufficient to prevent them from so competing. Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biopharmaceuticals, which could make it difficult for us to stop the infringement of our patents or marketing of competing products against third parties in violation of our proprietary rights generally. The initiation of proceedings by third parties to enforce our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business.

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Obtaining and maintaining our patent protection depends upon compliance with various procedural, document submission, fee payment, and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment, and other provisions during the patent prosecution process and following the issuance of a patent. Our failure to comply with such requirements could result in abandonment or lapse of a patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, competitors might be able to enter the market earlier than would otherwise have been the case if our patent were in force.

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

Competitors may infringe or otherwise violate our patents, trademarks, copyrights or other intellectual property. To counter infringement or unauthorized use, we or our licensees may be required to file infringement claims, which can be expensive and time-consuming. For example, we, Forest, Forest Laboratories Holdings Ltd., Merz Pharma GmbH & Co. KGaA, and Merz Pharmaceuticals GmbH filed patent infringement lawsuits under Forest's patents and patents owned by us and licensed to Forest, against several manufacturers of generic pharmaceuticals that have filed ANDAs with the FDA seeking approval to manufacture and sell generic versions of Namzaric and Namenda XR. We anticipate that the prosecution of the lawsuits will require a significant amount of time and attention of our chief executive officer and other senior executives. In addition, in a patent 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. An adverse result in any of the Forest litigations or any other litigation or proceeding could put one or more of our patents at risk of being invalidated or interpreted narrowly. Such a result could limit our ability to prevent others from using or commercializing similar or identical technology and products, limit our ability to prevent others from launching generic versions of our products and could limit the duration of patent protection for our products, all of which could have a material adverse effect on our business. A successful challenge to our patents could reduce or eliminate our right to receive royalties from Forest. 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 or our collaborators are infringing their intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of our business.

Our commercial success depends upon our ability and the ability of our collaborators to develop, manufacture, market, and sell our product candidates and to use our proprietary technologies without infringing, misappropriating, or



otherwise violating the proprietary rights or intellectual property of third parties. We or our collaborators may become party to, or be threatened with, future adversarial proceedings or litigation regarding intellectual property rights with respect to our products and technology, including interference, derivation, re-examination, inter partes review, post-grant review, opposition, or similar proceedings before the USPTO and its foreign counterparts. The costs of these proceedings could be substantial, and the proceedings may result in a loss of such intellectual property rights. Some of our competitors may be able to sustain the costs of complex patent disputes and litigation more effectively than we can, because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any disputes or litigation could adversely affect our ability to raise the funds necessary to continue our operations. Third parties may assert infringement claims against us or our collaborators based on existing patents or patents that may be granted in the future. For example, in December 2013 Teva Pharmaceuticals USA and Mayne Pharma International jointly initiated a lawsuit against Forest alleging that the manufacture and commercialization of Namenda XR by Forest infringes the plaintiffs' U.S. patent. Under our license agreement with Forest we are obliged to indemnify Forest under certain circumstances and our royalty entitlements may also be reduced. Our indemnification obligation to Forest, while subject to customary limitations, has no monetary cap, and our right to receive royalties from Forest may be eliminated in any calendar quarter in which certain third party generic competition exists. If we or our collaborators are found to infringe a third-party's intellectual property rights, we could be required to obtain a license from such third-party to continue developing and marketing our products and technology. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Even if we were able to obtain a license, it could 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, we could be found liable for monetary damages. A finding of infringement could prevent us from commercializing our product

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candidates or force us to cease some of our business operations, which could materially harm our business. Claims that we have misappropriated the confidential information or trade secrets of third parties could have a similar negative impact on our business.

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, our collaborators, and consultants. We also have agreements with our employees and selected consultants that obligate them to assign their inventions to us. However, while it is our policy to require our employees and contractors who may be involved in the conception or development of intellectual property to execute such agreements, we may be unsuccessful in executing such an agreement with each party who in fact conceives or develops intellectual property that we regard as our own. In addition, 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. While to our knowledge the confidentiality of our trade secrets has not been compromised, 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. Further, our trade secrets could be disclosed, misappropriated, or otherwise become known or be independently discovered by our competitors. 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 adversely affect 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.

Although we try to ensure that our employees do not use the proprietary information or know-how of others in their work for us, and we have no knowledge of any instances of wrongful use or disclosure by our employees to date, 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 an 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. This type of litigation or proceeding 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 adversely affect our ability to compete in the marketplace.

#### Risks related to government regulation

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

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 our collaboration partners are permitted to market our product candidates in the United States until we receive FDA approval of an NDA. We have not submitted an application or received marketing approval for any of our product candidates. Obtaining approval of an

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NDA 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:

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

Prior to receiving approval to commercialize any of our product candidates in the United States or abroad, we and our collaboration partners must demonstrate with substantial evidence from well-controlled clinical studies, 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 studies can be interpreted in different ways. Even if we and our 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 studies 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.

FDA approval of an NDA 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 repeat clinical studies, perform additional preclinical

studies and clinical studies, or abandon development and commercialization of a product candidate altogether. The number of preclinical studies and clinical studies 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 that:

- a product candidate may not be deemed safe or effective;
- FDA officials may not find the data from preclinical studies and clinical studies sufficient;
- the FDA might not approve our or our third-party manufacturer's 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 studies or does not gain regulatory approval, our business and results of operations will be materially and adversely harmed.

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If the FDA does not conclude our product candidates satisfy the requirements for approval under the Section 505(b)(2) regulatory approval pathway, or if the requirements for approval under Section 505(b)(2) are not as we expect, the approval pathway for our products will likely take significantly longer, cost significantly more, and entail significantly greater complications and risks than anticipated, and in any case may not be successful.

We are developing our current and future product candidates, including ADS-5102, with the expectation that they will be eligible for approval through the Section 505(b)(2) regulatory pathway. Section 505(b)(2) of the FDCA allows an NDA to rely in part on data in the public domain or the FDA's prior conclusions regarding the safety and effectiveness of an approved drug product. Consequently, use of the Section 505(b)(2) regulatory pathway could expedite the development program for our product candidates by potentially decreasing the amount of clinical data that would need to be generated in order to obtain FDA approval. If the FDA does not allow us to pursue the Section 505(b)(2) regulatory pathway as anticipated, we may need to conduct additional clinical trials, provide additional data and information, and meet additional standards for product approval. If this were to occur, the time and financial resources required to obtain FDA approval for our product candidates, and complications and risks associated with regulatory approval of would likely substantially increase. Moreover, inability to pursue the Section 505(b)(2) regulatory pathway may result in new competitive products reaching the market more quickly than our product candidates, which would adversely impact our competitive position and prospects. Even if we are able to utilize the Section 505(b)(2) regulatory pathway, there is no guarantee that utilizing this pathway will ultimately lead to accelerated product development or earlier approval for ADS-5102 or any other product candidate that we may attempt to develop and commercialize.

In addition, a company obtaining an approved NDA through the Section 505(b)(2) regulatory pathway for a drug product whose active moiety is the same active moiety as that in a previously approved drug (e.g. amantadine HCl) is entitled to three years of market exclusivity if clinical data (other than a bioavailability or bioequivalence study) is required by the FDA to support its findings of safety and efficacy of the approved product. If a competing product were to be approved in our target indication through the Section 505(b)(2) regulatory pathway and granted three years of market exclusivity, and if the FDA were to find that our product candidate (e.g. ADS-5102) does not differ with respect to active moiety, dosage form and strength, route of administration, and indicated use from the approved competing product, then approval of the marketing application for ADS-5102 in the target indication under Section 505(b)(2) may be delayed for as long as a competitor has exclusivity.

Even if we receive regulatory approval for a particular 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 for a particular product candidate, 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 our 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 studies 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, tracking, and recordkeeping for our products. Further, 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. Additionally, regulatory authorities must approve these manufacturing facilities before they can be used to manufacture our drug products, and these facilities are subject to continual review and periodic inspections by the FDA and other regulatory authorities for compliance with cGMP regulations. If we or a third party discover previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, a regulatory authority may impose restrictions on that product, the manufacturer or us, including requiring withdrawal of the product from the market or suspension of manufacturing. If we, our product candidates or the manufacturing facilities for our product candidates fail to comply with regulatory requirements of the FDA and/or other non-U.S. regulatory authorities, we could be subject to administrative or judicially imposed sanctions, including:

- warning letters;
- civil or criminal penalties and fines;

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

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

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

We may decide to commercialize ADS-5102, ADS-8704, and other future product candidates outside of the United States. 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 an MA, the European Medicines Agency 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. 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 studies 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. If we are unable to obtain non-U.S. regulatory approval to market our product candidates in other countries, we may not be able to achieve the financial results we project and our stock price could decline.

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 that could affect our future revenue and profitability and the future revenue and profitability of our potential customers. Federal and state lawmakers regularly propose and, at times, enact legislation that would result in significant changes to the healthcare system, some of which are intended to contain or reduce the costs of medical products and services. For example, one of the most significant healthcare reform measures in decades, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act, or, collectively, the PPACA, was enacted in 2010.

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The PPACA contains a number of provisions, including those governing enrollment in federal healthcare programs, reimbursement changes and fraud and abuse measures, all of which will impact existing government healthcare programs and will result in the development of new programs. The PPACA, among other things:

- imposes a non-deductible annual fee on entities that manufacture or import certain branded prescription drugs;
- increases the minimum level of Medicaid rebates payable by manufacturers of brand-name drugs from 15.1% to 23.1%;
- requires collection of rebates for drugs paid by Medicaid managed care organizations; and
- provides for a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices of applicable branded drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D.

While the U.S. Supreme Court upheld the constitutionality of most elements of the PPACA in June 2012, other legal challenges are still pending final adjudication in several jurisdictions. In addition, Congress has also proposed a number of legislative initiatives, including possible repeal of the PPACA. At this time, it remains unclear whether there will be any changes made to the PPACA, whether to certain provisions or its entirety. We can provide no assurance that the PPACA, as currently enacted or as amended in the future, will not adversely affect our business and financial results, and we cannot predict how future federal or state legislative or administrative changes relating to healthcare reform will affect our business.

The continuing efforts of the government, insurance companies, managed care organizations, and other payers of healthcare services to contain or reduce costs of healthcare may, among other things, adversely affect:

- our ability to set a price we believe is fair for our products;
- our ability to generate revenue and achieve or maintain profitability; and
- the availability of capital.

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

Certain federal and state healthcare laws and regulations pertaining to fraud and abuse and patients' rights are and will be applicable to our business. We could be subject to healthcare fraud and abuse and patient privacy regulation by both the federal government and the states in which we conduct our business. The regulations that may affect our ability to operate include:

- the federal healthcare program Anti-Kickback Statute, which prohibits knowingly and willfully offering, soliciting, receiving, or providing any remuneration (including any kickback, bribe or rebate), directly or indirectly, overtly or covertly, in cash or in kind, in exchange for or to induce either the referral of an individual for, or the purchase, order, lease, or recommendation of, any good, facility, item, or service for which payment may be made, in whole or in part, under federal healthcare programs, such as the Medicare and Medicaid programs;
- the federal false claims laws and civil monetary penalty laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, false or fraudulent claims for payment or approval, or knowingly using false statements, to obtain payment from the federal government, and which may apply to entities like us which provide coding and billing advice to customers;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created new federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payer (e.g., public or private) and knowingly and willfully

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falsifying, concealing, or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of, or payment for, healthcare benefits, items, or services relating to healthcare matters;

- the federal physician self-referral law, commonly known as the Stark Law, which prohibits a physician from making a referral to an entity for certain designated health services reimbursed by Medicare or Medicaid if the physician or a member of the physician's family has a financial relationship with the entity, and which also prohibits the submission of any claims for reimbursement for designated health services furnished pursuant to a prohibited referral;
- the federal transparency requirements under the PPACA require manufacturers of drugs, devices, biologicals, and medical supplies for which payment is available under Medicare, Medicaid, or the Children's Health Insurance Program (with certain exceptions) to report annually to the U.S. Department of Health and Human Services, or HHS, information related to physician payments and other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists, and chiropractors) and teaching hospitals, as well as certain ownership and investment interests held by physicians and their immediate family members;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, which governs the conduct of certain electronic healthcare transactions and protects the security and privacy of protected health information; and
  - state law equivalents of each of the above federal laws, such as anti-kickback, false claims, and transparency laws, which may be broader in scope and apply to items or services reimbursed by any third-party payer, including commercial insurers.

The PPACA, among other things, amended the intent standard of the federal Anti-Kickback Statute and criminal healthcare fraud statutes to a stricter standard such that a person or entity no longer needs to have actual knowledge of this statute or specific intent to violate it. In addition, the PPACA codified case law that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal 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 civil, criminal and/or administrative penalties, damages, fines, disgorgement, possible exclusion from participation in Medicare, Medicaid, and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our financial results. Any action against us for violation of these or other laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. Moreover, achieving and sustaining compliance with applicable federal and state privacy, security, and fraud laws may prove costly.

Risks related to ownership of our common stock

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

Our stock price has fluctuated in the past and may be volatile in the future. The stock market in general and the market for securities of pharmaceutical and 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 investments in our stock.

In addition, the clinical development stage of our operations may make it difficult for investors to evaluate the success of our business to date and to assess our future viability. The market price for our common stock may be influenced by many factors, including:

- the success of competitive products or technologies;

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- results of clinical studies of our product candidates or those of our competitors;
- introductions and announcements of new products and product candidates by us, our commercialization partners, or our competitors, and the timing of these introductions or announcements;
- actions taken by regulatory agencies with respect to our or our competitors' products, product candidates, clinical studies, manufacturing process, or sales and marketing terms;
- variations in our financial results or those of companies that are perceived to be comparable to us;
- the success of our efforts to acquire or in-license additional products or product candidates;
- developments concerning our collaborations, including but not limited to those with our sources of manufacturing and our commercialization partners;
- 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 patents, litigation matters, and our ability to obtain patent protection for our current or future products;
- 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 reimbursement systems;
- regulatory or legal developments in the United States and other countries, especially changes in laws or regulations applicable to our current or future products;
- 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;
- general economic, industry, and market conditions; 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. Additionally, 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 materially and adversely affect our business, financial condition, results of operations, and growth prospects.

Sales of a substantial number of shares of our common stock in the public market by our existing stockholders could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market, or the perception that these sales might occur, could depress 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 sales may have on the prevailing market price of our common stock.

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Concentration of ownership of our common stock among our existing executive officers, directors and principal stockholders may prevent new investors from influencing significant corporate decisions.

Our executive officers, directors and current beneficial owners of 5% or more of our common stock, in the aggregate, beneficially own a significant percentage of our outstanding common stock. These persons, acting together, will be able to significantly influence all matters requiring stockholder approval, including the election and removal of directors and any merger or other significant corporate transactions. The interests of this group of stockholders may not coincide with the interests of other stockholders.

We will continue to incur increased costs and demands upon management as a result of complying with the laws and regulations affecting public companies, and we could fail to successfully improve our systems, procedures and controls, which could affect our operating results.

As a public company, we will continue to incur legal, accounting and other expenses associated with reporting requirements and corporate governance requirements, including requirements under the Sarbanes-Oxley Act of 2002, the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, as well as new rules implemented by the SEC and the NASDAQ Stock Market LLC. We expect that we will need to continue to improve existing, and implement new operational, financial, and information management systems, procedures, and controls to manage our business effectively. Any delay in the implementation of, or disruption in the transition to, new or enhanced systems, procedures, or controls may cause our operations to suffer and we may be unable to conclude that our internal control over financial reporting is effective.

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

Our stock is currently traded on NASDAQ, but we can provide no assurance that we will be able to maintain an active trading market on NASDAQ or any other exchange in the future or that the daily trading volume will be adequate to allow orderly purchases or sales of our common stock without significantly impacting the price per share. If an active market for our common stock is not maintained, it may be difficult for our stockholders to sell shares without depressing the market price for the shares or at all.

If securities or industry analysts do not publish research, or publish inaccurate or unfavorable research, about us or 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. Securities and industry analysts may cease to publish research on our company at any time in their discretion. 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. In addition, 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. If our operating results fail to meet the forecast of analysts, our stock price will likely decline.

Provisions in our corporate charter documents and under Delaware law 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 that:

- 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;

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- our board of directors has the right to expand the size of our board of directors and 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 or the chairman of the board and chief executive officer;
- our certificate of incorporation prohibits 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, and 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.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.

Because we do not anticipate paying any cash dividends on our common stock in the foreseeable future, capital appreciation, if any, will be our stockholders' sole source of gain.

We have never declared or paid cash dividends on our common stock. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. In addition, the terms of existing or any future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be our stockholders' sole source of gain for the foreseeable future.

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ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

The Company leases approximately 18,500 square feet of office space in Emeryville, California, under an operating lease that expires April 2020. We believe that our existing facility will be sufficient for our needs for the foreseeable future.

ITEM 3. LEGAL PROCEEDINGS

Several companies have submitted Abbreviated New Drug Applications, or ANDAs, to the FDA requesting permission to manufacture and market generic versions of Namenda XR, on which we are entitled to receive royalties from Forest beginning in June 2018. In the notices, these companies allege that the patents associated with Namenda XR, some of which are owned by Forest or licensed by Forest from Merz Pharma GmbH & Co. KGaA, and others of which are owned by us and licensed by us exclusively to Forest in the United States, are invalid, unenforceable, and/or will not be infringed by the companies' manufacture, use, or sale of generic versions of Namenda XR. We, Forest, Merz Pharma GmbH & Co. KGaA, and Merz Pharmaceuticals GmbH (together Merz) filed lawsuits in the U.S. District Court for the District of Delaware for infringement of the relevant patents against all of these companies. The plaintiffs are seeking judgment that (i) the defendants have infringed the patents at issue, (ii) the effective date of any approval of the defendants' ANDAs shall not be earlier than the expiration date of the last to expire of the relevant patents, including any extensions or exclusivities, (iii) the defendants be enjoined from commercially manufacturing, using, offering for sale, or selling in the United States, or importing into the United States, any products that infringe or induce or contribute to the infringement of the patents at issue prior to the expiration date of the last to expire of the patents, including extensions and exclusivities, and (iv) the plaintiffs be awarded monetary relief, in addition to any attorneys' fees, costs, and expenses relating to the actions.

We and Forest have entered into a series of settlement agreements with the Namenda XR ANDA filers, except for two remaining defendants. The earliest date on which any of these agreements grants a license to market generic version of Namenda XR is January 31, 2020 or in the alternative, an option to launch an authorized generic version of Namenda XR beginning on January 31, 2021.

In January 2016, the Delaware District Court issued a claim construction (Markman) ruling in the Namenda XR litigation that includes findings of indefiniteness as to certain claim terms in our asserted patents, which may negatively impact at least some of the patent claims. We and Forest continue to review the ruling to determine how it may also affect our litigation regarding Namzaric, which is described below.

In February 2016, Forest proceeded to trial against one defendant with respect to one of its asserted patents. A case schedule has yet to be established for the second proceeding, which involves a second defendant. Forest is in control of these litigations, and we have been informed that Forest anticipates appealing any adverse District Court rulings at the appropriate time.

Several companies have submitted ANDAs requesting permission to manufacture and market generic versions of Namzaric, on which we are entitled to receive royalties from Forest beginning in May 2020. We and Forest have begun to file lawsuits alleging infringement of the relevant patents against Namzaric ANDA filers in the same court and seeking comparable relief as in the Namenda XR case. The Markman hearing is scheduled for November 2016 and the trial is scheduled for October 2017.

Because these Namenda XR and Namzaric lawsuits were filed within the requisite 45-day period provided in the U.S. Food, Drug and Cosmetic Act, there are stays preventing FDA approval of the ANDAs for 30 months or until a court decision adverse to the patents. The 30-month stays for these Namenda XR and Namzaric ANDAs will expire beginning in June 2016 and January 2018, respectively.

#### ITEM 4. MINE SAFETY DISCLOSURES

The disclosure required by this item is not applicable.

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## PART II

## ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

## PRICE RANGE OF COMMON STOCK

Our common stock has been listed on The NASDAQ Global Market under the symbol "ADMS" since April 10, 2014. Prior to that date, there was no public trading market for our common stock. Our initial public offering was priced at \$16.00 per share on April 9, 2014. 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:

	Low	High
Fiscal Year ended December 31, 2014		
Second Quarter (beginning April 10, 2014)	\$ 12.02	\$ 21.63
Third Quarter	\$ 14.74	\$ 19.10
Fourth Quarter	\$ 13.60	\$ 20.70
Fiscal Year ended December 31, 2015		
First Quarter	\$ 16.02	\$ 18.15
Second Quarter	\$ 16.55	\$ 27.60
Third Quarter	\$ 16.08	\$ 30.86
Fourth Quarter	\$ 12.73	\$ 31.84

On February 18, 2016, the last reported sale price of our common stock as reported on The NASDAQ Global Market was \$14.77 per share.

As of February 18, 2016, there were 21,417,219 shares of our common stock issued and outstanding with 38 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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## STOCK PRICE PERFORMANCE GRAPH

The following stock performance graph compares our total stock return with the total return for (i) the NASDAQ Composite Index and the (ii) the NASDAQ Biotechnology Index for the period from April 10, 2014 (the date our common stock commenced trading on the NASDAQ Global Market) through December 31, 2015. The figures represented below assume an investment of \$100 in our common stock at the closing price of \$14.01 on April 10, 2014 and in the NASDAQ Composite Index and the NASDAQ Biotechnology Index on April 10, 2014 and the reinvestment of dividends into shares of common stock. The comparisons in the table are required by the Securities and Exchange Commission, or SEC, and are not intended to forecast or be indicative of possible future performance of our common stock. This graph shall not be deemed “soliciting material” or be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or the Exchange Act, or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any of our filings under the Securities Act of 1933, as amended, or the Securities Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

Investment in stock or		April 10,	June 30,	September	December	March	June 30,	September	December
	Ticker	2014	2014	30,	31,	31,	2015	30,	31,
				2014	2014	2015	2015	2015	2015
as									
pharmaceuticals, Inc.	ADMS	\$ 100.00	\$ 130.48	\$ 132.91	\$ 123.99	\$ 124.85	\$ 187.17	\$ 119.50	\$ 202.11
NASDAQ Composite Index	IXIC	\$ 100.00	\$ 108.73	\$ 110.83	\$ 116.82	\$ 120.89	\$ 123.01	\$ 113.96	\$ 123.01
NASDAQ Biotechnology	NBI	\$ 100.00	\$ 115.92	\$ 123.37	\$ 137.11	\$ 155.22	\$ 166.76	\$ 136.75	\$ 155.22

## DIVIDEND POLICY

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

## USE OF PROCEEDS

On April 15, 2014, we issued and sold 3,000,000 shares of our common stock in the IPO at a public offering price of \$16.00 per share, for net proceeds of approximately \$41.4 million, after deducting underwriting discounts and commissions of approximately \$3.4 million and expenses of approximately \$3.2 million. On May 6, 2014, we issued and sold 81,371 shares of common stock pursuant to the underwriters’ partial exercise of their option to purchase additional shares, for net proceeds of approximately \$1.2 million, after deducting underwriting discounts and commissions of approximately \$91,000. All of the shares issued and sold in the IPO were registered under the Securities Act pursuant to a Registration Statement on Form S-1 (File No. 333-194342), which was declared effective by the SEC on April 9, 2014.

None of the expenses associated with the IPO were paid to directors, officers, persons owning 10% or more of



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any class of equity securities, or to their associates, or to our affiliates.

There has been no material change in the planned use of proceeds from our IPO as described in our prospectus effective April 9, 2014, filed with the SEC pursuant to Rule 424(b)(4) under the Securities Act.

## ITEM 6. SELECTED FINANCIAL DATA

You should read the following selected financial data together with the section of this report entitled “Management’s discussion and analysis of financial condition and results of operations” and our financial statements and the related notes included in this report. The statement of operations data for the years ended December 31, 2015, 2014, and 2013 and the balance sheet data as of December 31, 2015 and 2014 are derived from our audited financial statements included elsewhere in this report. Statement of operations data for the year ended December 31, 2012 and balance sheet data as of December 31, 2013 and 2012 are derived from our audited financial statements not included herein.

We have included, in our opinion, all adjustments, consisting only of normal recurring adjustments that we consider necessary for a fair presentation of the financial information set forth in those statements. Our historical results are not necessarily indicative of the results to be expected in the future, and our unaudited interim results are not necessarily indicative of the results to be expected for the full year or any other period.

	Years Ended December 31,			
	2015	2014	2013	2012
	(in thousands, except per share data)			
Consolidated Statement of Operations data:				
Revenue	\$ 1,916	\$ 55,846	\$ 71,095	\$ 37,471
Operating expenses				
Research and development	35,895	21,860	7,410	9,192
General and administrative	23,458	15,472	6,667	8,330
Total operating expenses	59,353	37,332	14,077	17,522
Income (loss) from operations	(57,437)	18,514	57,018	19,949
Interest and other income (expense), net	363	(917)	(4,906)	(1,913)
Income (loss) before income taxes	(57,074)	17,597	52,112	18,036
Provision (benefit) for income taxes	(5,272)	7,374	1,191	300
Net income (loss)	\$ (51,802)	\$ 10,223	\$ 50,921	\$ 17,736
Net income (loss) attributable to common stockholders:				
Basic	\$ (51,802)	\$ 8,968	\$ 33,068	\$ 11,441
Diluted	\$ (51,802)	\$ 9,069	\$ 35,353	\$ 11,596
Net income (loss) per share attributable to common stockholders:				
Basic	\$ (2.86)	\$ 0.60	\$ 3.48	\$ 1.21
Diluted	\$ (2.86)	\$ 0.53	\$ 2.99	\$ 1.17
Weighted average number of shares used in computing net income (loss) attributable to common stockholders:				
Basic	18,111	14,837	9,506	9,488
Diluted	18,111	17,107	11,806	9,924



To date, substantially all of our revenue has been generated from our collaboration agreements, and we have not generated any commercial product revenue. Revenue in the years ended December 31, 2014, 2013 and 2012 includes recognition of revenue relating to upfront and milestone payments called for within our license agreement with Forest, effective November 13, 2012, of \$55.0 million, \$69.6 million, and \$35.4 million, respectively. See the section of this report entitled “Management’s discussion and analysis of financial condition and results of operations—Financial operations overview—Revenue” for a more detailed description of our revenue recognition with respect to these agreements.

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	As of December 31,			
	2015	2014	2013	2012
	(in thousands)			
Balance Sheet Data:				
Cash and cash equivalents	\$ 33,104	\$ 61,446	\$ 85,612	\$ 62,957
Available-for-sale securities	73,691	60,912	—	—
Available-for-sale securities, non-current	13,165	36,364	—	—
Working capital	101,380	110,982	81,790	25,715
Total assets	128,743	161,189	86,216	64,303
Warrant liability	—	—	6,232	1,706
Total liabilities	12,556	14,115	10,462	40,186
Convertible preferred stock	—	—	19,149	19,149
Total stockholders' equity	116,187	147,074	56,605	4,968

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ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with the section of this report entitled "Selected financial data" and our financial statements and related notes included elsewhere in this report. This discussion and other parts of this report contain forward-looking statements that involve risk and uncertainties, such as statements of our plans, objectives, expectations and intentions. Our actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in the section of this report entitled "Risk factors."

Overview

We are a pharmaceutical company focused on the development and commercialization of therapeutics targeting chronic disorders of the central nervous system ("CNS"). We seek to achieve this by enhancing the pharmacokinetic profiles of approved drugs to create novel therapeutics for use alone and in fixed-dose combination products. Our business strategy is twofold. We intend to develop and commercialize our wholly-owned products directly. In addition, we may form partnerships with companies that have an already established CNS market presence.

We are developing our lead wholly-owned product candidate, ADS-5102 (amantadine hydrochloride), for multiple indications, including: a complication associated with the treatment of Parkinson's disease known as levodopa-induced dyskinesia ("LID"), for major symptoms associated with multiple sclerosis in patients with walking impairment, and potentially as a treatment for one or more additional CNS indications. ADS-5102 is an extended-release version of amantadine that is intended for once daily administration at bedtime. ADS-5102 is designed to improve upon the pharmacokinetic profile of immediate-release amantadine, with the aim of enhancing efficacy without compromising the known tolerability profile.

After successful completion of a Phase 2/3 clinical study in LID in 2013, we initiated two confirmatory Phase 3 trials and a separate open-label safety study in 2014. We completed enrollment in the larger of these trials, EASE LID, in July 2015, and the smaller, EASE LID 3, in December 2015. We announced top-line results of EASE LID in December 2015 and expect to announce top-line results of EASE LID 3 in the first half of 2016.

We expect to submit a New Drug Application ("NDA") to the U.S. Food and Drug Administration ("FDA") for ADS-5102 for the treatment of LID in 2016.

We are also exploring the utility of ADS-5102 for the treatment of major symptoms associated with multiple sclerosis in patients with walking impairment with the initiation of a Phase 2 clinical study in June 2015. We anticipate results

from this study in 2016. We may also explore the development of ADS-5102 in additional indications, as well as in combinations with other drugs.

We have also commenced development of ADS-4101, an extended-release version of an FDA-approved single-agent compound for the treatment of epilepsy (partial onset seizures). We expect that this new program will progress into clinical trials in 2016.

We plan to commercialize ADS-5102, and potentially other wholly-owned product candidates, if approved, by developing a small CNS commercial organization, including a sales force to reach leading neurologists and movement disorder specialists in the United States, and in other markets through distribution agreements and collaborations with CNS-focused pharmaceutical companies.

Through a partnership with Forest Laboratories Holdings Limited (“Forest Laboratories”), an indirect wholly-owned subsidiary of Allergan plc, our portfolio includes two drugs commercially available in the United States: Namzaric™ (memantine hydrochloride extended-release and donepezil hydrochloride) (formerly MDX-8704) and Namenda XR® (memantine hydrochloride) extended release capsules, launched in May 2015 and June 2013, respectively.

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Financial operations overview

### Summary

Our revenue to date has been generated primarily from license, milestone, and development revenue pursuant to our license agreement with Forest. We have not generated any commercial product revenue. As of December 31, 2015, we had an accumulated deficit of \$62.2 million. Although we reported net income in each of the years ended December 31, 2014, 2013, and 2012, this was primarily due to the recognition of revenue pursuant to our license agreement with Forest. There are no further milestone payments to be earned under our license agreement with Forest. We cannot assure you that we will receive additional collaboration revenue in the future. We incurred significant losses in 2015 and prior to 2012 and expect to incur significant and increasing losses in the foreseeable future as we advance our product candidates into later stages of development and, if approved, commercialization.

Under our agreement with Forest, we received a non-refundable upfront license fee of \$65.0 million in 2012, which we recognized on a straight-line basis from November 2012 to February 2013, \$40.0 million in development milestone fees recognized in 2013, a \$25.0 million milestone payment related to FDA acceptance of Forest's New Drug Application, or NDA, submission for Namzaric recognized in May 2014, and a final \$30.0 million milestone payment recognized in December 2014 upon FDA approval of the NDA. Beginning five years after the May 2015 commercial launch we are entitled to receive tiered royalties in the low double digits to the mid-teens for sales of Namzaric in the United States. In addition, we are also entitled to receive tiered royalties in the low to mid-single digits from Forest for sales of Namenda XR in the United States beginning in June 2018, however, we do not expect the Namenda XR royalties will make a significant financial contribution to our business.

We expect to continue to incur significant research and development expenses as we continue to advance our product candidates through clinical development. In addition, we plan to commercialize ADS-5102, if approved, and potentially other wholly-owned product candidates by developing a CNS commercial organization, including a sales force to reach leading neurologists and movement disorder specialists in the United States. Because of the numerous risks and uncertainties associated with drug development, we are unable to predict the timing or amount of expenses incurred or when, or if, we will be able to achieve sustained profitability.

Prior to our initial public offering of our common stock, or IPO, in April 2014, we had raised an aggregate of approximately \$87.2 million through the sale of convertible preferred stock and \$1.0 million through the exercise of preferred stock warrants. In 2014, we issued and sold 3,081,371 shares of common stock in our IPO and received net proceeds of approximately \$42.6 million, which included partial exercise of the underwriters' option to purchase additional shares and after deducting underwriting discounts, commissions and offering expenses. In connection with the completion of our IPO, all convertible preferred stock converted into common stock. On June 1, 2015, we entered into a Controlled Equity Offering Sales Agreement, pursuant to which we may, from time to time, issue and sell shares of common stock having an aggregate offering value of up to \$25.0 million. As of December 31, 2015, we had issued 509,741 shares of common stock and raised net proceeds of \$9.7 million under the Sales Agreement.

As of December 31, 2015, we had cash, cash equivalents, and investments of \$120.0 million. In January 2016, we raised an additional \$61.8 million from the sale of 2,875,000 shares of common stock.

### Revenue

We have not generated any revenue from commercial product sales to date. Our revenue to date has been generated primarily from non-refundable upfront license payments, milestone payments, and reimbursements for research and

development expenses under our license agreement with Forest and to a lesser degree from NIH grants and government contracts.

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The following table summarizes the sources of our revenue for the years ended December 31, 2015 and 2014 (in thousands):

	December 31,	
	2015	2014
Forest:		
Recognition of upfront license fees and milestones	\$ —	\$ 55,040
Reimbursement of development costs	1,434	558
Forest total	1,434	55,598
NIH grants	482	202
Government contracts	—	46
Total revenue	\$ 1,916	\$ 55,846

We recognized collaboration revenue of zero and \$55.0 million in 2015 and 2014, respectively, pursuant to our license agreement with Forest. We also recognized revenue from Forest of approximately \$1.4 million and \$0.6 million in development funding for the years ended December 31, 2015 and 2014, respectively. We do not expect to recognize any further milestone payments under our license agreement with Forest, while development funding is expected to remain at modest levels in future periods. Beginning in May 2020, we will be entitled to receive royalties in the low double digits to the mid-teens from Forest for sales of Namzaric in the United States and in June 2018, we will be entitled to receive royalties in the low to mid-single digits for sales of Namenda XR in the United States. We were also awarded a continuation of an NIH grant for \$1.0 million in August 2014, which we will administer, but conduct through subcontractors.

#### Research and development expenses

Research and development expenses represent costs incurred to conduct research, such as the discovery and development of our wholly-owned product candidates, as well as the development of product candidates pursuant to our agreement with Forest. We recognize all research and development costs as they are incurred. We began tracking our external costs by project beginning January 1, 2006.

Research and development expenses consist of:

- fees paid to clinical consultants, clinical trial sites, and vendors, including clinical research organizations, or CROs, in conjunction with implementing and monitoring our clinical trials and acquiring and evaluating clinical trial data, including all related fees, such as for investigator grants, patient screening fees, laboratory work, and statistical compilation and analysis;
- expenses related to production of clinical supplies, including fees paid to contract manufacturing organizations, or CMOs;
- other consulting fees paid to third parties; and
- employee-related expenses, which include salaries, benefits, and stock-based compensation.

The following table summarizes our research and development expenses incurred during the years ended December 31, 2015 and 2014 (in thousands):

	December 31,	
	2015	2014
Product candidates		

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ADS-5102	\$ 32,231	\$ 21,074
Government contracts, NIH grants, and ADS-8902 (1)	430	325
Other research and development expenses (2)	3,234	461
Total research and development expenses	\$ 35,895	\$ 21,860

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- (1) Government contracts, NIH grants, and ADS 8902 includes program costs related to a program that was suspended in 2010. The NIH assumed financial responsibility for the ongoing clinical activities through an independent third party subcontractor. We incur the expenses reflected in the above table in providing clinical operations support to an independent third party subcontractor for which we are reimbursed.
- (2) Other research and development expenses include costs not allocated to a specific program.



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The program-specific expenses summarized in the table above include costs directly attributable to our product candidates. We allocate research and development salaries, benefits, stock-based compensation, and indirect costs to our product candidates on a program-specific basis, and we include these costs in the program-specific expenses. We have reallocated certain other research and development expenses to program specific expenses for the year ended December 31, 2014 in order to consistently classify our product candidate expenses between periods.

The largest component of our total operating expenses has historically been our investment in research and development activities, including the clinical development of our product candidates. We anticipate to continue to incur significant research and development expenses as we continue our clinical trials for ADS-5102 in LID and major symptoms associated with MS, ADS-4101 for treatment of epilepsy, and potentially initiate additional clinical-stage programs in more indications or for future product candidates. The process of conducting the necessary clinical research to obtain FDA approval is costly and time consuming. We consider the active management and development of our clinical pipeline to be crucial to our long-term success. The actual probability of success for each product candidate and clinical program may be affected by a variety of factors including but not limited to the quality of the product candidate, early clinical data, investment in the program, competition, manufacturing capability, and commercial viability. Furthermore, in the past we have entered into collaborations with other pharmaceutical companies, CROs, and academic third parties to participate in the development and commercialization of our product candidates, and we may enter into additional collaborations in the future. In situations in which third parties have control over the clinical development of a product candidate, the estimated completion dates are largely under the control of such third parties and not under our control. We cannot forecast with any degree of certainty which of our product candidates, if any, will be subject to future collaborations or how such arrangements would affect our development plans or capital requirements. As a result of the uncertainties discussed above, we are unable to determine the duration and completion costs of our research and development projects or when and to what extent we will generate revenue from the commercialization and sale of any of our product candidates.

### General and administrative expenses

General and administrative expenses consist primarily of personnel and related benefit costs, and facilities, professional services, insurance, and public company related expenses. We anticipate our general and administrative expenses will increase as we continue to support our clinical and potentially commercial-stage programs. If ADS-5102 or other products are approved by the FDA, we plan to market and sell through our own sales force to reach leading neurologists and movement disorder specialists in the United States, which will further increase general and administrative expenses.

### Interest and other income (expense), net

Interest and other income (expense), net consists primarily of interest received on our cash, cash equivalents, and short and long-term investments, as well as gains and losses resulting from the remeasurement of our convertible preferred stock warrant liability. We recorded adjustments to the estimated fair value of the convertible preferred stock warrants until they were exercised or expired. Subsequent to the IPO, we reclassified the convertible preferred stock warrant liability as additional paid-in capital and we no longer recorded any related periodic fair value adjustments.

### Critical accounting policies and significant judgments and estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with United States generally accepted accounting principles, or U.S. GAAP. The preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenue generated and expenses incurred during the reporting

periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. We have discussed the development, selection and disclosure of these estimates with the Audit Committee of our Board of Directors. Actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are described in more detail in Note 2 of our financial statements included in this Annual Report on Form 10 K, we believe the following accounting policies to be critical to the judgments and estimates used in the preparation of our financial statements.

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### Revenue Recognition

We recognize revenue when all four of the following criteria have been met: (i) persuasive evidence of an arrangement exists, (ii) delivery has occurred or services have been rendered, (iii) the fee is fixed or determinable and (iv) collectability is reasonably assured. Revenue under license and collaboration arrangements is recognized based on the performance requirements of the contract. Determinations of whether persuasive evidence of an arrangement exists and whether delivery has occurred or services have been rendered are based on management's judgments regarding the fixed nature of the fees charged for deliverables and the collectability of those fees. Should changes in conditions cause management to determine that these criteria are not met for any new or modified transactions, revenue recognized could be adversely affected.

We generate revenue from collaboration and license agreements for the development and commercialization of products. Collaboration and license agreements may include non-refundable upfront license fees, partial or complete reimbursement of research and development costs, contingent consideration payments based on the achievement of defined collaboration objectives and royalties on sales of commercialized products. The Company's performance obligations under the collaborations may include the license or transfer of intellectual property rights, obligations to provide research and development services and related materials and obligations to participate on certain development and/or commercialization committees with the collaborators.

For revenue agreements with multiple-element arrangements, we allocate revenue to each non-contingent element based on the relative selling price of each element in an arrangement. When applying the relative selling price method, we determine the selling price for each deliverable using the following estimation hierarchy: (i) vendor-specific objective evidence of fair value of the deliverable, if it exists, (ii) third-party evidence of selling price, if vendor-specific objective evidence is not available or (iii) vendor's best estimate of selling price, if neither vendor-specific nor third-party evidence is available. Revenue allocated is then recognized when the four basic revenue recognition criteria, mentioned above, are met for each element.

We recognize payments that are contingent upon achievement of a substantive milestone in their entirety in the period in which the milestone is achieved. Milestones are defined as events that can only be achieved based on the Company's performance and there is substantive uncertainty about whether the event will be achieved at the inception of the arrangement. Events that are contingent only on the passage of time or only on counterparty performance are not considered milestones subject to this guidance. Further, the amounts received must relate solely to prior performance, be reasonable relative to all of the deliverables and payment terms within the agreement and commensurate with our performance to achieve the milestone after commencement of the agreement.

Amounts related to research and development funding are recognized as the related services or activities are performed, in accordance with the contract terms. Payments may be made to or by us based on the number of full-time equivalent researchers assigned to the collaboration project and the related research and development expenses incurred.

### Stock Based Compensation

We account for stock-based compensation of stock options granted to employees and directors and for employee stock purchase plan shares by estimating the fair value of stock-based awards using the Black-Scholes option pricing model and amortizing the fair value of the stock-based awards granted over the applicable vesting period. All stock options awards to non-employees are accounted for at the fair value of the consideration received or the fair value of the equity instrument issued, as calculated using the Black-Scholes model. The measurement of non-employee stock-based compensation is subject to periodic adjustment as the underlying equity instruments vest.

In order to estimate the value of share based awards, we use the Black Scholes model, which requires the use of certain subjective assumptions. The most significant subjective assumptions are management's estimates of the expected volatility and the expected term of the award. In addition, judgment is also required in estimating the amount of share based awards that are expected to be forfeited. If actual results differ significantly from any of these estimates, stock based compensation expense and our results of operations could be materially impacted.

#### Clinical Trial Accruals

Our clinical trial accruals are based on estimates of patient enrollment and related costs at clinical investigator sites, as well as estimates for the services received and efforts expended pursuant to contracts with multiple research institutions and clinical research organizations ("CROs") that conduct and manage clinical trials on our behalf.

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We estimate clinical trial expenses based on the services performed pursuant to contracts with research institutions and clinical research organizations that conduct and manage clinical trials on our behalf. In accruing service fees, we obtain the reported level of patient enrollment at each site and estimate the time period over which services will be performed and activity expended in each period. If the actual timing of the performance of services or the level of effort varies from the estimate, we will adjust the accrual accordingly. Payments made to third parties under these arrangements in advance of the receipt of the related services are recorded as prepaid expenses until the services are rendered

## Results of operations

## Comparison of the years ended December 31, 2015 and 2014

The following table summarizes our results of operations for the years ended December 31, 2015 and 2014 (in thousands, except percentages):

	December 31,		Increase/ (Decrease)	% Increase/ (Decrease)	
	2015	2014			
Revenue	\$ 1,916	\$ 55,846	\$ (53,930)	(97)	%
Research and development expenses	35,895	21,860	14,035	64	%
General and administrative expenses	23,458	15,472	7,986	52	%
Interest and other income (expense), net	363	(917)	1,280	140	%

## Revenue

Revenue decreased by \$53.9 million, or 97%, to \$1.9 million for the year ended December 31, 2015 from \$55.8 million for the year ended December 31, 2014. Revenue from license fees and milestones decreased to zero for the year ended December 31, 2015 from \$55.0 million for the year ended December 31, 2014 entirely due to the timing, magnitude, and nature of specified amounts recognized under our license agreement with Forest. No further license fees or milestones are due under our license agreement with Forest. Reimbursement of development expenses relating to our license agreement with Forest increased by \$0.9 million to \$1.4 million for the year ended December 31, 2015 from \$0.6 million for the year ended December 31, 2014.

## Research and development expenses

Research and development expenses increased by \$14.0 million, or 64%, to \$35.9 million for the year ended December 31, 2015 from \$21.9 million for the year ended December 31, 2014. The increase in research and development expenses was attributed to our continued development of ADS 5102, which increased by \$11.2 million, or 53%, to \$32.2 million from \$21.1 million for the years ended December 31, 2015 and 2014, respectively. The increase related primarily to manufacturing of clinical supplies, increased headcount, as well as continued enrollment in our Phase 3 program in support of ADS-5102 for LID and our Phase 2 trial for the treatment of major symptoms associated with MS. There were also increased expenses not allocated to specific programs of \$2.8 million in 2015 over the prior year period, which were mostly comprised of consultant expenses. Included in research and development expenses was stock based compensation expense, which was \$3.2 million compared to \$2.5 million for the years ended December 31, 2015 and 2014, respectively.

## General and administrative expenses

General and administrative expenses increased by \$8.0 million, or 52%, to \$23.5 million for the year ended December 31, 2015 from \$15.5 million for the year ended December 31, 2014. The increase in general and administrative

expenses was primarily due to the increase in headcount related expenses to expand our capabilities as a public and pre-commercial company. General and administrative expenses also included stock based compensation expense of \$6.8 million compared to \$4.7 million for the years ended December 31, 2015 and 2014, respectively.

Interest and Other income (expense), net

Interest and other income (expense), net increased by \$1.3 million or 140%, to a net interest and other income of \$0.4 million for the year ended December 31, 2015 from a net expense of \$0.9 million for the year ended December 31, 2014. Net interest income for the year ended December 31, 2015 was primarily due to interest income earned on

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investments. In the year ended December 31, 2014 we recorded other expense, primarily attributed to the remeasurement of preferred stock warrants and recognition of the change in fair value.

## Comparison of the years ended December 31, 2014 and 2013

The following table summarizes our results of operations for the years ended December 31, 2014 and 2013 (in thousands, except percentages):

	December 31,		Increase/	% Increase/	
	2014	2013	(Decrease)	(Decrease)	
Revenue	\$ 55,846	\$ 71,095	\$ (15,249)	(21)	%
Research and development	21,860	7,410	14,450	195	%
General and administrative	15,472	6,667	8,805	132	%
Interest and other income (expense), net	(917)	(4,906)	(3,989)	(81)	%

## Revenue

Revenue decreased by \$15.2 million, or 21%, to \$55.8 million for the year ended December 31, 2014 from \$71.1 million for the year ended December 31, 2013. Revenue from license fees and milestones decreased by \$14.6 million, or 21% to \$55.0 million for the year ended December 31, 2014 from \$69.6 million for the year ended December 31, 2013, largely due to the timing, magnitude, and nature of specified amounts recognized under our license agreement with Forest. Reimbursement of development expenses relating to our license agreement with Forest decreased by \$0.5 million to \$0.6 million for the year ended December 31, 2014 from \$1.1 million for the year ended December 31, 2013.

## Research and development expenses

Research and development expenses increased \$14.5 million, or 195%, to \$21.9 million from \$7.4 million for the years ended December 31, 2014 and 2013, respectively. Included in research and development expenses was stock-based compensation expense of \$2.5 million compared to \$0.3 million for the years ended December 31, 2014 and 2013, respectively. The increase in research and development expenses related primarily to manufacturing of clinical supplies, commencement, and continued enrollment of our Phase 3 trials in support of ADS-5102 for LID, which increased \$16.6 million, or 369%, to \$21.1 million from \$4.5 million for the years ended December 31, 2014 and 2013, respectively. There were also increased expenses not allocated to specific programs of \$0.1 million in 2014 over the prior year period, which were mostly comprised of consultant expenses. There was a partially offsetting decrease in expenses of \$2.2 million to \$0.2 million from \$2.4 million for year years ended December 31, 2014 and 2013, respectively, for ADS-8704, which we incurred as part of our licensing agreement with Forest.

## General and administrative expenses

General and administrative expenses increased by \$8.8 million, or 132%, to \$15.5 million for the year ended December 31, 2014 from \$6.7 million for the year ended December 31, 2013. The increase in general and administrative expenses was primarily due to the increase in headcount-related expenses. General and administrative expenses also included stock-based compensation expense of \$4.7 million compared to \$0.3 million for the years ended December 31, 2014 and 2013, respectively.

## Interest and other income (expense), net

Interest and other income (expense), net decreased by \$4.0 million or 81%, to a net expense of \$0.9 million for the year ended December 31, 2014 from a net expense of \$4.9 million for the year ended December 31, 2013. The decrease in net expense between the periods was primarily attributed to the remeasurement of preferred stock warrants and recognition of the change in fair value.

#### Liquidity, capital resources and plan of operation

We have funded our operations primarily through \$160.0 million of payments received pursuant to our license agreement with Forest, \$88.2 million sales of convertible preferred stock and warrants, and \$42.6 million pursuant to



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sales of our common stock in public offerings, including \$41.4 million in our April 2014 IPO. On June 1, 2015, we entered into a Controlled Equity Offering Sales Agreement with Cantor Fitzgerald & Co., pursuant to which we may, from time to time, issue and sell shares of common stock having an aggregate offering value of up to \$25.0 million. As of December 31, 2015, we had issued 509,741 shares of common stock and raised net proceeds of \$9.7 million under the Sales Agreement. We have not generated any revenue from the sale of products. We incurred losses and generated negative cash flows from operations since inception through the year ended December 31, 2011. Although in 2014, 2013, and 2012, we recognized a profit and positive cash flow as a result of payments received pursuant to our license agreement with Forest, we received our final milestone payment from Forest in December 2014, and we do not currently receive any royalties from Forest, nor do we have other collaborations from which we might expect milestone or royalty revenue. Consequently, we expect to incur substantial and increasing losses for the foreseeable future. Our principal sources of liquidity were our cash, cash equivalents, and investments, which totaled \$120.0 million and \$158.7 million at December 31, 2015 and 2014, respectively.

On January 6, 2016, the Company completed a follow-on public offering of 2,875,000 shares of its common stock, which includes the exercise in full by the underwriters of their option to purchase 375,000 shares of common stock, at an offering price of \$23.00 per share. Proceeds from the follow-on public offering were approximately \$61.8 million, net of underwriting discounts, commissions, and offering-related transaction costs.

We believe our existing cash, cash equivalents, and investments will be sufficient to fund our projected operating requirements, including operations related to the continued development of ADS 5102 for LID, for at least the next 12 months. However, it is possible that we will not achieve the progress that we expect, because the actual costs and timing of drug development, particularly clinical studies, and regulatory approvals are difficult to predict, subject to substantial risks and delays, and often vary depending on the particular indication and development strategy.

We expect to continue significant spending in connection with the development and commercialization of our product candidates, particularly for ADS-5102 for LID, as well as other indications. In order to continue these activities, we may decide to raise additional funds through a combination of equity offerings, debt financings, collaborations, and other strategic alliances. Sufficient additional funding may not be available on acceptable terms, or at all. If adequate funds are not available in the future, we may need to delay, reduce the scope of, or put on hold our clinical studies, research and development programs, or commercialization efforts.

## Comparison of 2015 and 2014

The following table summarizes our cash flows for the periods indicated (in thousands):

	Year Ended December 31,	
	2015	2014
Net cash (used in) provided by:		
Operating activities	\$ (47,210)	\$ 26,194
Investing activities	8,058	(97,380)
Financing activities	10,810	47,020
Net increase (decrease) in cash and cash equivalents	\$ (28,342)	\$ (24,166)

Net cash used in operating activities was \$47.2 million for the year ended December 31, 2015 compared to \$26.2 million of net cash provided by operating activities for the year ended December 31, 2014. Net loss of \$51.8 million for the year ended December 31, 2015 included net non cash adjustments of \$11.3 million, which consisted primarily of stock based compensation of \$10.0 million. Net income of \$10.2 for the year ended December 31, 2014 included \$55.0 million in development milestone payments under our license agreement with Forest. Net

cash provided by operating activities for the year ended December 31, 2014 also included non-cash adjustments of \$5.5 million, primarily related to \$7.2 million in stock-based compensation and a change in the preferred stock warrant value of \$1.0 million, offset by an excess tax benefit on the exercise of stock options of \$1.6 million and net amortization of investment premiums of \$1.4 million. The primary use of cash was to fund the ongoing clinical studies and product development activities related to ADS 5102 for LID.

Net cash provided by investing activities was \$8.1 million for the year ended December 31, 2015, compared to \$97.4 million of net cash used in investing activities for the year ended December 31, 2014. Net cash provided by

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investing activities for the year ended 2015 was a result of \$69.3 million of maturities of available-for-sale securities offset by purchases of \$59.8 million of available-for-sale securities and \$1.4 million of property and equipment. Net cash used in investing activities for the year ended 2014 resulted from the purchase of \$96.1 million of available-for-sale securities and \$1.3 million of property and equipment.

Net cash provided by financing activities was \$10.8 million for the year ended December 31, 2015, compared to \$47.0 million for the year ended December 31, 2014. In the year ended 2015 we received net cash proceeds of \$9.7 million related to the sale of common stock under a controlled equity offering, compared to \$42.6 million of net cash proceeds received from our initial public offering in the year ended 2014. In both the year ended 2015 and 2014 we received cash proceeds of \$1.2 million related to the exercise of stock options and from purchases of common stock under the Employee Stock Purchase Plan.

## Comparison of 2014 and 2013

The following table summarizes our cash flows for the periods indicated (in thousands):

	Year Ended December 31,	
	2014	2013
Net cash (used in) provided by:		
Operating activities	\$ 26,194	\$ 26,801
Investing activities	(97,380)	(167)
Financing activities	47,020	(3,979)
Net increase (decrease) in cash and cash equivalents	\$ (24,166)	\$ 22,655

Net cash provided by operating activities was \$26.2 million for the year ended December 31, 2014 compared to \$26.8 million for the year ended December 31, 2013. In 2014, we received development milestone payments of \$55.0 million under our license agreement with Forest. Net income of \$10.2 million for the year ended December 31, 2014 included net non-cash adjustments of \$5.5 million, which consisted primarily of stock based compensation of \$7.2 million and a change in the preferred stock warrant value of \$1.0 million, offset by an excess tax benefit on the exercise of stock options of \$1.6 million and net investment premium of \$1.4 million. In 2013, operating cash was generated primarily through the receipt of \$40.0 million in development milestone payments under our license agreement with Forest. Net income of \$50.9 million for the year ended December 31, 2013 included non cash income of \$29.6 million of deferred revenue and non cash charges of \$4.5 million related to the change in the value of the preferred stock warrant and \$0.6 million in stock based compensation. The primary use of cash was to fund the ongoing clinical studies and product development activities related to ADS 5102 for LID.

Net cash used in investing activities was \$97.4 million for the year ended December 31, 2014 compared to \$0.2 million for the same period in the prior year. The increase in net cash used in investing activities resulted primarily from the purchase of \$96.1 million of marketable securities in 2014 coupled with an increase of \$1.3 million relating to the purchase of property and equipment, primarily driven by leasehold improvements.

Net cash provided by financing activities was \$47.0 million for the year ended December 31, 2014, compared to \$4.0 million of net cash used in financing activities for the year ended December 31, 2013. In 2014, we received net cash proceeds of \$42.6 million related to our IPO coupled with \$2.0 million from the issuance of stock from the exercise of warrants and \$1.2 million from the exercise of stock options and purchase of ESPP shares. In 2013, net cash used in financing activities for the year ended December 31, 2013 was \$4.0 million, substantially all of which related to the repayment of convertible notes.

Off balance sheet arrangements

Since our inception, we have not engaged in any off balance sheet arrangements, including the use of structured finance, special purpose entities, or variable interest entities.

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## Contractual obligations

Our future contractual obligations at December 31, 2015 were as follows (in thousands):

	Total	Payments Due by Period			More than 5 Years
		Less than 1 Year	2 - 3 Years	4 - 5 Years	
Contractual obligations:					
Operating lease obligations	\$ 2,849	\$ 650	\$ 1,310	\$ 889	\$ —
Total contractual obligations	\$ 2,849	\$ 650	\$ 1,310	\$ 889	\$ —

## Recent Accounting Pronouncements

In May 2014, the FASB issued Accounting Standards Update (“ASU”) 2014-09, Revenue from Contracts with Customers. The amendment in this ASU provides guidance on the revenue recognition to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The core principle of this update provides guidance to identify the performance obligations under the contract(s) with a customer and how to allocate the transaction price to the performance obligations in the contract. It further provides guidance to recognize revenue when (or as) the entity satisfies a performance obligation. This standard will replace most existing revenue recognition guidance. On July 9, 2015, the FASB approved a one-year deferral of the effective date of this standard to 2018 for public companies, with an option that would permit companies to adopt the standard as early as the original effective date of 2017. Early adoption prior to the original effective date is not permitted. We have not yet selected a transition method nor have we determined the effect of the standard on our consolidated financial position and results of operations.

In August 2014, the FASB issued ASU 2014-15, Presentation of Financial Statements-Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern. This ASU provides guidance on management’s responsibility in evaluating whether there is substantial doubt about a Company’s ability to continue as a going concern and about related footnote disclosures. For each reporting period, management will be required to evaluate whether there are conditions or events that raise substantial doubt about the company’s ability to continue as a going concern within one year from the date the financial statements are issued. The amendments in this update are effective for annual periods ending after December 15, 2016, and for interim periods within annual periods beginning after December 15, 2016. Early adoption is permitted for annual or interim reporting periods for which the financial statements have not previously been issued. We are evaluating the impact the revised guidance will have on our financial statements.

In November 2015, the FASB issued ASU No. 2015-17, Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes. Under ASU 2015-17, a reporting entity is required to classify deferred tax assets and liabilities as noncurrent in a classified statement of financial position. Current guidance requiring the offsetting of deferred tax assets and liabilities of a tax-paying component of an entity and presentation as a single noncurrent amount is not affected. This ASU is effective for public business entities issuing financial statements for the annual periods beginning after December 15, 2016, and interim periods within those annual periods. Early adoption is permitted for financial statements as of the beginning of an interim or annual reporting period. Entities may apply the update prospectively to all deferred tax assets and liabilities and taxes, or retrospectively for all periods presented. The effects of this update on our consolidated financial statements are not expected to be material.

## JOBS Act Accounting Election

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards, and, therefore, are subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

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ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The primary objective of our investment activities is to preserve our capital to fund our operations. We also seek to maximize income from our investments without assuming significant risk. To achieve our objectives, we maintain a portfolio of cash equivalents and investments in a variety of securities of high credit quality. As of December 31, 2015, we had cash, cash equivalents, and investments of \$120.0 million, consisting of cash and cash equivalents, as well as short and long-term investment grade available-for-sale securities. In January 2016, we raised an additional \$61.8 million from the sale of 2,875,000 shares of common stock. A portion of our investments may be subject to interest rate risk and could fall in value if market interest rates increase. However, because our investments are primarily short-term in duration and our holdings in US government bonds and corporate debt securities mature prior to our expected need for liquidity, we believe that our exposure to interest rate risk is not significant and, as a consequence, a 1% movement in market interest rates would not have a significant impact on the total value of our portfolio. We actively monitor changes in interest rates.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The Consolidated Financial Statements and Supplementary Data required by this Item are set forth where indicated in Item 15 of this report.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and the rules and regulations thereunder, is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow for timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As required by Rule 13a-15(b) under the Exchange Act, our management, under the supervision and with the participation of our principal executive officer and principal financial officer, has evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of December 31, 2015. Based on such evaluation, our principal executive officer and principal financial officer have concluded that, as of December 31, 2015, our disclosure controls and procedures were effective.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) or 15d-15(f) under the Exchange Act

as a process designed by, or under the supervision of, our principal executive officer and principal financial officer and effected by our board of directors, management, and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our financial statements for external reporting purposes in conformity with generally accepted accounting principles and includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;



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- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2015. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework (2013). Based on this assessment, management believes that, as of December 31, 2015, our internal control over financial reporting is effective based on those criteria.

Attestation Report on Internal Control over Financial Reporting

This Annual Report on Form 10-K does not include an attestation report of our independent registered public accounting firm on internal control over financial reporting due to the deferral allowed under the JOBS Act for emerging growth companies.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal controls over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the year ended December 31, 2015 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

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PART III

Certain information required by Part III is omitted from this annual report on Form 10 K and is incorporated herein by reference to our definitive Proxy Statement for our 2016 Annual Meeting of Stockholders, or the Proxy Statement, which we intend to file pursuant to Regulation 14A of the Securities Exchange Act of 1934, as amended, within 120 days after December 31, 2015.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item concerning our directors is incorporated by reference to the information set forth in the section titled “Election of Directors” and “Corporate Governance” in our Proxy Statement. Information required by this item concerning our executive officers is incorporated by reference to the information set forth in the section entitled “Executive Officers and Key Employees” in our Proxy Statement. Information regarding Section 16 reporting compliance is incorporated by reference to the information set forth in the section entitled “Section 16(a) Beneficial Ownership Reporting Compliance” in our Proxy Statement.

Our written Code of Conduct and Ethics applies to all of our directors and employees, including our executive officers, including without limitation our principal executive officer, principal financial officer, principal accounting officer or controller or persons performing similar functions. The Code of Conduct and Ethics is available on our website at <http://www.adamaspharma.com> in the Investors section under “Corporate Governance.” Changes to or waivers of the Code of Conduct and Ethics will be disclosed on the same website. We intend to satisfy the disclosure requirement under Item 5.05 of Form 8 K regarding any amendment to, or waiver of, any provision of the Code of Conduct and Ethics in the future by disclosing such information on our website.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item regarding executive compensation is incorporated by reference to the information set forth in the sections titled “Executive Compensation” in our Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this item regarding security ownership of certain beneficial owners and management is incorporated by reference to the information set forth in the section titled “Security Ownership of Certain Beneficial Owners and Management” and “Equity Compensation Plan Information” in our Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item regarding certain relationships and related transactions and director independence is incorporated by reference to the information set forth in the sections titled “Certain Relationships and Related Persons Transactions” and “Election of Directors”, respectively, in our Proxy Statement.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item regarding principal accountant fees and services is incorporated by reference to the information set forth in the section titled “Principal Accountant Fees and Services” in our Proxy Statement.



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PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a)(1) Financial Statements

The following Consolidated Financial Statements are filed as part of this report:

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<u>Consolidated Balance Sheets</u>	79
<u>Consolidated Statements of Operations</u>	80
<u>Consolidated Statements of Comprehensive Income (Loss)</u>	81
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<u>Consolidated Statements of Cash Flows</u>	83
<u>Notes to Consolidated Financial Statements</u>	84

(a)(2) Financial Statement Schedules

Financial statement schedules have been omitted in this report because they are not applicable, not required under the instructions, or the information requested is set forth in the consolidated financial statements or related notes thereto.

(a)(3) Exhibits

See the Exhibit Index which follows the signature page of this Annual Report on Form 10-K, which is incorporated herein by reference.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Adamas Pharmaceuticals, Inc.  
(Registrant)

Date: February 23, 2016 /s/ Gregory T. Went, Ph.D.

Gregory T. Went, Ph.D.  
Chief Executive Officer  
(Principal Executive Officer)

Date: February 23, 2016 /s/ William J. Dawson

William J. Dawson  
Chief Financial Officer  
(Principal Financial and Accounting Officer)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Gregory T. Went, Ph.D. and William J. Dawson, jointly and severally, as his or her true and lawful attorneys in fact and agents, with full power of substitution and resubstitution, for him or her, and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys in fact and agents full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises hereby ratifying and confirming all that said attorneys in fact and agents, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Gregory T. Went	Chief Executive Officer and Chairman (Principal Executive Officer)	February 23, 2016
Gregory T. Went, Ph.D.		
/s/ William J. Dawson	Chief Financial Officer	February 23, 2016

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William J. Dawson  
Officer  
(Principal  
Financial  
and  
Accounting  
Officer)

/s/ Richard Booth  
Director  
February 23, 2016  
Richard Booth

/s/ Martha J. Demski  
Director  
February 23, 2016  
Martha J. Demski

/s/ William Ericson  
Director  
February 23, 2016  
William Ericson

/s/ Sara Grootwassink Lewis  
Director  
February 23, 2016  
Sara Grootwassink Lewis

/s/ Ivan Lieberburg  
Director  
February 23, 2016  
Ivan Lieberburg,  
M.D., Ph.D.

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Signature	Title	Date
/s/ David L. Mahoney	Director	February 23, 2016
David L. Mahoney		
/s/ John MacPhee	Director	February 23, 2016
John MacPhee		

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\*Pursuant to Power of Attorney

By: /s/ William J. Dawson

William J. Dawson

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ADAMAS PHARMACEUTICALS, INC.

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders

of Adamas Pharmaceuticals, Inc.

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, of comprehensive income, of convertible preferred stock and stockholders' equity and cash flows present fairly, in all material respects, the financial position of Adamas Pharmaceuticals, Inc. and its subsidiaries (the "Company") at December 31, 2015 and 2014, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2015 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP

San Jose, California

February 23, 2016

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## ADAMAS PHARMACEUTICALS, INC.

## CONSOLIDATED BALANCE SHEETS

(in thousands, except share and per share data)

	December 31, 2015	December 31, 2014
Assets		
Current assets		
Cash and cash equivalents	\$ 33,104	\$ 61,446
Available-for-sale securities	73,691	60,912
Accounts receivable	1,284	524
Prepaid expenses and other current assets	5,108	645
Total current assets	113,187	123,527
Property and equipment, net	2,353	1,228
Available-for-sale securities, non-current	13,165	36,364
Other assets	38	70
Total assets	\$ 128,743	\$ 161,189
Liabilities and stockholders' equity		
Current liabilities		
Accounts payable	\$ 3,052	\$ 3,685
Accrued liabilities	8,457	8,595
Other current liabilities	298	265
Total current liabilities	11,807	12,545
Non-current liabilities	749	1,570
Total liabilities	12,556	14,115
Commitments and Contingencies (Note 8)		
Convertible preferred stock, \$0.001 par value — 5,000,000 shares authorized, and zero shares issued and outstanding at December 31, 2015 and December 31, 2014	—	—
Stockholders' equity		
Common stock, \$0.001 par value — 100,000,000 shares authorized, 18,505,462 and 17,551,375 shares issued and outstanding at December 31, 2015 and December 31, 2014, respectively	23	22
Additional paid-in capital	178,473	157,581
Accumulated other comprehensive income (loss)	(158)	(180)
Accumulated deficit	(62,151)	(10,349)
Total stockholders' equity	116,187	147,074
Total liabilities and stockholders' equity	\$ 128,743	\$ 161,189

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



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ADAMAS PHARMACEUTICALS, INC.

## CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share data)

	Years Ended December 31,		
	2015	2014	2013
Revenue	\$ 1,916	\$ 55,846	\$ 71,095
Operating expenses			
Research and development	35,895	21,860	7,410
General and administrative	23,458	15,472	6,667
Total operating expenses	59,353	37,332	14,077
Income (loss) from operations	(57,437)	18,514	57,018
Interest and other income (expense), net	363	(917)	(4,906)
Income (loss) before income taxes	(57,074)	17,597	52,112
Provision (benefit) for income taxes	(5,272)	7,374	1,191
Net income (loss)	\$ (51,802)	\$ 10,223	\$ 50,921
Net income (loss) attributable to common stockholders:			
Basic	\$ (51,802)	\$ 8,968	\$ 33,068
Diluted	\$ (51,802)	\$ 9,069	\$ 35,353
Net income (loss) per share attributable to common stockholders:			
Basic	\$ (2.86)	\$ 0.60	\$ 3.48
Diluted	\$ (2.86)	\$ 0.53	\$ 2.99
Weighted average number of shares used in computing net income (loss) attributable to common stockholders:			
Basic	18,111	14,837	9,506
Diluted	18,111	17,107	11,806

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

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ADAMAS PHARMACEUTICALS, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

(in thousands)

	Years Ended December 31,		
	2015	2014	2013
Net income (loss)	\$ (51,802)	\$ 10,223	\$ 50,921
Unrealized gain (loss) on available-for-sale securities	22	(180)	—
Comprehensive income (loss)	\$ (51,780)	\$ 10,043	\$ 50,921

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

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## ADAMAS PHARMACEUTICALS, INC.

## CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY

(in thousands, except share and per share data)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital		Accumulated Other Comprehensive income (loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount	Shares	Amount			
Balances at December 31, 2012	4,719,174	\$ 1,149	9,499,862	\$ 14		\$ 76,447	\$ —	\$ (71,493)	\$ 4,968
Exercise of stock options	—	—	15,666	—		16	—	—	16
Vesting of common stock	—	—	—	—		8	—	—	8
Modification of common stock purchase warrants	—	—	—	—		52	—	—	52
Stock-based compensation	—	—	—	—		640	—	—	640
Net income	—	—	—	—		—	—	50,921	50,921
Balances at December 31, 2013	4,719,174	\$ 1,149	9,515,528	\$ 14		\$ 77,163	\$ —	\$ (20,572)	\$ 56,605
Exercise of stock options	—	—	738,539	1		480	—	—	481
Excess tax benefit of stock option exercises	—	—	—	—		1,599	—	—	1,599
Exercise of common stock warrants	—	—	199,837	—		453	—	—	453
Issuance of Series AA preferred stock from the exercise of preferred stock warrants	622,668	\$ 747	—	—		—	—	—	—
Conversion of preferred stock to common stock in	(5,341,874)	\$ (896)	4,003,225	4		27,892	—	—	27,896

April 2014 in connection with the IPO								
Issuance of common stock in initial public offering (“IPO”), net of discounts, commissions and issuance costs	—	—	3,081,371	3	42,629	—	—	42,632
Net unrealized loss on available-for-sale securities	—	—	—	—	—	(180)	—	(180)
Stock issued under employee stock purchase plan	—	—	12,875	—	162	—	—	162
Stock-based compensation	—	—	—	—	7,203	—	—	7,203
Net income	—	—	—	—	—	—	10,223	10,223
Balances at December 31, 2014	—	\$ —	17,551,375	\$ 22	\$ 157,581	\$ (180)	\$ (10,349)	\$ 147,074
Exercise of stock options	—	—	409,683	—	761	—	—	761
Vesting of common stock	—	—	—	—	112	—	—	112
Issuance of common stock in conjunction with Controlled Equity Offering, net of commissions and issuance costs	—	—	509,741	1	9,656	—	—	9,657
Issuance of common stock in conjunction with warrant exercises	—	—	3,484	—	—	—	—	—
Net unrealized gain on available-for-sale securities	—	—	—	—	—	22	—	22
Stock issued under employee stock purchase plan	—	—	31,179	—	407	—	—	407
Stock-based compensation	—	—	—	—	9,956	—	—	9,956
Net income	—	—	—	—	—	—	(51,802)	(51,802)
Balances at December 31, 2015	—	\$ —	18,505,462	\$ 23	\$ 178,473	\$ (158)	\$ (62,151)	\$ 116,187

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



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## ADAMAS PHARMACEUTICALS, INC.

## CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

	Years Ended December 31,		
	2015	2014	2013
Cash flows from operating activities			
Net income (loss)	\$ (51,802)	\$ 10,223	\$ 50,921
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities			
Depreciation and amortization	435	155	66
Stock-based compensation	9,956	7,203	640
Excess tax benefit on the exercise of stock options	—	(1,599)	—
Change in preferred stock warrant value	—	983	4,526
Net accretion of discounts and amortization of premiums of available-for-sale securities	875	(1,361)	—
Issuance of common stock and vesting of restricted common stock for services rendered	—	—	52
Loss on fixed asset disposal	—	111	—
Changes in assets and liabilities			
Accrued interest of available-for-sale securities	110	—	—
Prepaid expenses and other assets	(4,416)	(381)	80
Accounts receivable	(760)	(395)	761
Accounts payable	(788)	1,521	(1,157)
Deferred revenue	—	—	(29,611)
Accrued liabilities and other liabilities	(820)	9,734	523
Net cash provided by (used in) operating activities	(47,210)	26,194	26,801
Cash flows from investing activities			
Purchases of property and equipment	(1,399)	(1,285)	(167)
Purchases of available-for-sale securities	(59,828)	(96,095)	—
Maturities of available-for-sale securities	69,285	—	—
Net cash provided by (used in) investing activities	8,058	(97,380)	(167)
Cash flows from financing activities			
Proceeds from public offerings, net of offering costs	9,657	42,632	—
Proceeds from issuance of common stock upon exercise of stock options	746	1,011	21
Proceeds from employee stock purchase plan	407	162	—
Excess tax benefit on the exercise of stock options	—	1,599	—
Principal payments on convertible promissory notes	—	—	(4,000)
Repurchase of common stock	—	(370)	—
Proceeds from issuance of common and preferred stock upon exercise of warrants	—	1,986	—
Net cash provided by financing activities	10,810	47,020	(3,979)
Net increase (decrease) in cash and cash equivalents	(28,342)	(24,166)	22,655
Cash and cash equivalents at beginning of period	61,446	85,612	62,957
Cash and cash equivalents at end of period	\$ 33,104	\$ 61,446	\$ 85,612
Supplemental disclosure			

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Cash paid for income taxes	\$ 4,691	\$ 341	\$ 1,417
Cash paid for interest	\$ —	\$ —	\$ 279
Supplemental disclosure of noncash investing and financing activities			
Purchases of property and equipment included in accrued expense	\$ 161	\$ —	\$ —

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

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ADAMAS PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. THE COMPANY

Adamas Pharmaceuticals, Inc. (the “Company”) is a pharmaceutical company focused on the development and commercialization of therapeutics targeting chronic disorders of the central nervous systems (“CNS”). The Company seeks to achieve this by enhancing the pharmacokinetic profiles of approved drugs to create novel therapeutics for use alone and in fixed-dose combination products. The Company is developing its lead wholly-owned product candidate, ADS-5102 (amantadine hydrochloride) for a complication associated with the treatment of Parkinson’s disease known as levodopa-induced dyskinesia (“LID”). ADS-5102 is an extended-release version of amantadine that is intended for once daily administration at bedtime. The Company completed a Phase 2/3 clinical study in LID in 2013, and initiated two confirmatory Phase 3 trials and a separate open-label safety study in 2014. The Company completed enrollment in the larger of these trials, EASE LID, in July 2015, and the smaller, EASE LID 3, in December 2015. The Company announced top-line results of EASE LID in December 2015. The Company is also exploring the utility of ADS-5102 for the treatment of major symptoms associated with multiple sclerosis in patients with walking impairment with the initiation of a Phase 2 clinical study in June 2015.

Through a partnership with Forest Laboratories Holdings Limited (“Forest Laboratories”), an indirect wholly-owned subsidiary of Allergan plc, the Company’s portfolio also includes two drugs commercially available in the United States for indications relating to Alzheimer’s disease: Namzaric™ (memantine hydrochloride extended-release and donepezil hydrochloride) capsules (formerly MDX-8704) and Namenda XR® (memantine hydrochloride) extended release capsules, launched in May 2015 and June 2013, respectively.

The Company was incorporated in the State of Delaware on November 15, 2000. The Company’s headquarters and operations are located in Emeryville, California. The Company has four insignificant subsidiaries.

Initial Public Offering

In April 2014, the Company issued and sold 3,000,000 shares of its common stock in its initial public offering (“IPO”) at a public offering price of \$16.00 per share, for net proceeds of approximately \$41.4 million after deducting underwriting discounts and commissions of approximately \$3.4 million and expenses of approximately \$3.2 million. In May 2014, the Company issued and sold 81,371 shares of its common stock pursuant to the underwriters’ partial exercise of their option to purchase additional shares, for net proceeds of approximately \$1.2 million after deducting underwriting discounts and commissions of approximately \$91,000. Upon the closing of the IPO, all shares of convertible preferred stock then outstanding converted into an aggregate of 4,003,225 shares of common stock. In addition, all of the Company’s convertible preferred stock warrants outstanding at the close of the IPO were converted into common stock.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Use of Estimates

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”). The preparation of the accompanying consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that

affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities and the reported amounts of revenues and expenses in the consolidated financial statements and the accompanying notes. On an ongoing basis, management evaluates its estimates, including those related to revenue recognition, clinical trial accruals, fair value of assets and liabilities, income taxes, and stock-based compensation. Management bases its estimates on historical experience and on various other market-specific and relevant assumptions that management believes to be reasonable under the circumstances. Actual results may differ from those estimates.

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ADAMAS PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Liquidity and Financial Condition

To date, nearly all of the Company's resources have been dedicated to the research and development of its products, and the Company has not generated any commercial revenue from the sale of its products. The Company does not anticipate the generation of any commercial product revenue until it receives the necessary regulatory approvals to launch one of its products.

Based upon the current status of, and plans for, its product development, the Company believes that the existing cash, cash equivalents, and investments of \$120.0 million as of December 31, 2015 will be adequate to satisfy the Company's capital needs through at least the next twelve months. However, the process of developing and commercializing products requires significant research and development, preclinical testing and clinical trials, manufacturing arrangements, as well as regulatory approvals. These activities, together with the Company's general and administrative expenses, are expected to result in significant operating losses until the commercialization of the Company's products or partner collaborations generate sufficient revenue to cover expenses. While the Company had net income during 2014 and 2013, it has not generated any commercial revenue from sales of its products. Under its license agreement with Forest, the Company received the final milestone payment in 2014, and is not entitled to receive any royalties for sales of Namzaric until mid-2020 and Namenda XR until mid-2018. To achieve sustained profitability, the Company, alone or with others, must successfully develop its product candidates, obtain required regulatory approvals, and successfully manufacture and market its products.

Forward Stock Split

In March 2014, the Board of Directors of the Company and stockholders approved a forward stock split of the Company's common and preferred stock. As a result, common and preferred stock, stock options and warrants to purchase common and preferred stock were adjusted in the ratio of 2:1, effective March 24, 2014. All common and preferred shares and per share amounts presented in these condensed consolidated financial statements for all periods have been retroactively adjusted to reflect the 2-for-1 forward stock split. No fractional shares were issued.

Cash and Cash Equivalents

Cash and cash equivalents consist of highly liquid investments with original maturities, when purchased, of less than three months.

Investments

The Company classifies its investments as "available-for-sale." In general, these investments are free of trading restrictions. The Company carries these investments at fair value, based on quoted market prices or other readily available market information. Quoted market prices for US government and corporate bonds include both principal and accrued interest components. Unrealized gains and losses are included in accumulated other comprehensive income, which is reflected as a separate component of stockholders' equity in our Consolidated Balance Sheets. Gains and losses are recognized when realized in our Consolidated Statements of Income. When the Company determines that an other-than-temporary decline in fair value has occurred, the amount of the decline that is related to a credit loss is recognized in income. Gains and losses are determined using the specific identification method. The Company

considers all marketable debt securities with a maturity of less than one year to be short-term investments, with all others considered to be long-term investments.

All of our available-for-sale securities are subject to a periodic impairment review. We recognize an impairment charge when a decline in the fair value of our investments below the cost basis is judged to be other-than-temporary. Factors considered in determining whether a loss is temporary include the length of time and extent to which the investments' fair value has been less than the cost basis, the financial condition and near-term prospects of the investee, extent of the loss related to credit of the issuer, the expected cash flows from the security, our intent to sell or hold the security, and whether or not we will be required to sell the security before the recovery of its amortized cost.

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ADAMAS PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Consolidation

The consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. Intercompany balances and transactions have been eliminated in consolidation.

Segments

In accordance with ASC 280-10-50, Segment Reporting, operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision-maker in making decisions regarding resource allocation and assessing performance. The Company operates in one reportable segment: the development and commercialization of therapeutics targeting chronic disorders of the central nervous system.

Revenue Recognition

The Company recognizes revenue when all four of the following criteria have been met: (i) persuasive evidence of an arrangement exists, (ii) delivery has occurred or services have been rendered, (iii) the fee is fixed or determinable and (iv) collectability is reasonably assured. Revenue under license and collaboration arrangements is recognized based on the performance requirements of the contract. Determinations of whether persuasive evidence of an arrangement exists and whether delivery has occurred or services have been rendered are based on management's judgments regarding the fixed nature of the fees charged for deliverables and the collectability of those fees. Should changes in conditions cause management to determine that these criteria are not met for any new or modified transactions, revenue recognized could be adversely affected.

The Company generates revenue from collaboration and license agreements for the development and commercialization of products. Collaboration and license agreements may include non-refundable upfront license fees, partial or complete reimbursement of research and development costs, contingent consideration payments based on the achievement of defined collaboration objectives and royalties on sales of commercialized products. The Company's performance obligations under the collaborations may include the license or transfer of intellectual property rights, obligations to provide research and development services and related materials and obligations to participate on certain development and/or commercialization committees with the collaborators.

For revenue agreements with multiple-element arrangements, the Company allocates revenue to each non-contingent element based on the relative-selling-price of each element in an arrangement. When applying the relative-selling-price method, the Company determines the selling price for each deliverable using the following estimation hierarchy: (i) vendor-specific objective evidence of fair value of the deliverable, if it exists, (ii) third-party evidence of selling price, if vendor-specific objective evidence is not available or (iii) vendor's best estimate of selling price, if neither vendor-specific nor third-party evidence is available. Revenue allocated is then recognized when the four basic revenue recognition criteria, mentioned above, are met for each element.

The Company recognizes payments that are contingent upon achievement of a substantive milestone in their entirety in the period in which the milestone is achieved. Milestones are defined as events that can only be achieved based on the Company's performance and there is substantive uncertainty about whether the event will be achieved at the inception of the arrangement. Events that are contingent only on the passage of time or only on counterparty performance are not considered milestones subject to this guidance. Further, the amounts received must relate solely

to prior performance, be reasonable relative to all of the deliverables and payment terms within the agreement and commensurate with the Company's performance to achieve the milestone after commencement of the agreement.

Amounts related to research and development funding are recognized as the related services or activities are performed, in accordance with the contract terms. Payments may be made to or by the Company based on the number of full-time equivalent researchers assigned to the collaboration project and the related research and development expenses incurred.



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ADAMAS PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Concentration of Credit Risk

Financial instruments that potentially subject the Company to credit risk consist principally of cash and cash equivalents and short and long-term investments. Cash, cash equivalents, and investments are deposited with financial institutions or invested in security issuers that management believes are creditworthy. Deposits may, at times, exceed the amount of insurance provided on such deposits. To date, we have not experienced any losses on invested cash and cash equivalents.

Risk and Uncertainties

The Company's future results of operations involve a number of risks and uncertainties. Factors that could affect the Company's future operating results and cause actual results to vary materially from expectations include, but are not limited to, rapid technological change, uncertainty of results of clinical trials and reaching milestones, uncertainty of market acceptance of the Company's products, competition from substitute products and larger companies, protection of proprietary technology, strategic relationships, and dependence on key individuals.

Products developed by the Company require approvals from the U.S. Food and Drug Administration ("FDA") or other international regulatory agencies prior to commercial sales. There can be no assurance that the products will receive the necessary approvals. If the Company was denied approval, approval was delayed or the Company was unable to maintain approval, it could have a materially adverse impact on the Company.

The Company has expended and will continue to expend substantial funds to complete the research, development and clinical testing of product candidates. The Company also will be required to expend additional funds to establish commercial-scale manufacturing arrangements and to provide for the marketing and distribution of products that receive regulatory approval. The Company may require additional funds to commercialize its products. Additional funds may not be available on acceptable terms, if at all. If adequate funds are unavailable on a timely basis from operations or additional sources of financing, the Company may have to delay, reduce the scope of or eliminate one or more of its research or development programs which would materially and adversely affect its business, financial condition and operations.

Property and Equipment

Property and equipment are stated at cost. Depreciation is computed using the straight-line method over the estimated useful lives of the assets, generally between three and ten years. Leasehold improvements are amortized on a straight-line basis over the lesser of their useful life or the term of the lease, which is five years. Maintenance and repairs are charged to expense as incurred, and improvements and betterments are capitalized. When assets are retired or otherwise disposed of, the cost and accumulated depreciation are removed from the consolidated balance sheet and any resulting gain or loss is reflected in operations in the period realized.

Leases

At the inception of a lease, the Company evaluates the lease agreement to determine whether the lease is an operating, capital or build-to-suit lease using the criteria in ASC 840, "Leases." Certain lease agreements also require the Company to make additional payments for taxes, insurance, and other operating expenses incurred during the lease period, which are expensed as incurred. For operating leases, the Company recognizes rent expense on a straight-line basis

over the lease term and records the difference between cash rent payments and the recognition of rent expense as a deferred liability. Where lease agreements contain rent escalation clauses, rent abatements and/or concessions, such as rent holidays and tenant improvement allowances, the Company applies them in the determination of straight-line expense over the lease term.

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ADAMAS PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Accounting for Long-Lived Assets

The Company reviews property and equipment for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability is measured by the comparison of the carrying amount to the future net cash flows that the assets are expected to generate. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the projected discounted future net cash flows arising from the asset. There have been no such impairments of long-lived assets as of December 31, 2015.

Clinical Trial Accruals

The Company's clinical trial accruals are based on estimates of patient enrollment and related costs at clinical investigator sites as well as estimates for the services received and efforts expended pursuant to contracts with multiple research institutions and clinical research organizations ("CROs") that conduct and manage clinical trials on the Company's behalf.

The Company estimates clinical trial expenses based on the services performed pursuant to contracts with research institutions and clinical research organizations that conduct and manage clinical trials on its behalf. In accruing service fees, the Company obtains the reported level of patient enrollment at each site and estimates the time period over which services will be performed and activity expended in each period. If the actual timing of the performance of services or the level of effort varies from the estimate, the Company will adjust the accrual accordingly. Payments made to third parties under these arrangements in advance of the receipt of the related services are recorded as prepaid expenses until the services are rendered.

Research and Development

Research and development ("R&D") expenses include salaries and related compensation, contractor and consultant fees, external clinical trial expenses performed by contract research organizations ("CRO"), licensing fees, acquired intellectual property with no alternative future use, and facility and administrative expense allocations. In addition, we fund R&D at research institutions under agreements that are generally cancelable at our option. Research costs typically consist of applied research and preclinical and toxicology work. Pharmaceutical manufacturing development costs consist of product formulation, chemical analysis, and the transfer and scale-up of manufacturing at our contract manufacturers. Clinical development costs include the costs of Phase 1, Phase 2, and Phase 3 clinical trials. These costs are a significant component of our research and development expenses.

We accrue costs for clinical trial activities performed by contract research organizations and other third parties based upon the estimated amount of work completed on each study as provided by the CRO. These estimates are reviewed for reasonableness by our internal clinical personnel, and we aim to match the accrual to actual services performed by the organizations as determined by patient enrollment levels and related activities. We monitor patient enrollment levels and related activities using available information; however, if we underestimate activity levels associated with various studies at a given point in time, we could be required to record significant additional R&D expenses in future periods when the actual activity level becomes known. We charge all such costs to R&D expenses. Non-refundable advance payments are capitalized and expensed as the related goods are delivered or services are performed.

Convertible Preferred Stock

The Company classifies the convertible preferred stock as temporary equity on the balance sheets due to certain change of control events that are outside the Company's control, including liquidation, sale, or transfer of the Company, as holders of the convertible preferred stock could have caused redemption of the shares. Shares of convertible preferred stock were converted to common stock upon close of the IPO in April 2014.

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ADAMAS PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Convertible Preferred Stock Warrants

The Company accounts for its convertible preferred stock warrants as a liability based upon the characteristics and provisions of each instrument. Convertible preferred stock warrants classified as a liability are recorded on the Company's balance sheet at their fair value on the date of issuance and were revalued on each subsequent balance sheet, with fair value changes recognized as increases or reductions in the statements of operations. The Company adjusted the liability for changes in fair value of these warrants until the earlier of: (i) exercise of warrants, (ii) expiration of warrants, (iii) a change of control of the Company, or (iv) the closing of the Company's IPO. At those times, the convertible preferred stock warrant liability was adjusted to fair value in the condensed consolidated statements of operations and comprehensive income and, upon the closing of the Company's IPO in April 2014, the final fair value was reclassified to additional paid-in capital.

Fair Value of Financial Instruments

The carrying value of the Company's cash and cash equivalents, short-term investments, accounts receivable, long-term investments and other current assets, other assets, accounts payable, accrued liabilities approximate fair value due to the short-term nature or determinable value of these items. The fair value of convertible preferred stock warrants is determined using readily available market information.

See also Note 4 for further details of our fair value instruments.

Income Taxes

The Company accounts for income taxes under the asset and liability approach. Under this method, deferred tax assets and liabilities are determined based on the difference between the financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts expected to be realized.

The Company follows the provisions of ASC 740, Income Taxes, under which we assess all material positions taken in any income tax return, including all significant uncertain positions, in all tax years that are still subject to assessment or challenge by relevant taxing authorities. Assessing an uncertain tax position begins with the initial determination of the position's sustainability and is measured at the largest amount of benefit that is greater than fifty percent likely of being realized upon ultimate settlement. As of each balance sheet date, unresolved uncertain tax positions must be reassessed, and the Company will determine whether (i) the factors underlying the sustainability assertion have changed and (ii) the amount of the recognized tax benefit is still appropriate. The recognition and measurement of tax benefits requires significant judgment. Judgments concerning the recognition and measurement of a tax benefit might change as new information becomes available.

Basic and Diluted Net Income Per Share Attributable to Common Stockholders

Basic net income per share attributable to common stockholders is based upon the weighted average number of common shares outstanding during the period. Diluted net income per share attributable to common stockholders is based upon the weighted average number of common shares outstanding and dilutive common stock equivalents outstanding during the period. Common stock equivalents are options granted under our stock awards plans and are

calculated under the treasury stock method. Common equivalent shares from unexercised stock options and convertible preferred stock warrants are excluded from the computation when there is a loss as their effect is anti-dilutive, or if the exercise price of such options is greater than the average market price of the stock for the period.

Prior to April 10, 2014, the Company calculated its basic and diluted net income (loss) per share attributable to common stockholders in conformity with the two-class method required for companies with participating securities. Under the two-class method, the Company determined whether it had net income attributable to common stockholders, which includes the results of operations less current period convertible preferred stock non-cumulative dividends. If it

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ADAMAS PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

was determined that the Company had net income attributable to common stockholders during a period, the related undistributed earnings were then allocated between common stock and the convertible preferred stock based on the weighted average number of shares outstanding during the period to determine the numerator for the basic net income per share attributable to common stockholders. In computing diluted net income attributable to common stockholders, undistributed earnings are re-allocated to reflect the potential impact of dilutive securities to determine the numerator for the diluted net income per share attributable to common stockholders.

Stock-Based Compensation

The Company accounts for stock-based compensation of stock options granted to employees and directors and for employee stock purchase plan shares by estimating the fair value of stock-based awards using the Black-Scholes option-pricing model and amortizing the fair value of the stock-based awards granted over the applicable vesting period. All stock options awarded to non-employees are accounted for at the fair value of the consideration received or the fair value of the equity instrument issued, as calculated using the Black-Scholes model. Stock options granted to non-employees are subject to periodic revaluation at each reporting date as the underlying equity instruments vest.

In order to estimate the value of share-based awards, the Company uses the Black-Scholes model, which requires the use of certain subjective assumptions. The most significant subjective assumptions are management's estimates of the expected volatility and the expected term of the award. In addition, judgment is also required in estimating the amount of share-based awards that are expected to be forfeited. If actual results differ significantly from any of these estimates, stock-based compensation expense and the Company's results of operations could be materially impacted.

Recent Accounting Pronouncements

In May 2014, the FASB issued Accounting Standards Update ("ASU") 2014-09, Revenue from Contracts with Customers. The amendment in this ASU provides guidance on the revenue recognition to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The core principle of this update provides guidance to identify the performance obligations under the contract(s) with a customer and how to allocate the transaction price to the performance obligations in the contract. It further provides guidance to recognize revenue when (or as) the entity satisfies a performance obligation. This standard will replace most existing revenue recognition guidance. On July 9, 2015, the FASB approved a one-year deferral of the effective date of this standard to 2018 for public companies, with an option that would permit companies to adopt the standard as early as the original effective date of 2017. Early adoption prior to the original effective date is not permitted. We have not yet selected a transition method nor have we determined the effect of the standard on our consolidated financial position and results of operations.

In August 2014, the FASB issued ASU 2014-15, Presentation of Financial Statements-Going Concern (Subtopic 205-40): Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern. This ASU provides guidance on management's responsibility in evaluating whether there is substantial doubt about a Company's ability to continue as a going concern and about related footnote disclosures. For each reporting period, management will be required to evaluate whether there are conditions or events that raise substantial doubt about the company's ability to continue as a going concern within one year from the date the financial statements are issued. The amendments in this update are effective for annual periods ending after December 15, 2016, and for interim periods within annual periods beginning after December 15, 2016. Early adoption is permitted for annual or interim reporting periods for which the financial statements have not previously been issued. We are evaluating the impact the revised guidance will have on

our financial statements.

In November 2015, the FASB issued ASU No. 2015-17, Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes. Under ASU 2015-17, a reporting entity is required to classify deferred tax assets and liabilities as noncurrent in a classified statement of financial position. Current guidance requiring the offsetting of deferred tax assets and liabilities of a tax-paying component of an entity and presentation as a single noncurrent amount is not affected. This ASU is effective for public business entities issuing financial statements for the annual periods

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## ADAMAS PHARMACEUTICALS, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

beginning after December 15, 2016, and interim periods within those annual periods. Early adoption is permitted for financial statements as of the beginning of an interim or annual reporting period. Entities may apply the update prospectively to all deferred tax assets and liabilities and taxes, or retrospectively for all periods presented. The effects of this update on our consolidated financial statements are not expected to be material.

## 3. BALANCE SHEET COMPONENTS

## Prepaid expenses and other current assets (in thousands)

	December 31,	
	2015	2014
Income tax receivable	\$ 4,293	\$ —
Prepaid expenses	545	414
Prepaid clinical trial	255	227
Other current assets	15	4
Prepaid expenses and other current assets	\$ 5,108	\$ 645

## Property and equipment, net (in thousands)

	December 31,	
	2015	2014
Computer equipment and software	\$ 869	\$ 385
Office equipment	62	60
Furniture and fixtures	429	260
Leasehold improvements	1,619	763
	2,979	1,468
Less: Accumulated depreciation and amortization	(626)	(240)
Property and equipment, net	\$ 2,353	\$ 1,228

Depreciation expense was \$435,000, \$155,000 and \$66,000 for the years ended December 31, 2015, 2014, and 2013, respectively.

## Accrued liabilities (in thousands)

	December 31,	
	2015	2014
Accrued salaries and related benefit expenses	\$ 3,372	\$ 1,887
Clinical trial accruals	4,097	1,351
Accrued consulting and other professional fees	749	416
Income and other taxes	53	4,773

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Other	186	168
Accrued liabilities	\$ 8,457	\$ 8,595

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ADAMAS PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 4. FAIR VALUE MEASUREMENTS

In accordance with ASC 820-10, Fair Value Measurements and Disclosures, the Company determines the fair value of financial and non-financial assets and liabilities using the fair value hierarchy, which establishes three levels of inputs that may be used to measure fair value, as follows:

- Level 1 inputs which include quoted prices in active markets for identical assets or liabilities;
- Level 2 inputs which include observable inputs other than Level 1 inputs, such as quoted prices for similar assets or liabilities, quoted prices for identical or similar assets or liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the asset or liability. For available-for-sale securities, the Company reviews trading activity and pricing as of the measurement date. When sufficient quoted pricing for identical securities is not available, the Company uses market pricing and other observable market inputs for similar securities obtained from various third-party data providers. These inputs either represent quoted prices for similar assets in active markets or have been derived from observable market data; and
- Level 3 inputs which include unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the underlying asset or liability. Level 3 assets and liabilities include those whose fair value measurements are determined using pricing models, discounted cash flow methodologies or similar valuation techniques, as well as significant management judgment or estimation.

The following table represents the fair value hierarchy for the Company's financial assets and liabilities which require fair value measurement on a recurring basis (in thousands):

	Fair Value Measurements at December 31, 2015			
	Total	Level 1	Level 2	Level 3
Assets				
Money market	\$ 23,430	\$ 23,430	\$ —	\$ —
Corporate debt	56,787	—	56,787	—
U.S. Treasury notes	30,069	—	30,069	—
Total assets measured at fair value	\$ 110,286	\$ 23,430	\$ 86,856	\$ —

	Fair Value Measurements at December 31, 2014			
	Total	Level 1	Level 2	Level 3
Assets				
Money market	\$ 59,303	\$ 59,303	\$ —	\$ —
Corporate debt	85,311	—	85,311	—
U.S. Treasury notes	11,965	—	11,965	—
Total assets measured at fair value	\$ 156,579	\$ 59,303	\$ 97,276	\$ —

Money market funds are highly liquid investments and are actively traded. The pricing information on these investment instruments are readily available and can be independently validated as of the measurement date. This approach results in the classification of these securities as Level 1 of the fair value hierarchy.

Corporate debt and U.S. Treasury notes are measured at fair value using level 2 inputs. We review trading activity and pricing for these investments as of each measurement date. When sufficient quoted pricing for identical securities is not available, we use market pricing and other observable market inputs for similar securities obtained from various third party data providers. These inputs represent quoted prices for similar assets in active markets or these inputs have been derived from observable market data. This approach results in the classification of these securities as Level 2 of the fair value hierarchy.

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## ADAMAS PHARMACEUTICALS, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Upon issuance of the convertible preferred stock warrants, the Company estimated the fair value of the liability and subsequent remeasurement using the option pricing model at each reporting date, using the following inputs: the risk free interest rates; the expected dividend rates; the remaining expected life of the warrants; and the expected volatility of the price of the underlying stock. The estimates were based, in part, on subjective assumptions and could differ materially in future periods. This results in the classification of the preferred stock warrant liability as Level 3 of the fair value hierarchy.

The following table includes a roll forward of the financial instruments classified within Level 3 of the fair value hierarchy (in thousands):

	Convertible Preferred Stock Warrant Liability
Fair Value Using Level 3 Inputs	
Balance at December 31, 2013	\$ 6,232
Change in fair value recorded in Other (income) expense, net	983
Exercise of warrants	(7,215)
Balance at December 31, 2014	—
Balance at December 31, 2015	\$ —

There were no transfers to or from Level 1 and Level 2 during the years ended December 31, 2015 and 2014.

## 5. INVESTMENTS

The Company's investments consist of corporate debt and U.S. Treasury notes classified as available-for-sale securities.

The Company limits the amount of investment exposure as to institution, maturity, and investment type. To mitigate credit risk, the Company invests in investment grade corporate debt and United States Treasury notes. Such securities are reported at fair value, with unrealized gains and losses excluded from earnings and shown separately as a component of accumulated other comprehensive income (loss) within stockholders' equity. Realized gains and losses are reclassified from other comprehensive income (loss) to other income (expense) on the condensed consolidated statements of operations when incurred. The Company may pay a premium or receive a discount upon the purchase of available-for-sale securities. Interest earned and gains realized on available-for-sale securities and amortization of discounts received and accretion of premiums paid on the purchase of available-for-sale securities are included in investment income.

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The following table is a summary of amortized cost, unrealized gain and loss, and the fair value of available-for-sale securities as of December 31, 2015 and 2014 (in thousands):

	December 31, 2015		Gross Unrealized Losses	Fair Value
	Amortized Cost	Gross Unrealized Gains		
<b>Investments:</b>				
Corporate debt	\$ 56,892	\$ —	\$ (105)	\$ 56,787
U.S. Treasury notes	30,122	1	(54)	30,069
<b>Total</b>	<b>\$ 87,014</b>	<b>\$ 1</b>	<b>\$ (159)</b>	<b>\$ 86,856</b>
<b>Reported as:</b>				
Short-term investments	\$ 73,817	\$ 1	\$ (127)	\$ 73,691
Long-term investments	13,197	—	(32)	13,165
<b>Total</b>	<b>\$ 87,014</b>	<b>\$ 1</b>	<b>\$ (159)</b>	<b>\$ 86,856</b>

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## ADAMAS PHARMACEUTICALS, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

	December 31, 2014				
			Gross Unrealized	Gross Unrealized	Fair
	Amortized Costs	Gains	Losses		Value
Investments:					
Corporate debt	\$ 85,474	\$ —	\$ (163)		\$ 85,311
U.S. Treasury notes	11,982	—	(17)		11,965
Total	\$ 97,456	\$ —	\$ (180)		\$ 97,276
Reported as:					
Short-term investments	\$ 61,016	\$ —	\$ (104)		\$ 60,912
Long-term investments	36,440	—	(76)		36,364
Total	\$ 97,456	\$ —	\$ (180)		\$ 97,276

Short-term and long-term investments includes accrued interest of \$0.4 million and \$36,000, respectively, as of December 31, 2015. Short-term and long-term investments includes accrued interest of \$0.3 million and \$0.2 million, respectively, as of December 31, 2014. The Company has not incurred any realized gains or losses on investments for the years ended December 31, 2015 and 2014. Investments are classified as short-term or long-term depending on the underlying investment's maturity date. Long-term investments have a maturity date range of greater than 12 months and less than 20 months as of December 31, 2015.

## 6. COLLABORATION AND LICENSE AGREEMENTS

In November 2012, the Company granted Forest an exclusive license, with right to sublicense, certain of the Company's intellectual property rights relating to human therapeutics containing memantine in the United States. In connection with these rights, Forest markets Namzaric and Namenda XR for the treatment of moderate to severe dementia related to Alzheimer's disease. Pursuant to the agreement, Forest made an upfront payment of \$65.0 million. The Company earned and received additional cash payments totaling \$95.0 million upon achievement by Forest of certain development and regulatory milestones. In addition, the Company may earn tiered royalty payments based on future net sales of Namzaric and Namenda XR.

The Company identified the following two non-contingent performance deliverables under the license agreement: (i) transfer of intellectual property rights, inclusive of the related technology know-how conveyance ("license and know-how" or "license") and (ii) the obligation to participate on the Joint Development Committee ("JDC"). The Company concluded that the license and the know-how together represent a single deliverable, and therefore the two together have been accounted for as a single unit of accounting. There was no separate consideration identified in the agreement for the deliverables and there was no right of return under the agreement. The Company considered the provisions of the multiple-element arrangement guidance in determining whether the deliverables outlined above have standalone value. The transfer of license and know-how has standalone value separate from the obligation to participate on the JDC, as the agreement allows Forest to sublicense its rights to the acquired license to a third party. Further, the Company believes that Forest has research and development expertise with compounds similar to those licensed under the agreement and has the ability to engage other third parties to develop these compounds, allowing Forest to realize the value of the license and know-how without receiving the JDC participation.

The Company developed its best estimates of selling prices ("BESP") for each deliverable in order to allocate the non-contingent arrangement consideration to the two units of accounting. Based on BESP analysis, value assigned to

the obligation to participate on the JDC was a negligible amount. Accordingly, the entire upfront license fee of \$65.0 million was allocated to the transfer of license and technical know how. Revenue recognition commenced upon delivery of the license and was recognized on a straight line basis through the period of the transfer of the know how. Forest was able to derive value from the license as the know how was transferred. A straight line pattern of revenue recognition is only acceptable when a more precise pattern cannot be discerned. The way in which the transfer of know how occurred did not give rise to a more precise pattern of recognition, and the Company therefore recognized revenue on a straight line basis over the period of the transfer of the know how (from November 2012 to February 2013).



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ADAMAS PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

In November and December 2013, the Company received a total of \$40.0 million in milestone payments under its license agreement with Forest. The milestone payments were for the successful completion of studies that support the planned New Drug Application (“NDA”) filing with the FDA for Namzaric by Forest. In May 2014, the Company received an additional \$25.0 million milestone payment under the license agreement. This milestone payment was a result of the FDA’s acceptance of the NDA for Namzaric. In December 2014, the Company received a final \$30.0 million milestone payment in connection with the FDA approval of Namzaric. These amounts have been recorded as revenue when received in the consolidated statements of operations and comprehensive income during 2013 and 2014, respectively.

The Company is entitled to receive royalties on net sales in the United States by Forest, its affiliates, or any of its sublicensees of controlled-release versions of memantine products covered by the terms of the license agreement. Beginning in May 2020, the Company will be entitled to receive royalties in the low double digits to the mid-teens from Forest for sales of Namzaric in the United States and in June 2018, the Company will be entitled to receive royalties in the low to mid-single digits for sales of Namenda XR in the United States. Forest’s obligation to pay royalties with respect to fixed-dose memantine-donepezil products, including Namzaric, continues until the later of (i) 15 years after the commercial launch of the first fixed-dose memantine-donepezil product by Forest in the United States or (ii) the expiration of the Orange Book listed patents for which Forest obtained rights from us covering such product. Forest’s obligation to pay royalties with respect to Namenda XR continue until the expiration of the Orange Book listed patents covering such products. However, Forest’s obligation to pay royalties for any product covered by the license is eliminated in any quarter where there is significant competition from generics.

**7. WARRANTS TO PURCHASE COMMON OR PREFERRED STOCK**

In conjunction with various financings between 2002 and 2012, the Company issued warrants to purchase 758,994 shares of convertible preferred stock and 127,780 shares of common stock. The relative fair value of these warrants was determined using the Black-Scholes model and was amortized to interest expense over the term of each loan, unless subsequently modified.

Immediately prior to the completion of the Company’s IPO in 2014, 206,162 of the warrants to purchase common stock were either exercised for cash or automatically net exercised for a total issuance of 199,837 shares of common stock, pursuant to the terms of the warrants. In July 2015, warrants to purchase an aggregate of 7,116 shares of common stock were exercised in a cashless exercise, resulting in the issuance of 3,484 shares of common stock. As of December 31, 2015 and 2014, warrants to purchase zero and 7,116 shares of common stock were outstanding, respectively.

Prior to the IPO in April 2014, the warrants to purchase convertible preferred stock were classified as a liability and remeasured to fair value each reporting period. The Company had estimated the fair value of these liabilities using the Black-Scholes model and assumptions that were based on the individual characteristics of the warrants on the valuation date, as well as the assumptions for expected volatility, expected life, dividends, and risk-free interest rate. The remeasurement of the fair value of the outstanding warrants from December 31, 2013 through the date of the conversion to a common stock warrant and following the exercise resulted in a \$1.0 million expense recorded to other income (expense), net in the Company’s consolidated statements of operations and comprehensive income. As of both December 31, 2015 and 2014, there were no warrants to purchase convertible preferred stock outstanding.

## 8. COMMITMENTS AND CONTINGENCIES

### Lease Commitments

The Company leases approximately 18,500 square feet of office space in Emeryville, California under an operating lease that expires April 30, 2020. The lease provides for periods of escalating rent. The total cash payments over the life of the lease are divided by the total number of months in the lease period and the average rent is charged to expense each month during the lease period.

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ADAMAS PHARMACEUTICALS, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

As of December 31, 2015, future minimum lease payments under a non-cancelable facility operating lease including related office equipment were as follows (in thousands):

	December 31, 2015
2016	\$ 650
2017	650
2018	660
2019	666
2020	223
Thereafter	—
Total	\$ 2,849

The Company's total rent expense was approximately \$628,000, \$277,000, and \$214,000 for the years ended December 31, 2015, 2014, and 2013, respectively.

## Contingencies

In the normal course of business, the Company enters into contracts and agreements that contain a variety of representations and warranties and provide for general indemnifications. The Company's exposure under these agreements is unknown, because it involves claims that may be made against the Company in the future, but have not yet been made. The Company accrues a liability for such matters when it is probable that future expenditures will be made and such expenditures can be reasonably estimated.

## Indemnification

In accordance with the Company's amended and restated certificate of incorporation and amended and restated bylaws, the Company has indemnification obligations to its officers and directors for certain events or occurrences, subject to certain limits, while they are serving in such capacity. There have been no claims to date, and the Company has a directors and officers liability insurance policy that may enable it to recover a portion of any amounts paid for future claims.

## Litigation

Several companies have submitted Abbreviated New Drug Applications, or ANDAs, to the FDA requesting permission to manufacture and market generic versions of Namenda XR, on which the Company is entitled to receive royalties from Forest beginning in June 2018. In the notices, these companies allege that the patents associated with Namenda XR, some of which are owned by Forest or licensed by Forest from Merz Pharma GmbH & Co. KGaA, and others of which are owned by the Company and licensed by the Company exclusively to Forest in the United States, are invalid, unenforceable, and/or will not be infringed by the companies' manufacture, use, or sale of generic versions of Namenda XR. The Company, Forest, Merz Pharma GmbH & Co. KGaA, and Merz Pharmaceuticals GmbH (together Merz) filed lawsuits in the U.S. District Court for the District of Delaware for infringement of the relevant

patents against all of these companies. The parties are collectively seeking judgment that (i) the defendants have infringed the patents at issue, (ii) the effective date of any approval of the defendants' ANDAs shall not be earlier than the expiration date of the last to expire of the relevant patents, including any extensions or exclusivities, (iii) the defendants be enjoined from commercially manufacturing, using, offering for sale, or selling in the United States, or importing into the United States, any products that infringe or induce or contribute to the infringement of the patents at issue prior to the expiration date of the last to expire of the patents, including extensions and exclusivities, and (iv) the Company, Forest, and Merz be awarded monetary relief, in addition to any attorneys' fees, costs, and expenses relating to the actions.

We and Forest have entered into a series of settlement agreements with the Namenda XR ANDA filers, except for two remaining defendants. The earliest date on which any of these agreements grants a license to market generic version of Namenda XR is January 31, 2020 or in the alternative, an option to launch an authorized generic version of

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ADAMAS PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Namenda XR beginning on January 31, 2021.

In January 2016, the Delaware District Court issued a claim construction (Markman) ruling in the Namenda XR litigation that includes findings of indefiniteness as to certain claim terms in our asserted patents, which may negatively impact at least some of the patent claims. We and Forest continue to review the ruling to determine how it may also affect our litigation regarding Namzaric, which is described below.

In February 2016, Forest proceeded to trial against one defendant with respect to one of its asserted patents. A case schedule has yet to be established for the second proceeding, which involves a second defendant. Forest is in control of these litigations, and we have been informed that Forest anticipates appealing any adverse District Court rulings at the appropriate time.

Several companies have submitted ANDAs requesting permission to manufacture and market generic versions of Namzaric, on which the Company is entitled to receive royalties from Forest beginning in May 2020. We and Forest have begun to file lawsuits alleging infringement of the relevant patents against Namzaric ANDA filers in the same court and seeking comparable relief as in the Namenda XR case. The Markman hearing is scheduled for November 2016 and the trial is scheduled for October 2017.

Because these Namenda XR and Namzaric lawsuits were filed within the requisite 45-day period provided in the U.S. Food, Drug and Cosmetic Act, there are stays preventing FDA approval of the ANDAs for 30 months or until a court decision adverse to the patents. The 30-month stays for these Namenda XR and Namzaric ANDAs will expire beginning in June 2016 and January 2018, respectively.

From time to time, the Company may be party to legal proceedings, investigations, and claims in the ordinary course of its business. Other than the matters described above, the Company is not presently a party to any material legal proceedings.

## 9. CONVERTIBLE PREFERRED STOCK

The Company's amended and restated certificate of incorporation filed on April 15, 2014, authorizes 5,000,000 shares of convertible preferred stock, of which there were no shares outstanding as of December 31, 2015 and 2014. Upon close of the IPO in April 2014, all of the Company's outstanding shares of convertible preferred stock were automatically converted into shares of common stock.

At December 31, 2013, the convertible preferred stock consisted of the below (in thousands except share and per share data). The fair value was approximately \$27.9 million upon completion of the IPO.

Series	Shares Authorized	Outstanding	Per Share Liquidation Preference	Carrying Value
Series AA	5,000,000	3,431,620	\$ 3.81	\$ 6,521
Series AA-1	1,700,000	1,287,554	50.00	12,628
	6,700,000	4,719,174		\$ 19,149

## 10. STOCKHOLDERS' EQUITY

### Common Stock

The amended and restated certificate of incorporation authorizes the Company to issue 100,000,000 shares of common stock. Common stockholders are entitled to dividends as and when declared by the board of directors, subject to the rights of holders of all classes of stock outstanding having priority rights as to dividends. There have been no dividends declared to date. Each share of common stock is entitled to one vote.

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ADAMAS PHARMACEUTICALS, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The Company has classified all unvested shares of common stock issued upon the early exercise of stock options as employee deposits (a liability) as these options are not considered to be substantively exercised until vested. At December 31, 2015 and December 31, 2014, 3,000 and 13,000 shares of common stock, respectively, from early exercised options were unvested.

## Controlled Equity Offering

On June 1, 2015, the Company entered into a Controlled Equity Offering Sales Agreement (“Sales Agreement”), with Cantor Fitzgerald & Co. (“Cantor”), as sales agent, pursuant to which the Company may, at its discretion, issue and sell common stock from time to time with a value of up to a maximum of \$25.0 million in an at-the-market offering. All sales of shares have been and will continue to be made pursuant to a shelf registration statement that was declared effective by the Securities and Exchange Commission (“SEC”) on June 1, 2015. Cantor is acting as sole sales agent for any sales made under the Sales Agreement for a 3% commission on gross proceeds. The common stock is being sold at prevailing market prices at the time of the sale, and, as a result, prices may vary. Unless otherwise terminated earlier, the Sales Agreement continues until all shares available under the Sales Agreement have been sold.

The following table summarizes the total sales under the Sales Agreement through the period indicated (in thousands, except per share amounts):

	December 31, 2015
Total shares of common stock sold	509,741
Average price per share	\$ 20.04
Gross proceeds	\$ 10,216
Commissions earned by Cantor	\$ 306
Other issuance costs	\$ 253

Shares reserved for Future Issuance

Shares of Company’s common stock reserved for future issuance are as follows:

December 31, 2015	December 31, 2014
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Common stock options outstanding	5,328,378	4,981,522
Common stock options available for grant	1,463,415	1,518,191
Employee stock purchase plan	394,148	249,887
Warrants to purchase common stock	—	7,116
Total	7,185,941	6,756,716



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ADAMAS PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 11. STOCK-BASED COMPENSATION

The following table reflects stock-based compensation expense recognized for the years ended December 31, 2015, 2014, and 2013 (in thousands):

	Years Ended		
	December 31,		
	2015	2014	2013
Research and development:			
Employees	\$ 2,492	\$ 1,157	\$ 105
Non-employee consultants	664	1,331	199
General and administrative:			
Employees	6,388	2,887	170
Non-employee consultants	412	1,828	166
Total expense	\$ 9,956	\$ 7,203	\$ 640

## Stock Compensation Plans

In October 2002, the Company established its 2002 Employee, Director and Consultant Stock Plan and in December 2007, the Company established its 2007 Stock Plan. No further grants were then made under the 2002 Plan.

In February 2014, the Company's board of directors adopted, and in March 2014 the Company's stockholders approved, the 2014 Equity Incentive Plan (the "2014 Plan"), which became effective on the completion of the IPO. No further grants were then made under the 2007 Plan. Under the 2014 Plan, 1,993,394 shares of the Company's common stock were made available for issuance which included all shares that, as of the effective time, were reserved for issuance pursuant to the 2007 Plan, and is subject to further increase for shares that were subject to outstanding options under the 2007 Plan and the 2002 Plan as of the effective time that thereafter expire, terminate, or otherwise are forfeited or reacquired. The number of shares of the Company's common stock reserved for issuance pursuant to the 2014 Plan will automatically increase on the first day of each fiscal year for a period of up to 10 years, commencing on the first day of the fiscal year following 2014, in an amount equal to 4% of the total number of shares of the Company's capital stock outstanding on the last day of the preceding fiscal year, or a lesser number of shares as determined by our board of directors. For 2015, the common stock available for issuance under the 2014 Plan increased by 701,763 shares of common stock. As of December 31, 2015, the number of shares available for issuance under the 2014 Plan was 1,463,415.

Options granted under the 2014 Stock Plan may have terms of up to ten years. All options issued to date have had a ten year life. The exercise price of an ISO shall not be less than 100% of the estimated fair value of the shares on the date of grant, as determined by the board of directors. The exercise price of an ISO and NSO granted to a 10% stockholder shall not be less than 110% of the estimated fair value of the shares on the date of grant, respectively, as determined by the board of directors. The exercise price of a NSO shall not be less than the par value per share of common stock. The options granted generally vest over four years and vest at a rate of 25% upon the first anniversary of the issuance date and 1/48th per month thereafter.

## Employee Stock Purchase Plan

In February 2014, the Company's board of directors adopted and, in March 2014, the Company's stockholders approved, the 2014 Employee Stock Purchase Plan (the "ESPP"), which became effective on the completion of the Company's IPO. The ESPP authorized the issuance of 262,762 shares. Under the ESPP, employees, subject to certain restrictions, may purchase shares of common stock at 85% of the fair market value at either the beginning of the offering period or the date of purchase, whichever is less. Purchases are limited to the lesser of 15% of each employee's eligible annual compensation or \$25,000. Through the end of 2015, the Company issued a total of 44,054 shares under the ESPP. The number of shares available for future issuance under the plan were 394,148 at December 31, 2015. Beginning January 1, 2015 and continuing through and including January 1, 2024, the amount of common stock reserved for issuance under the ESPP will increase annually on that date by the lesser of (i) one percent (1%) of the total number of shares of common stock outstanding on such December 31, (ii) 520,000 shares of common stock, or (iii) a number of

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## ADAMAS PHARMACEUTICALS, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

shares as determined by the board of directors prior to the beginning of each year, which shall be the lesser of (i) or (ii) above. For 2015, the common stock available for issuance under the ESPP increased by 175,440 shares of common stock.

## Valuation Assumptions

The Company's method of valuation for share-based awards is based on the Black-Scholes model. The Company's determination of fair value of share-based payment awards on the date of grant using an option-pricing model is affected by the Company's stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to the Company's expected stock price volatility over the term of the awards, and actual and projected employee stock option exercise behaviors. A description of the assumptions follows:

- The expected stock price volatility assumption was determined by examining the historical volatilities of a group of industry peers, as the Company had limited trading history for the Company's common stock due to the recent IPO. The Company will continue to analyze the historical price volatility and expected term assumptions as more historical data for the Company's common stock become available.
- The risk-free interest rate is based on the U.S. Treasury zero-coupon issues with remaining terms similar to the expected term on the options.
- The expected term of the options granted is determined using the average period the stock options are expected to remain outstanding and is based on the options vesting term, contractual terms and historical exercise and vesting information used to develop reasonable expectations about future exercise patterns and post-vesting employment termination behavior.
- The expected dividend yield assumption was based on the Company's historical and expectation of dividend payouts.
- Forfeitures were estimated based on historical experience.
- Determination of the fair value of the shares of common stock underlying the stock options historically has been the responsibility of the Company's board of directors. Subsequent to the IPO in April 2014, the fair value of common stock is determined based on the closing price of the NASDAQ Global Market exchange.

As stock-based compensation expense recognized in the Consolidated Statement of Operations for fiscal years 2015, 2014 and 2013 is based on awards ultimately expected to vest, each has been reduced for estimated forfeitures. ASC 718-10 requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

The Company estimated the fair value of each option grant on the date of grant using the Black-Scholes model with the following weighted-average assumptions:

	Years Ended December 31,		
	2015	2014	2013
Expected price volatility	68% - 80%	90% - 96%	89% - 100%
Risk-free interest rate	1.37% - 1.95%	1.84% - 2.20%	1.45% - 2.48%
Expected term (in years)	5.50 - 6.25	6.75 - 7.00	7.25

Dividend yield                      —                      —                      —

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## ADAMAS PHARMACEUTICALS, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The Company estimated the fair value of stock purchased under the ESPP on the date of purchase using the Black-Scholes model with the following weighted-average assumptions:

	Years Ended December 31,		
	2015	2014	2013
Expected price volatility	56% - 62%	67% - 75%	—
Risk-free interest rate	0.07% - 0.41%	0.02% - 0.05%	—
Expected term (in years)	.05	.05	—
Dividend yield	—	—	—

Stock-based compensation expense related to employee stock plan purchases for the years ended December 31, 2015, 2014, and 2013 was \$0.2 million, \$69,200 and zero, respectively.

During the years ended December 31, 2015, 2014, and 2013, the Company granted stock options to employees to purchase 917,150, 2,310,583, and 522,000 shares of common stock respectively, with a weighted-average grant date fair value of \$11.47, \$10.77, and \$8.73, respectively. As of December 31, 2015, there was total unrecognized compensation cost of approximately \$24.2 million. This cost is expected to be recognized over a period of 2.8 years. The total fair value of employee stock options vested for the year ended December 31, 2015 and 2014 was \$10.0 million and \$0.9, respectively.

Stock-based compensation expense related to employee options for the years ended December 31, 2015, 2014, and 2013 was \$8.7 million, \$4.0 million and \$0.3 million, respectively.

The stock option and related activity under all of our stock option plans is summarized as follows:

Stock Options	Outstanding Options	Weighted	Aggregate
	Number of	Average	
	Shares	Exercise	Value
		Price	(thousands)
Balances, December 31, 2014	4,981,522	\$ 6.10	
Options granted	917,150	18.09	
Options exercised	(409,683)	1.86	
Options forfeited	(148,945)	3.78	
Options expired	(11,666)	0.63	
Balances, December 31, 2015	5,328,378	\$ 8.57	\$ 105,293
Vested and expected to vest, December 31, 2015	5,101,041	\$ 8.40	\$ 101,614
Vested, December 31, 2015	2,772,074	\$ 5.08	\$ 64,412

The aggregate intrinsic value of options outstanding, vested and expected to vest, and vested were calculated as the difference between the exercise price of the options and the fair value of the Company's common stock as of

December 31, 2015 of \$28.32.

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## ADAMAS PHARMACEUTICALS, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The following table summarizes information concerning outstanding and exercisable options outstanding at December 31, 2015:

Range of Exercise Prices	Options Outstanding			Options Exercisable	
	Number of Shares	Weighted-Average Remaining Life (in years)	Weighted-Average Exercise Price	Number of Shares	Weighted-Average Exercise Price
\$0.00 - 0.99	1,223,525	5.77	\$ 0.66	1,223,525	\$ 0.66
\$1.00 - 8.99	839,070	4.38	2.42	839,070	2.42
\$9.00 - 10.99	1,455,000	8.13	9.00	1,455,000	9.00
\$11.00 - 16.99	687,000	8.55	13.58	411,610	12.32
\$17.00 - 26.22	1,123,783	9.16	18.15	200,708	17.85
	5,328,378	7.26	\$ 8.57	4,129,913	\$ 5.95

The weighted average remaining contractual life and aggregated intrinsic value of options exercisable as of December 31, 2015 are 6.73 years and \$92.4 million, respectively. The aggregate intrinsic value of options exercised was approximately \$6.6 million, \$10.0 million, and \$29,000 for the years ended December 31, 2015, 2014, and 2013, respectively. The aggregate intrinsic value is calculated as the pre-tax difference between the weighted-average exercise price of the underlying awards and the closing price per share of \$28.32 of the Company's common stock on December 31, 2015. The calculation excludes any awards with an exercise price higher than the closing price of the Company's common stock on December 31, 2015.

## Non-employee Stock Based Compensation

During the years ended December 31, 2015, 2014, and 2013, the Company granted options to purchase zero, 199,550, and 94,000 shares of common stock to consultants, respectively. These options are granted in exchange for consulting services to be rendered and are measured and recognized as the stock options are earned. The Company believes that the estimated fair value of the stock options is more readily measurable than the fair value of the services rendered.

The Company estimated the fair value of non-employee stock options using the Black-Scholes model with the following weighted-average assumptions:

	Years Ended December 31,		
	2015	2014	2013
Expected price volatility	76% - 82%	72% - 98%	88% - 98%
Risk-free interest rate	1.84% - 2.26%	0.81% - 2.75%	1.02% - 2.72%
Expected term (in years)	8.00 - 9.00	3.25 - 10.00	3.25 - 10.00

Dividend yield — — —

Compensation expense related to non-employee options for years ended December 31, 2015, 2014, and 2013 was approximately \$1.1 million, \$3.2 million, and \$0.4 million, respectively.

## 12. INCOME TAXES

Income (loss) before provision for income tax is summarized as follows (in thousands):

	Year Ended December 31,		
	2015	2014	2013
United States	\$ (57,074)	\$ 17,599	\$ 52,095
International	—	(2)	17
Total	\$ (57,074)	\$ 17,597	\$ 52,112



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ADAMAS PHARMACEUTICALS, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The provision for income taxes is summarized as follows (in thousands):

	December 31,		
	2015	2014	2013
Current:			
Federal	\$ (5,273)	\$ 7,367	\$ 1,190
State	1	7	1
Foreign	—	—	(1)
	(5,272)	7,374	1,190
Deferred:			
Federal	—	—	—
State	—	—	—
Foreign	—	—	1
	—	—	1
Provision (benefit) for income taxes	\$ (5,272)	\$ 7,374	\$ 1,191

During 2014, the Company reduced its current Federal and state taxes payable by \$1.6 million related to excess tax benefits from stock-based compensation, offsetting additional paid-in capital. There was no reduction related to excess tax benefits from stock-based compensation for the years ended December 31, 2015 and 2013. The provision for income taxes differs from the amount computed by applying the federal income tax rate of 35% to pretax income (loss) from operations as a result of the following:

	December 31,		
	2015	2014	2013
Statutory federal income tax rate	\$ (19,976)	\$ 6,159	\$ 18,239
State income taxes, net of federal tax benefits	1	1	1
Warrants	—	344	1,584
Foreign rate differential	—	1	(6)
Tax credits	(8,303)	(168)	(119)
Net operating loss carryback	4,099	—	—
Change in statutory rates	—	—	(61)
Stock compensation	821	302	—
Other	1,330	(70)	(59)
Change in valuation allowance	16,756	805	(18,388)
Income tax provision	\$ (5,272)	\$ 7,374	\$ 1,191

Significant components of the Company's deferred tax assets and liabilities are as follows (in thousands):

	December 31,	
	2015	2014
Net operating loss carryforwards	\$ 12,665	\$ 4,736
Research and development tax credits	8,652	1,107

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Accruals and reserves	345	176
Stock compensation	5,341	2,584
Depreciation and amortization	2,149	1,646
Total deferred tax assets	29,152	10,249
Less: Valuation allowance	(29,152)	(10,249)
Net deferred tax assets	\$ —	\$ —

The deferred income tax assets have been fully offset by a valuation allowance, as realization is dependent on future earnings, if any, the timing and amount of which are uncertain. The net valuation allowance increased by \$18.9 million and \$1.0 for the years ended December 31, 2015 and 2014, respectively.

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## ADAMAS PHARMACEUTICALS, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

The Company's accounting for deferred taxes involves the evaluation of a number of factors concerning the realizability of its net deferred tax assets. The Company primarily considered such factors as its history of operating losses, the nature of the Company's deferred tax assets, and the timing, likelihood, and amount, if any, of future taxable income during the periods in which those temporary differences and carryforwards become deductible. At present, the Company does not believe that it is more likely than not that the deferred tax assets will be realized; accordingly, a full valuation allowance has been established and no deferred tax asset is shown in the accompanying balance sheets.

As of December 31, 2015 and December 31, 2014, the Company had federal net operating loss carryforwards of approximately \$25.0 million and \$1.5 million, respectively, available to reduce future taxable income. The Company also had state net operating loss carryforwards of approximately \$96.8 million and \$73.3 million as of December 31, 2015 and December 31, 2014, respectively. The federal net operating loss carryforward begins expiring in 2025, and the state net operating loss carryforward begins expiring in 2017, if not utilized.

The Company also had federal research and development tax credit carryforwards of approximately \$3.2 million. If not utilized, the carryforwards will begin expiring in 2024. The Company has state research and development credit carryforwards of approximately \$2.1 million which do not expire.

Under federal and similar state tax statutes, changes in our ownership may limit our ability to use our available net operating loss and tax credit carryforwards. The annual limitation, as a result of a change of control, may result in the expiration of net operating losses and credits before utilization.

The Company's ability to use its remaining net operating loss and tax credit carryforwards may be further limited if the Company experiences a Section 382 ownership change in connection with future changes in our stock ownership.

## Uncertain Tax Positions

The total amounts of unrecognized tax benefits for the years ended December 31, 2015, 2014, and 2013 were \$1.8 million, \$2.6 million and \$2.3 million, respectively. If recognized, none of the unrecognized tax benefits would affect the effective tax rate.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows (in thousands):

	December 31,		
	2015	2014	2013
Balance at the beginning of the year	\$ 2,608	\$ 2,270	\$ 1,880
Additions based on prior period tax positions	980	348	184
Reductions based on prior period tax positions	(1,768)	(10)	—
Reductions based on current period tax positions	—	—	206
Balance at the end of the year	\$ 1,820	\$ 2,608	\$ 2,270

The Company's policy is to account for interest and penalties as income tax expense. The Company accrued \$11,000 of interest related to unrecognized tax benefits during the year ended December 31, 2014. The Company accrued no interest related to unrecognized tax benefits during the years ended December 31, 2015 and 2013. Additionally, the interest accrued in 2014 of \$11,000 is being reversed due to the net operating loss carryback claim and refund.

The Company files income tax returns in the U.S. federal jurisdiction, California, and India. The Company is subject to U.S. federal income tax examination for the calendar years ending 2001 through 2015 due to net operating losses that have been carried forward for tax purposes. Additionally, the Company is subject to state income tax examinations for the 2005 through 2015 calendar years due to net operating losses that are being carried forward for tax purposes. The Company is subject to audit by the Indian tax authorities from 2013 onward. The Company is not currently under audit in any major tax jurisdiction.

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## ADAMAS PHARMACEUTICALS, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 13. NET INCOME PER SHARE

A reconciliation of the numerator and denominator used in the calculation of the basic and diluted net income per share is as follows (in thousands, except per share data):

	December 31,		
	2015	2014	2013
Historical net income (loss) per share			
Numerator:			
Net income (loss)	\$ (51,802)	\$ 10,223	\$ 50,921
Noncumulative dividend on preferred stock	—	(432)	(1,436)
Undistributed earnings allocated to preferred stockholders	—	(823)	(16,417)
Basic net income (loss) attributable to common stockholders	(51,802)	8,968	33,068
Adjustment to net income (loss) for dilutive securities	—	101	2,285
Diluted net income (loss) attributable to common stockholders	\$ (51,802)	\$ 9,069	\$ 35,353
Denominator:			
Basic common shares outstanding:			
Basic common shares outstanding: weighted average common shares outstanding	18,116	14,849	9,508
Less: weighted average unvested common shares subject to repurchase	(5)	(12)	(2)
Weighted average number of common shares used in calculating net income (loss) per share—basic	18,111	14,837	9,506
Dilutive securities:			
Common stock options	—	2,148	2,204
Warrants to purchase common stock	—	122	96
Weighted average number of common shares used in calculating net income (loss) per share—diluted	18,111	17,107	11,806
Net income (loss) per share attributable to common stockholders			
Basic	\$ (2.86)	\$ 0.60	\$ 3.48
Diluted	\$ (2.86)	\$ 0.53	\$ 2.99

The following shares of potentially dilutive securities were excluded from the computation of diluted net income per share of common stock for the periods presented, because including them would have been anti-dilutive (in thousands):

	December 31,		
	2015	2014	2013
Convertible preferred stock	—	—	4,719
Options to purchase common stock	5,249	441	—
Warrants to purchase convertible preferred stock	—	—	623
Total	5,249	441	5,342



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## ADAMAS PHARMACEUTICALS, INC.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## 14. QUARTERLY FINANCIAL INFORMATION (UNAUDITED)

The following table represents certain unaudited quarterly information for the eight quarters ended December 31, 2015. This data has been derived from unaudited consolidated financial statements that, in the opinion of the Company's management, include all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of such information when read in conjunction with the Company's annual audited consolidated financial statements and notes thereto appearing elsewhere in this report. These operating results are not necessarily indicative of results for any future period (in thousands, except per share data):

	Year Ended December 31, 2015			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Revenue	\$ 226	\$ 398	\$ 768	\$ 524
Operating expenses	12,452	14,551	15,763	16,587
Net loss	(12,202)	(14,051)	(14,859)	(10,690)(1)
Net loss per share attributable to common stockholders:				
Basic	(0.69)	(0.78)	(0.81)	(0.58)
Diluted	(0.69)	(0.78)	(0.81)	(0.58)

	Year Ended December 31, 2014			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Revenue	\$ 176	\$ 25,154	\$ 215	\$ 30,301
Operating expenses	5,867	8,435	9,765	13,265
Net income (loss)	(6,380)	16,429	(9,557)	9,731
Net income (loss) per share attributable to common stockholders:				
Basic	(0.67)	1.05	(0.57)	0.56
Diluted	(0.67)	0.88	(0.57)	0.50

(1) In the fourth quarter of 2015 the Company recorded an out-of-period correcting adjustment of \$2.9 million to record an income tax benefit related to the carryback of a portion of the current year loss to obtain a tax refund from the prior year which was not properly accounted for in the interim periods of 2015. The Company has determined that the adjustment is not material to any current or interim periods.

## 15. SUBSEQUENT EVENT

On January 6, 2016, the Company completed a follow-on public offering of 2,875,000 shares of its common stock, which includes the exercise in full by the underwriters of their option to purchase 375,000 shares of common stock, at an offering price of \$23.00 per share. Proceeds from the follow-on public offering were approximately \$61.8 million, net of underwriting discounts, commissions, and offering-related transaction costs.



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## EXHIBIT INDEX

Exhibit Number	Exhibit Description	Incorporation By Reference SEC File			
		Form No.	Exhibit	Filing Date	
3.1	Amended and Restated Certificate of Incorporation of Adamas Pharmaceuticals, Inc.	8 K 001 36399	3.1	4/15/2014	
3.2	Amended and Restated Bylaws of Adamas Pharmaceuticals, Inc.	8 K 001 36399	3.2	4/15/2014	
4.1	Reference is made to Exhibits 3.1 through 3.2.				
4.2	Form of Common Stock Certificate of Adamas Pharmaceuticals, Inc.	S 1 333 194342	4.1	3/26/2014	
4.3	Fourth Amended and Restated Investor Rights Agreement, dated as of September 30, 2011, by and among the registrant and certain of its stockholders.	S 1 333 194342	10.5	3/5/2014	
10.1	Adamas Pharmaceuticals, Inc. 2002 Employee, Director and Consultant Stock Plan, as amended, and Form of Stock Option Grant Notice, Option Agreement and Form of Notice of Exercise.	S 1 333 194342	10.1	3/5/2014	
10.2	Adamas Pharmaceuticals, Inc. 2007 Stock Plan, as amended, and Form of Stock Option Grant Notice, Option Agreement and Form of Notice of Exercise.	S 1 333 194342	10.2	3/5/2014	
10.3	Adamas Pharmaceuticals, Inc. 2014 Equity Incentive Plan and Form of Stock Option Grant Notice and Option Agreement.	S 1 333 194342	10.3	4/7/2014	
10.4	Adamas Pharmaceuticals, Inc. Form of Stock Option Grant Notice and Option Agreement.	10-Q 001 36399	10.24	8/11/2015	
10.5	Adamas Pharmaceuticals, Inc. 2014 Employee Stock Purchase Plan	S 1 333 194342	10.4	3/26/2014	
10.6	Office Lease Agreement by and between the registrant and CA Emeryville Properties Limited Partnership, dated as of October 25, 2006.	S 1 333 194342	10.7	3/5/2014	
10.7	First Amendment to Lease by and between the registrant and NOP Watergate LLC (as successor in interest to CA Emeryville Properties Limited Partnership), dated as of April 29, 2009.	S 1 333 194342	10.8	3/5/2014	
10.8	Second Amendment to Office lease Agreement by and between the registrant and Emeryville Office, L.L.C. (as successor to NOP Watergate, LLC), dated as of January 18, 2011.	S 1 333 194342	10.9	3/5/2014	
10.9	Third Amendment to Lease by and between the registrant and Emeryville Office, L.L.C., dated as of June 17, 2011.	S 1 333 194342	10.10	3/5/2014	
10.10	Fourth Amendment to Lease by and between the registrant and Emeryville Office, L.L.C., dated as of January 31, 2013.	S 1 333 194342	10.11	3/5/2014	
10.11	Fifth Amendment to Lease by and between the registrant and Emeryville Office, L.L.C., dated as of May 23, 2014.	10 Q 001 36399	10.3	8/7/2014	
10.12	License Agreement by and between the registrant and Forest Laboratories Holdings Limited, dated as of November 13, 2012.	S 1/A333 194342	10.6	4/7/2014	
10.13	Adamas Pharmaceuticals, Inc. Executive Severance Plan.	S 1 333 194342	10.19	3/5/2014	
10.14	Offer Letter by and between Adamas Pharmaceuticals, Inc. and Gregory Went, dated as of March 8, 2006.	S 1 333 194342	10.12	3/5/2014	
10.15	Offer Letter by and between the registrant and Natalie McClure, dated as of December 17, 2009, as amended by the letter dated February 18, 2011.	S 1 333 194342	10.14	3/5/2014	



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Exhibit Number	Exhibit Description	Incorporation By Reference				
		Form	SEC File No.	Exhibit	Filing Date	
10.16	Offer Letter by and between the registrant and Jeffrey Knapp, dated February 24, 2014.	S 1	333 194342	10.16	3/5/2014	
10.17	Offer Letter by and between registrant and William J. Dawson, dated as of August 12, 2014.	8 K	001 36399	10.8	8/13/2014	
10.18	Offer Letter by and between the registrant and Grace Shin, dated November 17, 2014.	10-Q	001 36399	10.22	5/13/2015	
10.19	Offer letter by and between the registrant and Rajiv Patni, MD, dated April 17, 2015.	10-Q	001 36399	10.23	8/11/2015	
10.20	Form of Indemnity Agreement between the registrant and its directors and officers.	S 1	333 194342	10.17	3/5/2014	
10.21	Adamas Pharmaceuticals, Inc. Transaction Bonus Plan.	S 1	333 194342	10.18	3/5/2014	
10.22	Controlled Equity OfferingSM Sales Agreementby and between registrant and Cantor Fitzgerald & Co., dated June 1, 2015.	S-3	333-204284	1.2	5/18/2015	
10.23	Sixth Amendment to Lease by and between the registrant and KBSIII Towers At Emeryville, LLC, dated as of October 27, 2015.					
10.24	Adamas Pharmaceuticals, Inc. Form of Restricted Stock Unit Grant Notice and Award Agreement.					
23.1	Consent of Independent Registered Public Accounting Firm					
24.1	Power of Attorney (included on the signature page hereto)					
31.1	Certification of Principal Executive Officer pursuant to Rule 13a 14(a) or Rule 15d 14(a) of the Securities Exchange Act of 1934, as amended.					
31.2	Certification of Principal Financial Officer pursuant to Rule 13a 14(a) or Rule 15d 14(a) of the Securities Exchange Act of 1934, as amended.					
32.1	Certification of Principal Executive Officer and Principal Financial Officer pursuant to Rule 13a 14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes Oxley Act of 2002.(1)					
101.INS	XBRL Instance Document					
101.SCH	XBRL Taxonomy Extension Schema Document					
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document					
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document					
101.LAB	XBRL Taxonomy Extension Label Linkbase Document					
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document					

(1) This certification accompanies the Form 10 K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Registrant under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10 K), irrespective of any general incorporation language contained in such filing.

