AERIE PHARMACEUTICALS INC
Form 10-K
March 02, 2016
Table of Contents

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-K

(Mark One)
ý 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
o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
Commission File Number: 001-36152

Aerie Pharmaceuticals, Inc.
(Exact name of registrant as specified in its charter)

Delaware	20-3109565
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)

2030 Main Street, Suite 1500
Irvine, California 92614
(949) 526-8700
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

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

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, $0.001 par value per share	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 o No ý
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes o No ý
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 ý No o

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 ý No o

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 the 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. o

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

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

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

The aggregate market value of the voting stock held by non-affiliates of the registrant on June 30, 2015, based upon the closing price of $17.65 of the registrant's common stock as reported on the NASDAQ Global Market, was $298,090,000. Shares of the registrant's common stock held by each officer and director and each person known to the registrant to own 10% or more of the outstanding voting power of the registrant have been excluded because such persons may be deemed affiliates. This determination of affiliate status is not a determination for other purposes.

As of February 25, 2016, the registrant had 26,511,882 shares of common stock, $0.001 par value, issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's definitive proxy statement (the "Proxy Statement") for the 2016 Annual Meeting of Stockholders are incorporated by reference into Part III of this Annual Report on Form 10-K. The Proxy Statement will be filed with the Securities and Exchange Commission (the "SEC") within 120 days of the registrant's fiscal year ended December 31, 2015.

Table of Contents

TABLE OF CONTENTS

Table of Contents

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). We may, in some cases, use terms such as "predicts," "believes," "potential," "proposed," "continue," "estimates," "anticipates," "expects," "plans," "intends," "may," "would," "could," "might," "will," "should," "exploring," "pursuing" or ot convey uncertainty of future events or outcomes to identify these forward-looking statements.

Forward-looking statements appear in a number of places throughout this report and include statements regarding our intentions, beliefs, projections, outlook, analyses or current expectations concerning, among other things:

- the success, timing and cost of our ongoing and anticipated preclinical studies and clinical trials for our current and potential future product candidates, including statements regarding the timing of initiation and completion of the studies and trials;
- our expectations regarding the clinical effectiveness of our product candidates and results of our clinical trials;
- the timing of and our ability to obtain and maintain U.S. Food and Drug Administration ("FDA") or other regulatory authority approval of, or other action with respect, to our product candidates;
- our expectations related to the use of proceeds from our initial public offering ("IPO") in October 2013, the issuance and sale of the 2014 Convertible Notes (as defined herein) in September 2014 and the issuance and sale of common stock under our shelf registration statement on Form S-3 and "at-the-market" sales agreements;
- our estimates regarding anticipated capital requirements and our needs for additional financing;
- the commercial launch and potential future sales of our current or any other future product candidates;
- our commercialization, marketing and manufacturing capabilities and strategy;
- third-party payor reimbursement for our product candidates;
- the glaucoma patient market size and the estimated rate and degree of market adoption of our product candidates by eye-care professionals and patients;
- the timing, cost or other aspects of the commercial launch of our product candidates;
- our plans to pursue development of our product candidates for additional indications and other therapeutic opportunities;
- the potential advantages of our product candidates;
- our plans to explore possible uses of our existing proprietary compounds beyond glaucoma;
- our ability to protect our proprietary technology and enforce our intellectual property rights;
- our expectations regarding collaborations, licensing, acquisitions and strategic operations, including our ability to in-license or acquire additional ophthalmic products or product candidates; and
- our stated objective of building a major ophthalmic pharmaceutical company.

By their nature, forward-looking statements involve risks and uncertainties because they relate to events, competitive dynamics and industry change, and depend on regulatory approvals and economic and other environmental circumstances that may or may not occur in the future or may occur on longer or shorter timelines than anticipated. We discuss many of these risks in greater detail under the heading "Risk Factors" in Part I, Item 1A of this report and elsewhere in this report. You should not rely upon forward-looking statements as predictions of future events. Although we believe that we have a reasonable basis for each forward-looking statement contained in this report, we caution you that forward-looking statements are not guarantees of future performance and that our actual results of operations, financial condition and liquidity, and the development of the industry in which we operate may differ materially from the forward-looking statements contained in this report. In addition, even if our results of operations, financial condition and liquidity, and events in the industry in which we operate are consistent with the forward-looking statements contained in this report, they may not be predictive of results or developments in future periods.

Table of Contents

Any forward-looking statements that we make in this report speak only as of the date of this report. Except as required by law, we are under no duty to update or revise any of the forward-looking statements, whether as a result of new information, future events or otherwise, after the date of this report.

Table of Contents

PART I

ITEM 1. BUSINESS

Overview

We are a clinical-stage pharmaceutical company focused on the discovery, development and commercialization of first-in-class therapies for the treatment of patients with glaucoma and other diseases of the eye. Our strategy is to advance our product candidates, including Rhopressa™ (netarsudil ophthalmic solution) 0.02%, and Roclatan™ (netarsudil/latanoprost ophthalmic solution) 0.02%/0.005%, to regulatory approval and commercialize these products ourselves in North American markets. We plan to build a commercial team of approximately 100 sales representatives to target approximately 10,000 high prescribing eye-care professionals throughout North America. We are also directing our own clinical trials to gain regulatory approval in Europe, and are preparing to either use a contract research organization, or otherwise partner, to conduct the necessary trials to gain approval in Japan. For commercialization outside of North America, we may potentially commercialize ourselves in Europe and expect to explore partnership opportunities through collaboration and licensing arrangements in Europe and Japan. We expect to finalize our European commercialization strategy by the end of 2016. We are enhancing our longer-term commercial potential by identifying and advancing additional product candidates, including through our internal discovery efforts, research collaborations, potential in-licensing or acquisitions of additional ophthalmic products or technologies or product candidates that would complement our current product portfolio.

We completed our IPO in October 2013 which raised net proceeds of approximately $68.3 million. Since our IPO we have raised additional net proceeds of approximately $122.9 million through the sale and issuance of the 2014 Convertible Notes in September 2014, and approximately $50.5 million through at-the-market sales during 2015. Our senior leadership team has extensive experience in the ophthalmology market and has overseen the development and commercialization of several successful ophthalmic products at major pharmaceutical companies. If our products are approved and we are commercially successful, we believe Aerie could become a major ophthalmic pharmaceutical company.

Our two advanced stage product candidates are designed to lower intraocular pressure, or IOP, in patients with open-angle glaucoma and ocular hypertension. Both product candidates are taken once-daily and have shown in preclinical and clinical trials to be effective in lowering IOP, with novel mechanisms of action, or MOAs, and a positive safety profile. Glaucoma is one of the largest segments in the global ophthalmic market. In 2014, branded and generic glaucoma product sales exceeded $4.7 billion in the United States, Europe and Japan in aggregate, according to IMS. Prescription volume for glaucoma products in the United States alone exceeded 33 million in 2014 and is expected to grow, driven in large part by the aging population.

Our lead product candidate is once-daily Rhopressa™. We successfully completed our second Phase 3 registration trial for Rhopressa™, named “Rocket 2,” in September 2015, which will be the pivotal trial for a New Drug Application, or NDA, filing with the U.S. Food and Drug Administration, or FDA, that we expect to submit in the third quarter of 2016. The primary clinical efficacy endpoint was to demonstrate non-inferiority of IOP lowering of Rhopressa™ compared to timolol in a 90-day efficacy period. The final primary baseline IOP ranges for Rocket 2 were above 20 mmHg (millimeters of mercury) to below 25 mmHg. In addition to successfully achieving non-inferiority to timolol at this endpoint range, the recently reported topline 12-month safety data from Rocket 2 confirmed a positive safety profile for the drug and demonstrated a consistent IOP lowering effect throughout the 12-month period at the specified timepoint.

As background, the final primary endpoint range for Rocket 2 was updated from the original trial design, which included baseline IOPs of up to 27 mmHg. This change in endpoint range was made while Rocket 2 was in progress and prior to the database being locked, and was performed with FDA agreement. The reason for the change was the failure of our first Phase 3 registration trial for Rhopressa™, named “Rocket 1.” This 90-day efficacy trial did not meet its primary clinical efficacy endpoint of demonstrating non-inferiority of IOP lowering of Rhopressa™ compared to timolol at its primary range of above 20 mmHg to below 27 mmHg, which we reported in April 2015 (while Rocket 2 was

already underway). Rocket 1 was successful at its pre-specified secondary endpoint range of above 20 mmHg and below 24 mmHg, and it was agreed by the FDA that Rocket 1, because of its success in meeting the secondary endpoint range, could be used as supportive to Rocket 2 for the upcoming NDA filing.

We are also conducting a third Phase 3 registration trial for Rhopressa™, named “Rocket 3,” in Canada, which is a supplementary 12-month safety-only trial and is not required for NDA filing purposes. In addition, we are conducting a fourth Phase 3 registration trial for Rhopressa™, named “Rocket 4,” in the U.S., which is designed to generate the six-month safety data that will be needed for European approval purposes, and is also not required for NDA filing purposes. We expect to report the topline 90-day interim efficacy data for Rocket 4 in the fourth quarter of 2016.

Table of Contents

We are developing Rhopressa™ as the first of a new class of compounds that is designed to lower IOP in patients through novel MOAs. We believe that, if approved, Rhopressa™ will represent the first new MOAs for lowering IOP in patients with glaucoma in over 20 years. Based on clinical data to date, we expect that Rhopressa™, if approved, will compete with non-PGA (prostaglandin analog) products as a preferred adjunctive therapy to PGAs, due to its IOP-lowering ability at consistent levels across tested baselines with once-daily dosing relative to currently marketed non-PGA products and its potential synergistic effect with PGA products. Adjunctive therapies currently represent approximately one-half of the entire glaucoma therapy market in the United States. In addition, if approved, we believe that Rhopressa™ may also become a preferred therapy where PGAs are contraindicated, for patients who do not respond to PGAs, for patients who have lower IOPs but nevertheless present with glaucomatous damage to the optic nerve, which is commonly referred to as “low-tension” or “normal tension” glaucoma, as well as for patients who choose to avoid the cosmetic issues associated with PGA products.

Our second product candidate is once-daily Roclatan™. Roclatan™ is a fixed-dose combination of Rhopressa™ and latanoprost, which is the most commonly prescribed drug for the treatment of patients with glaucoma. We currently have one Phase 3 registration trial for Roclatan™ in process with a second about to start, after having successfully completed a Phase 2b clinical trial for patients with open-angle glaucoma and ocular hypertension in June 2014. In the the Phase 2b clinical trial, Roclatan™ achieved its primary efficacy endpoint on day 29 and statistical superiority over individual components at all timepoints. We believe Roclatan™ has the potential to provide a greater IOP-lowering effect than any currently approved glaucoma product. Therefore, we believe that Roclatan™, if approved, could compete with both PGA and non-PGA therapies and become the product of choice for patients requiring maximal IOP lowering.

The first Phase 3 registration trial for Roclatan™, named “Mercury 1,” commenced in September 2015. We expect to commence our second Phase 3 registration trial for Roclatan™ , named “Mercury 2,” in March 2016. Mercury 1 is a 12-month safety trial which includes a 90-day interim efficacy readout and Mercury 2 is a 90-day efficacy trial. Both trials are designed to demonstrate superiority of Roclatan™ to each of its components, similar to the successful Phase 2b trial. If both Mercury 1 and Mercury 2 are successful, we expect to file an NDA for Roclatan™ in the second half of 2017, approximately one year after the NDA filing for Rhopressa™.

We believe our clinical plans for both Rhopressa™ and Roclatan™ are already in place to satisfy European regulatory requirements. In addition to Rocket 1 and Rocket 2, the Rocket 4 trial is designed to provide adequate six month safety data for Rhopressa™ to meet European requirements. Based on our Rhopressa™ clinical plan, we expect to file for regulatory approval in Europe by mid-2017. While Mercury 1 and Mercury 2 will be used for European approval for Roclatan™, we also plan to initiate a third Phase 3 registration trial for Roclatan™, named “Mercury 3,” in Europe in the first half of 2017. Mercury 3 will be designed to compare Roclatan™ to a fixed dose combination product broadly marketed in Europe, which if successful should improve our commercialization prospects in that region.

Our stated objective is to build a major ophthalmic pharmaceutical company. In addition to our primary product candidates, Rhopressa™ and Roclatan™, we are also exploring the longer-term impact of Rhopressa™ on the diseased trabecular meshwork, as well as for neuroprotection, and evaluating possible uses of our existing proprietary portfolio of Rho Kinase inhibitors beyond glaucoma. In February 2015, we issued a research update on preclinical results demonstrating the potential for Rhopressa™ to have disease-modifying activity in glaucoma patients by stopping fibrosis in the trabecular meshwork, and also increasing perfusion in the trabecular outflow pathway thus increasing both drainage and the delivery of nutrients to the diseased tissue. Additionally, our preclinical small molecule, AR-13154, has shown preclinically the potential to decrease lesion size in wet age-related macular degeneration (AMD) at numerically higher levels than a current market-leading product.

We may license, acquire or develop additional product candidates and technologies to broaden our presence in ophthalmology. In August 2015 and September 2015, we entered into collaboration and license arrangements with GrayBug, Inc. and Ramot at Tel Aviv University, Ltd., respectively, neither of which represents a material financial commitment by Aerie. Our collaboration with GrayBug is focused on researching the potential use of their

biodegradable polymer technology to deliver a version of AR-13154 to the back of the eye over a sustained period of time. With Ramot, we are evaluating a Ramot preclinical anti-beta amyloid small molecule, named EG-30, for neuroprotection in glaucoma and reduction of geographic atrophy in advanced dry AMD. We continually explore and discuss potential additional opportunities for new ophthalmic products, delivery alternatives and new therapeutic areas with potential partners.

We own the worldwide rights to all indications for our current Aerie product candidates. Our intellectual property portfolio contains patents and pending patent applications related to composition of matter, pharmaceutical compositions and methods of use for our product candidates. We have patent protection for our primary product candidates, Rhopressa™ and Roclatan™ , in the United States through at least 2030.

Table of Contents

In March 2015, we revised our corporate structure to align with our business strategy outside of North America by establishing Aerie Pharmaceuticals Limited, a wholly-owned subsidiary organized under the laws of the Cayman Islands ("Aerie Limited"). In addition, we assigned the beneficial rights to our non-U.S. and non-Canadian intellectual property to Aerie Limited (the "IP Assignment"). As part of the IP Assignment, we and Aerie Limited entered into a research and development agreement and cost sharing agreement pursuant to which we and Aerie Limited will share the costs of the development of intellectual property. Additionally, in April 2015, we continued to prepare for foreign-based activities and established Aerie Pharmaceuticals Ireland Limited ("Aerie Ireland Limited") as a wholly-owned subsidiary of Aerie Limited to develop and commercialize the beneficial rights of the intellectual property assigned as part of the IP Assignment pursuant to a license arrangement to be entered into between Aerie Limited and Aerie Ireland Limited. We are currently evaluating the possibility of constructing an Aerie manufacturing plant in Ireland.

As indicated earlier, glaucoma is one of the largest segments in the global ophthalmic market. In 2014, branded and generic glaucoma product sales exceeded $4.7 billion in the United States, Europe and Japan in aggregate, according to IMS. Prescription volume for glaucoma products in the United States alone exceeded 33 million in 2014 and is expected to grow, driven in large part by the aging population. The PGA and non-PGA market segments each represent approximately one-half of the prescription volume in the U.S. glaucoma market, as shown in the following pie chart, which is based on IMS data.

According to the National Eye Institute, it is estimated that over 2.7 million people in the United States suffer from glaucoma, a number that is expected to reach 4.3 million by 2030. Furthermore, The Eye Diseases Prevalence Research Group has estimated that only half of the nation's glaucoma sufferers know that they have the disease. Glaucoma is a progressive and highly individualized disease, in which elevated levels of IOP are associated with damage to the optic nerve, resulting in irreversible vision loss and potentially blindness. Patients may suffer the adverse effects of glaucoma across a wide range of IOP levels, including within the "normotensive" range of 10 mmHg to 21 mmHg, which is generally accepted as the level of IOP in healthy individuals. There are multiple factors that can contribute to an individual getting glaucoma, including, but not limited to, age, family history and ethnicity. For example, there generally is a higher incidence and severity of the disease in African-American and Hispanic populations. Based on data from the Baltimore Eye Survey, approximately 80% of glaucoma patients have low to moderately elevated IOP at the time of diagnosis and approximately 60% of glaucoma patients have IOP of 21 mmHg or below at the time of diagnosis. Additionally, in Japan, the Tajimi Study found that approximately 90% of glaucoma patients had IOP of 21 mmHg or below at the time of diagnosis. In clinical trials to date, Rhopressa™ has demonstrated the ability to provide relatively consistent IOP lowering across all tested baseline IOP levels, which we believe differentiates it from currently marketed drugs that have shown reduced efficacy at lower baseline IOPs.

Glaucoma is treated by the reduction of IOP, which has been shown to slow the progression of vision loss. In a healthy eye, fluid is continuously produced and drained in order to maintain pressure equilibrium and provide nutrients to the eye tissue. The FDA recognizes sustained lowering of IOP as the primary clinical endpoint for the approval of drugs to treat patients with glaucoma and ocular hypertension. The primary drainage mechanism of the eye is the trabecular meshwork, or TM, which accounts for approximately 80% of fluid drainage in a healthy eye, while the secondary drainage mechanism, the uveoscleral pathway, is responsible for the remaining drainage. In glaucoma patients, damage to the TM results in insufficient drainage of fluid from the eye, which causes increased IOP and damage to the optic nerve. In addition to eye fluid production and drainage through the TM and uveoscleral pathway, episcleral venous pressure, or EVP, makes a significant contribution to IOP. EVP represents the pressure of the blood in the episcleral veins of the eye where the eye fluid drains into the bloodstream. Historical

Table of Contents

studies have shown that EVP accounts for approximately half of IOP in normotensive subjects and approximately one-third of IOP in patients with pressures of 24 to 30 mmHg. When EVP is lowered, fluid is able to flow more freely from the eye. Drugs that lower IOP without lowering EVP are most effective at high IOPs, where EVP is believed to contribute less to IOP, and are less effective at lower IOPs, where EVP is seen to account for a larger portion of IOP.

Once glaucoma develops, it is a chronic condition that requires life-long treatment. The initial treatment for glaucoma patients is typically the use of prescription eye drops. PGAs have become the most widely prescribed glaucoma drug class. The most frequently prescribed PGA is once-daily latanoprost. The most commonly prescribed non-PGA drugs belong to the beta blocker class. The most frequently prescribed beta blocker is twice-daily timolol. Other non-PGA drug classes include the alpha agonists and carbonic anhydrase inhibitors. When PGA monotherapy is insufficient to control IOP or contraindicated due to concerns about side effects, non-PGA products are used either as add-on therapy to the PGA or as an alternative monotherapy. It is estimated that up to 50% of glaucoma patients receiving PGA monotherapy require add-on therapy within two years of initial prescription of the drug, in order to maintain adequate control of IOP. It is believed that this rise in IOP after a patient is on an initial therapy results from the lack of effect of current therapies on the TM, and as a result damage to the TM progresses and the IOPs begin to rise.

Based on our preclinical studies and clinical trials to date, our product candidates represent a new class of drugs utilizing novel MOAs that are applied topically as once-daily eye drops. Currently approved drugs mainly reduce IOP by increasing fluid outflow through the eye's secondary drain with once-daily dosing or reducing fluid inflow by decreasing fluid production with multiple doses per day. Rhopressa™ lowers IOP through a triple MOA that (i) relaxes the contracted tissue of the TM to improve fluid outflow through the eye's primary drain, (ii) decreases fluid production in the eye and (iii) lowers EVP, an MOA that we believe further differentiates Rhopressa™ from currently marketed glaucoma products. Roclatan™, our quadruple-action fixed-combination product candidate, combines the triple MOA of Rhopressa™ with latanoprost, a PGA that increases fluid drainage through the uveoscleral pathway.

We believe there are significant unmet needs in the glaucoma market and that eye-care professionals are eager for new therapy choices. None of the commonly prescribed PGAs or non-PGAs target the TM, the diseased tissue responsible for elevated IOP levels in glaucoma patients and the eye's primary drain. Moreover, PGAs have side effects, contraindications and reduced efficacy in patients with low to moderately elevated IOPs relative to patients with higher IOPs. Non-PGAs are less efficacious than PGAs, have more serious and a greater number of side effects and contraindications, and require multiple daily doses. As a result, we believe there is a significant unmet need in both the PGA and non-PGA market segments, each of which represents approximately one-half of the U.S. and European glaucoma market based on prescription volumes. Despite the limitations of existing glaucoma drugs, Xalatan (latanoprost), the best-selling PGA, together with Xalacom, its fixed-combination with a beta blocker, which is not available in the United States, generated peak annual global revenues of approximately $1.7 billion prior to the introduction of their generic equivalents, and the most commonly prescribed non-PGA drugs each generated peak annual global revenues of over $400 million prior to the introduction of their generic equivalents.

We believe Rhopressa™ may be prescribed by eye-care professionals as an add-on drug of choice for patients taking PGAs, due to the MOAs of Rhopressa™ being complementary to the MOA of PGAs, and due its IOP-lowering ability, more convenient dosing and better tolerability profile compared to currently marketed non-PGA add-on products.

In addition to the expected primary use of Rhopressa™ as an adjunctive therapy, we also believe Rhopressa™ may be prescribed by eye-care professionals in the following circumstances:

- As a preferred alternative therapy for patients who do not respond to PGAs.
- As a preferred initial therapy for patients with low or normal-tension glaucoma.
- As a preferred initial therapy where PGAs are contraindicated and for patients who choose to avoid the cosmetic issues associated with PGAs, including iris color change in light-eyed patients, discoloration of tissue surrounding the eyes and eyelid droopiness and sunken eyes caused by loss of orbital fat.

In addition, based on our preclinical data to date, we believe that quadruple-action Roclatan™ would be the only glaucoma product that covers the full spectrum of currently known IOP-lowering MOAs, giving it the potential to provide a greater IOP-lowering effect than any currently approved glaucoma product. Therefore, we believe Roclatan™ could compete with both PGA and non-PGA therapies for patients requiring maximal IOP lowering, including those

with higher IOPs and those who present with significant disease progression despite currently available therapies. We currently plan to commercialize our products ourselves in North America, may commercialize ourselves in Europe and plan to explore partnership opportunities through collaboration and licensing arrangements in certain key markets outside of North

Table of Contents

America, including Europe and Japan, where as noted in the Tajimi study, glaucoma patients tend to have lower IOPs, in ranges where currently marketed products tend to be less effective.

Our Product Pipeline

Our primary product candidates, triple-action Rhopressa™ (netarsudil ophthalmic solution) 0.02%, and quadruple-action Roclatan™ (netarsudil/latanoprost ophthalmic solution) 0.02%/0.005%, are once-daily eye drops. The references to triple and quadruple action are supported by our preclinical studies and clinical trials to date. Rhopressa™ inhibits Rho Kinase, or ROCK, and the norepinephrine transporter, or NET, which are both novel biochemical targets for lowering IOP. By inhibiting these targets, we believe Rhopressa™ reduces IOP via three separate MOAs: (i) through ROCK inhibition, it increases fluid outflow through the TM, which accounts for approximately 80% of fluid drainage from the eye; (ii) also through ROCK inhibition, as demonstrated in a preclinical study, it reduces EVP, which represents the pressure of the blood in the episcleral veins of the eye where eye fluid drains into the bloodstream; and (iii) through NET inhibition, it reduces the production of eye fluid. Roclatan™, a single-drop fixed-dose combination of Rhopressa™ and latanoprost, lowers IOP through the same three MOAs as Rhopressa™ and, as a fourth MOA, through the ability of latanoprost to increase fluid outflow through the uveoscleral pathway, the eye's secondary drain. All of these observations represent findings from Aerie's body of preclinical and clinical work, as applicable.

We discovered and developed our product candidates internally through a rational drug design approach that coupled medicinal chemistry with high content screening of compounds in proprietary cell-based assays. We selected and formulated our product candidates for preclinical in vivo testing following a detailed characterization of over 3,000 synthesized ROCK-selective and ROCK/NET inhibitors. We continue to seek to discover and develop new compounds in our research laboratories and employ a scientific staff with expertise in medicinal chemistry, analytical chemistry, biochemistry, cell biology, pharmacology and pharmaceutical science.

The following table summarizes each of our existing product candidates, their MOAs and their development status, as well as our intellectual property rights for these product candidates.

Product Candidate and Mechanism		Phase of Development	Intellectual Property Rights
Rhopressa™	Triple-action—ROCK/NET inhibitor	Phase 3	Wholly-Owned
Roclatan™	Quadruple-action—ROCK/NET inhibitor and latanoprost, a PGA	Phase 3	Wholly-Owned

In 2015, we decided to no longer actively pursue further development of AR-13533, a second generation ROCK/NET inhibitor, merely for strategic business purposes. We have not yet submitted an IND for AR-13533 to the FDA.

Rhopressa™

Rhopressa™ is the first of a new class of glaucoma drug products that was discovered by our scientists. It is a once-daily eye drop designed to reduce IOP in patients with glaucoma or ocular hypertension. Based on our preclinical and clinical observations, it increases fluid outflow through the primary drain of the eye while also reducing eye fluid production. In addition, a preclinical study demonstrated reduction of EVP as an additional MOA of Rhopressa™, as further described below. The active ingredient in Rhopressa™, AR-13324, acts through the inhibition of both ROCK and NET.

ROCK is a protein kinase, which is an enzyme that modifies other proteins by chemically adding phosphate groups to them. Specifically, ROCK regulates actin and myosin, which are proteins that are responsible for cellular contraction. ROCK activity also promotes the production of extracellular matrix proteins. ROCK inhibitors block TM cell contraction and reduce the production of extracellular matrix, thereby improving fluid outflow and consequently decreasing IOP. In addition, we believe ROCK inhibition may also be responsible for reduction of EVP. EVP represents the pressure of the blood in the episcleral veins of the eye, where eye fluid drains into the bloodstream. When EVP is lowered, the fluid is able to flow more freely from the eye.

NET is a protein that transports norepinephrine across neuronal cell membranes. Norepinephrine is a chemical released by neurons to communicate with targeted cells. NET returns excess norepinephrine back into the neuron, which helps end the signaling between the neuron and the neuron's target cells. We believe the inhibition of NET prolongs the activation of target

Table of Contents

cells in the ciliary body of the eye, which reduces the production of eye fluid and thereby lowers IOP. Based on our clinical trials, we have observed that Rhopressa™ may also have a potential synergisitic effect with PGAs, whereby its IOP-lowering ability is increased when patients take a PGA as a first line therapy.

Rhopressa™ is expected to compete primarily in the adjunctive therapy market, which represents approximately one-half of the U.S. glaucoma prescription market, which totaled 33 million prescriptions in 2014 according to IMS. Currently marketed adjunctive therapies are older generation products that are generally dosed two to three times a day, have MOAs focused on fluid production reduction, often have lower efficacy levels and have systemic side effects. We believe Rhopressa™ will be able to compete with these products due to its effective IOP-lowering at relatively consistent levels across tested IOPs including the ability to lower EVP, targeting of the diseased tissue, potential synergistic effect with PGAs, convenient once-daily dosing, and favorable tolerability profile with lack of systemic side effects.

Based on the Rhopressa™ Rocket 1 and Rocket 2 Phase 3 registration trial results, Phase 2b clinical trial results, performance of Rhopressa™ in the Roclatan™ Phase 2b clinical trial and the several positive differentiating attributes of Rhopressa™, we believe Rhopressa™ has the potential to be the future drug of choice as adjunctive therapy to PGAs when additional IOP lowering is desired and as an initial therapy for PGA non-responders or for patients with low or normal-tension glaucoma and those with tolerability concerns.

Rhopressa™ Phase 3 Efficacy Results

Our Phase 3 registration trials commenced in July 2014 and are designed to use timolol as the comparator, as timolol represents the most widely used comparator in registration trials in glaucoma, and is also the most widely prescribed non-PGA drug. We anticipate a total enrollment of approximately 2,030 patients in our Phase 3 registrations trials of Rhopressa™. Phase 3 efficacy results are determined after three months of treatments and safety results are analyzed and submitted following 12 months of treatment.

In April 2015, we completed our initial Phase 3 registration trial, named “Rocket 1,” which was designed to measure efficacy over three months. Baseline IOP was measured prior to treatment. Following treatment, IOP was measured at 8 a.m., 10 a.m. and 4 p.m. at the end of week two, week four and day 90. This trial included 182 patients in the Rhopressa™ once-daily (QD) arm and 188 patients in the timolol twice-daily (BID) arm. The baseline IOPs tested in the trial ranged from above 20 to below 27 mmHg. Rhopressa™ did not achieve its primary endpoint of demonstrating non-inferiority of IOP lowering for Rhopressa™ compared to timolol for patients with IOP below 27 mmHg, but did achieve its pre-specified secondary endpoint, demonstrating non-inferiority of IOP lowering for Rhopressa™ compared to timolol for patients with IOP below 24 mmHg. We believe the lack of success at the top end of the range is attributed, at least in part, to patient non-compliance and the probability that certain patient baseline IOP levels exceeded the entry criteria of below 27 mmHg.

For the Rhopressa™ population of patients with IOP below 27 mmHg in Rocket 1, the mean difference from timolol ranged from -0.4 to +1.3 mmHg at a 95% confidence interval. For the population of patients with IOP below 26 mmHg, Rhopressa™ met the criteria for non-inferiority to timolol at all 9 time points and was numerically superior to timolol at the majority of time points. For the prespecified population of patients with IOP below 24 mmHg, Rhopressa™ met the criteria for non-inferiority to timolol at all 9 time points and was numerically superior to timolol at all 9 time points.

No drug-related serious adverse events, or SAEs, were identified during the Rocket 1 trial. The primary adverse event was conjunctival hyperemia, or eye redness, which was experienced by approximately 35% of the Rhopressa™ patients, of which approximately 80% was reported as mild. Conjunctival hyperemia was measured by biomicroscopy at 8am at the end of week two, week four and day 90. Across the population of patients on Rhopressa™, approximately 5% to 13% of subjects experienced conjunctival hemorrhage, erythema of the eyelid, blurry vision and or corneal deposit.

Our second Phase 3 registration trial, named “Rocket 2,” is designed to measure efficacy over three months and safety over 12 months. The Rocket 2 trial includes Rhopressa™ dosed both once-daily, or QD, and twice daily, or BID. After evaluating Rocket 1 efficacy results, we obtained agreement from the FDA to change the IOP range for the primary endpoint for the Rocket 2 trial to baseline IOP below 25 mmHg. This modified clinical endpoint range was set to a level where Rocket 1 would have been successful.

In September 2015, the Rocket 2 trial achieved its primary efficacy endpoint of demonstrating non-inferiority of IOP lowering for Rhopressa™ QD and BID compared to timolol BID. The baseline IOPs tested in the trial ranged from pre-study baseline IOPs of above 20 mmHg to below 25 mmHg. The study included a Rhopressa™ BID arm at the request of the FDA, because it is known that PGAs are less efficacious when dosed BID, and we believe there was interest in discovering how Rhopressa™ BID would perform. Baseline IOP was measured prior to treatment. Following treatment, IOP was measured at 8 a.m., 10 a.m.

Table of Contents

and 4 p.m. at the end of week two, week six and day 90. The trial included 129 patients in the Rhopressa™ QD arm, 132 patients in the Rhopressa™ BID arm and 142 patients in the timolol twice-daily arm. The most common Rhopressa™ adverse event in the QD arm was conjunctival hyperemia, or eye redness, which was reported as 35% increased incidence, of which 83% was mild and 16% moderate. Other ocular adverse events occurring in approximately 5% to 15% of patients in the Rhopressa™ QD arm included conjunctival hemorrhage, corneal deposits and blurry vision. The Rhopressa™ BID arm showed slightly higher efficacy, but had a higher incidence of adverse events which led to a greater number of early terminations in comparison to the Rhopressa™ QD arm. Other ocular adverse events occurring in approximately 5% to 17% of patients in the Rhopressa™ QD arm included conjunctival hemorrhage, corneal deposits, blurry vision, increased lacrimation, reduced visual acuity, eye pruritus, and conjunctival edema. In February 2016, safety data for the 12-month period of the Rocket 2 trial confirmed this positive safety profile for the drug and demonstrated a consistent IOP lowering effect throughout the 12-month period at the 8 a.m. timepoint.

After detailed analysis of the Rocket 1 and Rocket 2 results, we observed higher levels of IOP lowering for Rhopressa™ at week two and to a lesser extent at week six stemming from patients who were previously on a PGA, pointing to the potential synergistic effect of PGAs and Rhopressa™, which decreases over the 90-day period as the residual PGA effect subsides. For all other patients, the IOP lowering was consistent across the 90 day measurement periods. For illustrative purposes, the graphic below shows the performance of Rocket 1 and Rocket 2 at baselines above 20 mmHg and below 25 mmHg, compared to timolol.

In addition to our Rocket 1 and Rocket 2 trials, we are currently conducting a one year, safety-only study for Rhopressa™ in Canada, named “Rocket 3,” which commenced in September 2014, and an additional Phase 3 registration trial for Rhopressa™, named “Rocket 4,” which commenced in September 2015. Rocket 4 is designed to gain adequate six-month safety data for regulatory filings in Europe. Based upon discussions with the FDA, we expect to file a NDA for Rhopressa™ in the third quarter of 2016, utilizing Rocket 2 as the pivotal clinical trial and Rocket 1 as supportive. Neither Rocket 3 nor Rocket 4 is required for the NDA filing.

Rhopressa™ Preclinical Anti-Fibrotic and Perfusion Results

We continue to explore the potential longer-term impact of Rhopressa™ on the trabecular meshwork. By increasing trabecular outflow, as demonstrated in our preclinical studies, Rhopressa™, has the potential to stop the degeneration of outflow tissues. As part of the aging process, the trabecular meshwork becomes stiffened and clogged as fibrosis develops and progresses. Preclinical studies on human trabecular meshwork cells have demonstrated a meaningful anti-fibrotic effect from Rhopressa™. Further, additional preclinical experiments on human eyes have demonstrated the product candidate’s potential ability to increase the perfusion of the trabecular meshwork and downstream outflow tissues. We believe this is possible because as a

Table of Contents

result of the action of Rhopressa™ the trabecular meshwork becomes relaxed and opens, which increases the flow of eye fluid, or aqueous humor. This has the potential to increase the health of the trabecular outflow tissues, since it should increase the delivery of nutrients and antioxidants to the trabecular meshwork that were otherwise blocked from passage. The flow of fluid through the trabecular meshwork is the only known mechanism for delivering such nutrients to the diseased tissue, as there are no blood vessels present. Work is continuing as we explore whether our product candidates may be able to prevent, or possibly even reverse, damage to the trabecular meshwork pathway through this potential effect as well as the potential anti-fibrotic effect of our product candidates. If findings are positive and there is demonstrated disease modification, this could be a major breakthrough in the treatment of glaucoma and ocular hypertension.

Roclatan™

Our once-daily, quadruple-action product candidate Roclatan™ is a combination of our triple-action compound AR-13324, the active ingredient in Rhopressa™, formulated with latanoprost in a single eye drop. If approved, we believe that Roclatan™ would be the first glaucoma product to lower IOP through all currently known MOAs:

- increasing fluid outflow through the TM, the eye's primary drain,
- reducing fluid production in the eye,
- reducing EVP, and
- through the MOA of latanoprost, increasing fluid outflow through the uveoscleral pathway, the eye's secondary drain.

Roclatan™ Phase 3 Development Strategy

Our Phase 3 registration trials commenced in September 2015. We anticipate a total enrollment of approximately 1,840 patients in our Phase 3 registrations trials. Our initial Phase 3 registration trial, named "Mercury 1," is a 12-month safety trial with a 90-day interim efficacy readout, which commenced in September 2015. We expect Mercury 1 topline 90-day efficacy data in the third quarter of 2016 and topline 12-month safety data in the third quarter of 2017. Our second Phase 3 registration trial, named "Mercury 2," is a 90-day efficacy and safety trial, which is expected to commence in March 2016. Both trials are designed to demonstrate the superiority of Roclatan™ to each of its components. If both Mercury 1 and Mercury 2 are successful, we expect to file an NDA for Roclatan™ in the second half of 2017, approximately one year after the NDA filing for Rhopressa™.

We also plan to initiate a third Phase 3 registration trial, named "Mercury 3," in the first half of 2017. Mercury 3 will be designed to compare Roclatan™ to a fixed dose combination product broadly marketed in Europe, which if successful should improve our commercialization prospects in that region.

Roclatan™ Phase 2 Efficacy Results

In June 2014, we completed a 28-day Roclatan™ Phase 2b clinical trial. The baseline IOPs tested in the study ranged from 22 to 36 mmHg and included 297 patients who were treated once daily with Roclatan™ 0.01%, Roclatan™ 0.02%, Rhopressa™ 0.02%, or latanoprost. The primary efficacy endpoint for this Phase 2b clinical trial was statistical superiority of Roclatan™ over each of its components on day 29. Baseline IOP was measured prior to treatment. Following treatment, IOP was measured on day eight, day 14 and day 28 at 8 a.m., 10 a.m. and 4 p.m. We observed statistical superiority over the individual components at all time points.

Table of Contents

Roclatan™ vs. Individual Components
Mean IOP at All Time Points (p<0.001)

Roclatan™ 0.02% lowered mean diurnal IOP on day 29 from 25.1 mmHg at baseline to 16.5 mmHg, a 34% decrease in IOP. Roclatan™ 0.02% was determined to be 1.6 - 3.2 mmHg more efficacious than latanoprost and 1.7 - 3.4 mmHg more efficacious than Rhopressa™.

An additional analysis that compared the response results for patients on day 29 revealed that 50% of Roclatan™ patients compared to 28% of latanoprost patients experienced a 35% or greater decrease in mean diurnal IOP from baseline on day 29. Furthermore, 46% of Roclatan™ patients compared to 18% of latanoprost patients had a mean diurnal IOP of 16 mmHg or less on day 29. From a safety perspective, Roclatan™ was well tolerated. The most common Roclatan™ adverse event was hyperemia, or eye redness, which was reported in 40% of patients. For patients who experienced hyperemia, 80% were observed as mild through biomicroscopy findings. Additionally, there were no systemic drug-related adverse events reported.

We believe Roclatan™, if approved, would be the only glaucoma product that covers the full spectrum of currently known IOP- lowering MOAs, giving it the potential to provide a greater IOP-lowering effect than any currently marketed glaucoma product. Therefore, we believe Roclatan™ could compete with both PGA and non-PGA therapies for patients requiring maximal IOP lowering, including those with higher IOPs and those who present with significant disease progression despite currently available therapies.

Pipeline Opportunities

AR-13154

One of our owned preclinical molecules, AR-13154, has demonstrated the potential for the treatment of wet AMD. This preclinical small molecule inhibits Rho kinase, JAK2 and PDGFR- , and has shown lesion size decreases in a model of wet AMD at levels similar to or better than current market-leading products. If proven out, we may have the potential to provide an entirely new mechanism and pathway to treat this disease. Further, in our preclinical studies, we have seen a promising effect of this molecule on reducing neovascularization in a model of proliferative diabetic retinopathy.

Table of Contents

The graph below depicts the results of a preclinical study designed to show the impact of AR-13154 and Eylea® on laser-induced choroidal neovascularization, or CNV, in rats.

Since AR-13154 is a small molecule with a short half-life, and the aforementioned diseases are located in the back of the eye, a delivery mechanism is needed to deliver the molecule to the back of the eye for a sustained delivery period. As a result, in mid-2015 we established a research collaboration with GrayBug, a drug delivery technology spin-out from Johns Hopkins University. We believe that their biodegradable polymer technology may be effective in facilitating delivery of our small molecules, including AR-13154, over a sustained period, such as six months. The technology may also prove useful in delivering other Aerie molecules to the front of the eye, such as for the purpose of long term IOP lowering.

EG-30

Another small molecule that may benefit from delivery technology is EG-30, a preclinical anti-beta amyloid product candidate that we are researching in collaboration with Ramot at Tel Aviv University. We believe that EG-30, Ramot's product candidate, has the potential for neuroprotection and reduction of geographic atrophy in advanced dry AMD.

Our Strategy

Our goal is to become a leader in the discovery, development and commercialization of innovative pharmaceutical products for the treatment of patients with glaucoma and other diseases of the eye. We believe our product candidates have the potential to address many of the unmet medical needs in the glaucoma market. Key elements of our strategy are to:

Advance the development of our product candidates to approval. We expect to file the NDA for Rhopressa™ (netarsudil ophthalmic solution) 0.02% in the third quarter of 2016, using our successful Rocket 2 clinical trial as the pivotal trial and Rocket 1 data as supportive. This will be a key step in driving this drug to a commercial stage in the United States. Our Rocket 4 trial, which is ongoing, is designed to provide adequate six-month safety data to support a filing with the European MAA by approximately mid-2017.

Our second product candidate, once-daily, quadruple-action Roclatan™ (netarsudil/latanoprost ophthalmic solution) 0.02%/0.005%, which is a fixed-dose combination of Rhopressa™ and latanoprost, the most commonly prescribed drug for the treatment of patients with glaucoma, successfully completed a Phase 2b clinical trial in patients with open-angle glaucoma and ocular hypertension in June 2014. Our first Phase 3 registration trial for Roclatan™, named "Mercury 1," commenced in September 2015. We expect to commence our second Phase 3 trial for Roclatan™, named "Mercury 2," in March 2016. If both Mercury 1 and Mercury 2 are successful, we expect to file an NDA for Roclatan™ in the second half of 2017, approximately one year after the NDA filing for Rhopressa™. We expect to commence a third Phase 3 registration trial for Roclatan™, named "Mercury 3," in Europe in the first half of 2017, which will be designed to compare Roclatan™ to a fixed dose combination product broadly marketed in Europe, which if successful should improve our commercialization prospects in that region.

Table of Contents

Establish internal sales capabilities to commercialize our product candidates in North America. We own worldwide rights to all indications for our product candidates and we plan to retain commercialization rights in North American markets. Ultimately, if our product candidates are approved, we plan to build a commercial team in North America of approximately 100 sales representatives. We expect our sales organization to target approximately 10,000 high prescribing eye-care professionals throughout North America.

Explore partnerships with leading pharmaceutical and biotechnology companies to maximize the value of our product candidates outside North America. We are exploring the licensing of commercialization rights or other forms of collaboration with qualified potential partners for the commercialization of our product candidates in other territories, including Japan and Europe.

Continue to leverage and strengthen our intellectual property portfolio. We believe we have a strong intellectual property position relating to our product candidates. Our intellectual property portfolio contains U.S. and foreign patents and pending U.S. and foreign patent applications related to composition of matter, pharmaceutical compositions and methods of use for our product candidates. We have patent protection for our primary product candidates in the United States through at least 2030.

Expand our product portfolio through internal discovery efforts and in-licensing or acquisitions of additional ophthalmic product candidates or products. We continue to seek to discover and develop new compounds in our research laboratories and employ a scientific staff with expertise in medicinal chemistry, analytical chemistry, biochemistry, cell biology, pharmacology and pharmaceutical science. In addition, we also plan to continue to evaluate the expansion of our product portfolio through in-licensing or acquisitions of additional ophthalmic product candidates or products. We currently have research collaboration arrangements with GrayBug Inc., for drug delivery technology, and Ramot at Tel Aviv University Ltd., for a small molecule anti-beta amyloid product candidate with the potential for neuroprotection and treatment of advanced dry AMD.

Glaucoma Overview

Glaucoma is generally characterized by relatively high IOP as a result of impaired drainage of fluid, known as aqueous humor, from the eye. The FDA recognizes sustained lowering of IOP, measured in terms of mmHg, as the primary clinical endpoint for regulatory approval, making clinical trials for this indication relatively straight-forward due to easily measured objective parameters.

In a healthy eye, aqueous humor is continuously produced and drained from the eye in order to maintain pressure equilibrium and provide micronutrients to various tissues in the eye. The normal range of IOP is generally between 10 and 21 mmHg. Several studies have demonstrated that the significant majority of glaucoma patients have IOPs below 26 mmHg at the time of diagnosis. An insufficient drainage of fluid can increase IOP above normal levels, which can eventually cause damage to the optic nerve. Once damaged, the optic nerve cannot regenerate and thus, damage to vision is permanent.

The most common form of glaucoma is open-angle glaucoma, which is characterized by abnormally high IOP as a result of impaired drainage of fluid from the eye’s primary drain, the TM. Open-angle glaucoma is a progressive disease leading to vision loss and blindness for some patients as a result of irreversible damage to the optic nerve. Studies of the disease have demonstrated that reducing IOP in patients with glaucoma can help slow or halt further damage to the optic nerve and help preserve vision. Once diagnosed, glaucoma requires life-long treatment to maintain IOP at lower levels based on the individual patient’s risk of disease progression. Ophthalmologists will routinely determine a target IOP, which represents the desired IOP level to achieve with glaucoma therapy for an individual patient. Should the disease progress even once the initial target IOP is reached, further lowering of the IOP has been shown to help in preventing additional damage to the optic nerve and further vision loss. This may require lowering IOP until it is in the so-called “low normal range” of 12 to 14 mmHg to protect the optic nerve from further damage.

There are multiple factors that can contribute to an individual getting open-angle glaucoma, including, but not limited to, age, family history and ethnicity. For example, there generally is a higher incidence and severity of the disease in African-American and Hispanic populations.

Some patients with high IOP are diagnosed with a condition known as ocular hypertension. Patients with ocular hypertension have high IOP without the loss of visual fields or observable damage to the optic nerve, and are at an increased risk of developing glaucoma. These patients are commonly treated in the same manner as glaucoma patients.

Table of Contents

The following diagram illustrates how increased IOP eventually leads to increased pressure on the optic nerve, resulting in gradual loss of vision and ultimately visual disability and blindness.

The ciliary body in the eye is the tissue that produces aqueous humor, the production of which is commonly referred to as fluid inflow. The fluid leaves the eye primarily through the TM, the process of which is commonly referred to as fluid outflow. The healthy eye maintains a state of IOP homeostasis through a constant physiological process of aqueous humor production and drainage. The deteriorating function of the TM in glaucoma leads to increased resistance to fluid outflow and higher IOP. There is also a secondary drain for the fluid in the eye known as the uveoscleral pathway, which is typically responsible for approximately 20% of fluid drainage.

In addition to aqueous humor production and drainage through the TM and uveoscleral pathway, EVP plays a significant role in the regulation of IOP. EVP represents the pressure of the blood in the episcleral veins of the eye which are the site of drainage of eye fluid into the bloodstream. Historical studies have shown that EVP accounts for approximately one-half of IOP in normotensive subjects and approximately one-third of IOP in patients with pressures of 24 to 30 mmHg. When EVP is lowered, aqueous humor is able to flow more freely from the eye.

Patients are diagnosed through measurements of IOP using Goldmann applanation tonometry, the standard device used by clinicians to measure IOP, along with an evaluation of visual fields and observing the appearance of the optic nerve. These tests are routinely carried out by eye-care professionals. The initial treatment for patients diagnosed with open-angle glaucoma or ocular hypertension is typically a PGA eye drop. PGAs are designed to lower IOP by increasing outflow through the eye's secondary fluid drain. An eye-care professional will then measure a patient's response to the drug over the first few months. It has been shown that up to 50% of glaucoma patients require more than one drug to treat their IOP. This may occur as early as three to six months after initiating treatment with a PGA. The eye-care professionals may then add a second drug from one of the non-PGA classes, to be used together with the initial drug, or switch to a fixed-combination of two drugs in a single eye drop, or select an alternative single treatment. The reason so many patients eventually need more than one drug is generally considered to be a reflection of the progressive nature of the disease at the TM.

In severe glaucoma cases, patients may need to undergo an invasive surgical procedure. Trabeculectomy is the most common glaucoma-related surgical procedure, also referred to as filtration surgery, in which a piece of tissue in the drainage angle of the eye is removed, creating an opening to the outside of the eye. The opening is partially covered with a scleral flap, the white part of the eye, and the conjunctiva, the thin membrane covering the sclera. This new opening allows fluid to drain out of the eye, bypassing the clogged drainage channels of the TM to maintain a lowered IOP. Devices called shunts are used in glaucoma surgery to divert fluid in a controlled manner from the inside of the eye to the subconjunctival space bypassing the blocked TM. Generally, the shunts reduce IOP to the extent that the use of drops can be reduced, but often not completely eliminated. Many patients continue to require eye drops even following surgery.

Competition

The pharmaceutical industry is characterized by rapidly advancing technologies, intense competition and a strong emphasis on proprietary products. While we believe that our experience and scientific knowledge provide us with competitive advantages, we face competition from established branded and generic pharmaceutical companies, such as Valeant Pharmaceuticals International, Inc., Novartis International AG, Allergan, Inc., Santen Inc. and smaller biotechnology and pharmaceutical companies as well as from academic institutions, government agencies and private and public research institutions, which may in the future develop products or technologies to treat glaucoma or other diseases of the eye. Any product candidates that we

Table of Contents

successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future. We believe that the key competitive factors affecting the success of our current product candidates, if approved, are likely to be efficacy and MOAs, safety, convenience, price, tolerability and the availability of reimbursement from government and other third-party payors.

We expect to compete directly against companies producing existing and future glaucoma treatment products. The most commonly approved classes of eye drops to lower IOP in glaucoma are discussed below:

PGA Drug Class

- Prostaglandin Analogues (PGAs). Most PGAs are once-daily dosed eye drops generally prescribed as the initial drug to reduce IOP by increasing fluid outflow through the eye's secondary drain. They do not target the diseased tissue, or TM. PGAs represent approximately one-half of the U.S. and European prescription volume for the treatment of glaucoma.

Xalatan (latanoprost), the best-selling PGA, together with Xalacom, its fixed-combination with a beta blocker, which is not available in the United States, had worldwide peak sales of approximately $1.7 billion before its patent expired in 2012, according to publicly reported sales. The adverse effects of PGAs include hyperemia or eye redness, irreversible change in iris color, discoloration of the skin around the eyes, and droopiness of eyelids caused by the loss of orbital fat. PGAs should be used with caution in patients with a history of intraocular inflammation.

Non-PGA Drug Class

- Beta Blockers. Beta blockers, with their MOA designed to inhibit aqueous production, are one of the oldest approved drugs for the lowering of IOP. The most commonly used drug in this class is timolol. Beta blockers are less effective than PGAs in terms of IOP lowering and are typically used twice daily. Beta blockers are the most commonly used non-PGA drug. They are used as an initially prescribed monotherapy and as an adjunct therapy to PGAs when the efficacy of PGAs is insufficient. Beta blocker eye drops have contraindications in their label as a result of systemic exposure from topical application of the eye drops, potentially leading to cardio-pulmonary events such as bronchospasm, arrhythmia and heart failure.
- Carbonic Anhydrase Inhibitors. Carbonic anhydrase inhibitors, with their MOA designed to inhibit aqueous production, are less effective than PGAs and are required to be dosed three times daily in order to obtain the desired IOP lowering. In published clinical studies of carbonic anhydrase inhibitors, the most frequently reported adverse events reported were blurred vision and bitter, sour or unusual taste. Carbonic anhydrase inhibitors are sulfonamides and, as such, systemic exposure increases risk of adverse responses such as Stevens Johnson syndrome and blood dyscrasias.
- Alpha Agonists. Alpha agonists, with their MOA designed to inhibit aqueous production plus have an effect on uveoscleral outflow, are less effective than PGAs and need to be dosed three times daily in order to obtain the desired IOP lowering. In clinical studies, the most frequently reported adverse reactions that occurred in individuals receiving brimonidine ophthalmic solution, a commonly prescribed alpha agonist, included allergic conjunctivitis, conjunctival hyperemia, eye pruritus, burning sensation, conjunctival folliculosis, hypertension, ocular allergic reaction, oral dryness and visual disturbance.

Despite their modest efficacy, safety and tolerability profiles, the requirement for two to three doses per day, and the fact that they do not target the diseased tissue in glaucoma, the beta blocker, carbonic anhydrase inhibitor and alpha agonist products account for up to one-half of the total prescription volume for the treatment of glaucoma based on historical prescription patterns, with beta blocker timolol being the most widely prescribed non-PGA drug. This is driven by the PGA products not being sufficiently effective as monotherapy for up to half of all glaucoma patients.

Table of Contents

New eye drops for the treatment of glaucoma continue to be developed by our competitors. The following table outlines publicly disclosed development programs for the treatment of glaucoma of which we are aware.

New MOAs

Brand	MOA / Dosing	Trial Stage
Rhopressa™ (Aerie AR-13324)	ROCK/NET inhibitor (qd)	Phase 3
Roclatan™ (Aerie PG324)	ROCK/NET inhibitor + PGA (qd)	Phase 3
INO-8875 (Inotek)	Adenosine-A1 agonist (bid or qd)	Phase 3
OPA-6566 (Acucela)	Adenosine-A2a agonist (bid)	Phase 1/2
SYL040012 (Sylentis)	RNAi beta blocker (qd)	Phase 2

New PGAs[1]

Brand	MOA / Dosing	Trial Stage
Vesneo (Bausch + Lomb)	NO donating latanoprost (qd)	Filed NDA
DE-117 (Santen)	EP2 agonist (qd)	Phase 2
ONO-9054 (Ono)	FP/EP3 agonist (qd)	Phase 2

[1]Not usable as add-on therapy to current PGAs.

Many of our competitors have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. In July 2015, Bausch + Lomb Inc., a wholly owned subsidiary of Valeant Pharmaceuticals International, Inc., filed a NDA for a nitric oxide-donating latanoprost, which is currently under review by the FDA for the treatment of open angle glaucoma and ocular hypertension. Early-stage companies are also developing treatments for glaucoma and other diseases of the eye and may prove to be significant competitors, such as Inotek Pharmaceuticals, which is developing an adenosine receptor agonist. We expect that our competitors will continue to develop new treatments for glaucoma and other diseases of they eye, which may include eye drops, oral treatments, surgical procedures, implantable devices or laser treatments. Alternative treatments beyond eye drops continue to develop.

Other early-stage companies may also compete through collaborative arrangements with large and established companies. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to, or necessary for, our programs. Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer adverse effects, are more convenient or are less expensive than any products that we may develop. Our competitors also may obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours. In addition, our ability to compete may be affected because in many cases insurers or other third-party payors encourage the use of generic products. Our industry is highly competitive and is currently dominated by generic drugs, such as latanoprost and timolol, in the case of glaucoma treatment, and additional products are expected to become available on a generic basis over the coming years. If any of our product candidates are approved, we expect that they will be priced at a premium over competitive generic products and consistent with other branded glaucoma drugs.

Manufacturing

AR-13324, the active ingredient in Rhopressa™, is a small molecule and capable of being manufactured in reliable and reproducible synthetic processes from readily available starting materials. We believe the chemistry used to manufacture AR-13324, Rhopressa™ and Roclatan™ is amenable to scale up and does not require unusual equipment in the manufacturing process. We do not currently operate manufacturing facilities for clinical or commercial production of our product candidates. We currently rely on third-party manufacturers to produce the active pharmaceutical

ingredient and final drug product for our clinical trials. We manage such production with all our vendors on a purchase order basis in accordance with applicable master service and supply agreements. We do not have long-term agreements with any of these or any other third-party suppliers to support our clinical trials. Latanoprost, used in the manufacture of Roclatan™, is available in commercial quantities from multiple reputable third-party manufacturers. We intend to procure quantities on a purchase order basis for our clinical and commercial production. If any of our existing third-party suppliers should become unavailable to us for any reason, we believe

Table of Contents

that there are a number of potential replacements, although we might experience a delay in our ability to obtain alternative suppliers.

With respect to commercial production of our potential products in the future, we plan on outsourcing the production of the active pharmaceutical ingredients. The commercial production of our final drug product manufacturing is expected to be supported by a combination of internal and outsourced manufacturing. We are currently evaluating the possibility of constructing our own manufacturing plant in Ireland. In addition, we have entered into a contractual relationship for the final drug product manufacturing for commercialization. However, we do not have any current contractual relationships for the commercial production of the active pharmaceutical ingredients.

We expect to continue to develop drug candidates that can be produced cost-effectively at contract manufacturing facilities. However, should a supplier or manufacturer on which we have relied to produce a product candidate provide us with a faulty product or such product is later recalled, we would likely experience delays and additional costs, each of which could be significant.

Intellectual Property

We have obtained patent protection for our primary product candidates, Rhopressa™ and Roclatan™ (patent protection for Roclatan™ arises from the patent protection we have secured for Rhopressa™), in the United States and certain foreign jurisdictions and are seeking patent protection in a number of other foreign jurisdictions for these product candidates. We intend to maintain and defend our patent rights to protect our technology, inventions, processes and improvements that are commercially important to the development of our business. We cannot be sure that any of our existing patents or patents we obtain in the future will be commercially useful in protecting our technology. We cannot be sure that our patents will issue on any of our pending patent applications or patent applications we file in the future. Our commercial success also depends in part on our non-infringement of the patents or proprietary rights of third parties. For a more comprehensive discussion of the risks related to our intellectual property, see “Risk Factors-Risks Related to Intellectual Property.”

Our intellectual property consists of issued patents, and pending patent applications for compositions of matter and methods of use, for our product candidates and other proprietary technology. For our primary product candidates Rhopressa™ and Roclatan™, we hold U.S. Patent 8,450,344, which is scheduled to expire in 2026, and U.S. Patent 8,394,826, which is scheduled to expire in 2030, each of which has claims directed to composition of matter and method of use. We hold patents for composition of matter and method of use in certain foreign jurisdictions for our primary product candidates. Additionally, we hold patents for other ROCK Inhibitor molecules.

We have established and continue to build proprietary positions for our product candidates and related technology in the United States and other jurisdictions. As of December 31, 2015, we had 58 United States or foreign issued patents that cover various aspects of our current and previously discontinued product candidates and our other proprietary technology and 27 U.S. patent applications or foreign patent applications that, if patents were to issue based on the existing claims, would cover various aspects of our current and previously discontinued product candidates and our other proprietary technology.

Aerie® is a registered trademark of ours and we have applications pending from the U.S. Patent and Trademark Office, or USPTO, for the registration of our trademarks Rhopressa™ and Roclatan™.

Regulatory Matters

FDA Regulation and Marketing Approval

In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act, or FDCA, and related regulations. Drugs are also subject to other federal, state and local statutes and regulations. Failure to comply with the applicable United States regulatory requirements at any time during the product development process, approval process or after approval may subject an applicant to administrative or judicial sanctions and non-approval of product candidates. These sanctions could include the imposition by the FDA or an Institutional Review Board, or IRB, of a clinical hold on trials, the FDA’s refusal to approve pending applications or related supplements, withdrawal of an approval, untitled or warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, restitution, disgorgement, civil penalties or criminal prosecution. Such actions by government agencies could also require us to expend a large amount of resources to respond to the actions. Any

agency or judicial enforcement action could have a material adverse effect on us.

Table of Contents

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, packaging, storage, distribution, record keeping, approval, post-approval monitoring, advertising, promotion, sampling and import and export of our products. Our drugs must be approved by the FDA through the NDA process before they may be legally marketed in the United States. See "—The NDA Approval Process" below.

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

- completion of non-clinical laboratory tests, animal studies and formulation studies conducted according to Good Laboratory Practices or other applicable regulations;
- submission of an IND, which allows clinical trials to begin unless FDA objects within 30 days;
- adequate and well-controlled human clinical trials to establish the safety and efficacy of the proposed drug for its intended use or uses conducted in accordance with FDA regulations, Good Clinical Practices, or GCP, which are international ethical and scientific quality standards meant to assure the rights, safety and well-being of trial participants are protected and to define the roles of clinical trial sponsors, administrators, and monitors;
- pre-approval inspection of manufacturing facilities and clinical trial sites; and
- FDA approval of an NDA, which must occur before a drug can be marketed or sold.

IND and Clinical Trials

Prior to commencing the first clinical trial, an initial IND, which contains the results of preclinical tests along with other information, such as information about product chemistry, manufacturing and controls and a proposed protocol, must be submitted 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 concerns or questions about the conduct of the clinical trial. In such a case, the IND sponsor must resolve any outstanding concerns with the FDA before the clinical trial may begin. A separate submission to the existing IND must be made for each successive clinical trial to be conducted during product development. Further, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial before it commences at that site. Informed consent must also be obtained from each trial subject. Regulatory authorities, including the FDA, an IRB, a data safety monitoring board or the sponsor, may suspend or terminate a clinical trial at any time on various grounds, including a finding that the participants are being exposed to an unacceptable health risk or that the clinical trial is not being conducted in accordance with FDA requirements.

For purposes of NDA approval, human clinical trials are typically conducted in sequential phases that may overlap:

- Phase 1—the drug is initially given to healthy human subjects or patients and tested for safety, dosage tolerance, absorption, metabolism, distribution and excretion. These trials may also provide early evidence on effectiveness. During Phase 1 clinical trials, sufficient information about the investigational drug's pharmacokinetics and pharmacologic effects may be obtained to permit the design of well- controlled and scientifically valid Phase 2 clinical trials.
- Phase 2—trials are conducted in a limited number of patients in the target population to identify possible adverse effects and safety risks, to determine the efficacy of the product for specific targeted diseases and to determine dosage tolerance and optimal dosage. Multiple Phase 2 clinical trials may be conducted by the sponsor to obtain information prior to beginning larger and more expensive Phase 3 clinical trials. Throughout this report, we refer to our initial Phase 2 clinical trials as "Phase 2a clinical trials" and our subsequent Phase 2 clinical trials as "Phase 2b clinical trials."
- Phase 3—when Phase 2 evaluations demonstrate that a dosage range of the product appears effective and has an acceptable safety profile, and provide sufficient information for the design of Phase 3 registration trials, Phase 3 registration trials are undertaken to provide statistically significant evidence of clinical efficacy and to further test for safety in an expanded patient population at multiple clinical trial sites. They are performed after preliminary evidence suggesting effectiveness of the drug has been obtained, and are intended to further

evaluate dosage, effectiveness and safety, to establish the overall benefit-risk relationship of the investigational drug and to provide an adequate basis for product labeling and approval by the FDA. In most

Table of Contents

cases, the FDA requires two adequate and well-controlled Phase 3 clinical trials to demonstrate the efficacy of the drug.

All clinical trials must be conducted in accordance with FDA regulations, GCP requirements and their protocols in order for the data to be considered reliable for regulatory purposes.

An investigational drug product that is a combination of two different drugs in the same dosage form must comply with an additional rule that requires that each component make a contribution to the claimed effects of the drug product. This typically requires larger studies that test the drug against each of its components. In addition, typically, if a drug product is intended to treat a chronic disease, as is the case with our products, safety and efficacy data must be gathered over an extended period of time, which can range from six months to three years or more. Government regulation may delay or prevent marketing of product candidates or new drugs for a considerable period of time and impose costly procedures upon our activities.

Disclosure of Clinical Trial Information

Sponsors of clinical trials of FDA-regulated products, including drugs, are required to register and disclose certain clinical trial information. Information related to the product, patient population, phase of investigation, study sites and investigators, and other aspects of the clinical trial is then made public as part of the registration. Sponsors are also obligated to discuss the results of their clinical trials after completion. Disclosure of the results of these trials can be delayed until the new product or new indication being studied has been approved. Competitors may use this publicly available information to gain knowledge regarding the progress of development programs.

The NDA Approval Process

In order to obtain approval to market a drug in the United States, a marketing application must be submitted to the FDA that provides data establishing to the FDA's satisfaction the safety and effectiveness of the investigational drug for the proposed indication. Each NDA submission requires a substantial user fee payment (currently exceeding $2,350,000 for fiscal year 2016) unless a waiver or exemption applies. The application includes all relevant data available from pertinent non-clinical, preclinical and clinical trials, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls and proposed labeling, among other things. Data can come from company-sponsored clinical trials intended to test the safety and effectiveness of a use of a product, or from a number of alternative sources, including studies initiated by investigators that meet GCP requirements.

During the development of a new drug, sponsors are given opportunities to meet with the FDA at certain points. These points may be prior to submission of an IND, at the end of Phase 2, and before an NDA is submitted. Meetings at other times may be requested. These meetings can provide an opportunity for the sponsor to share information about the data gathered to date, for the FDA to provide advice and for the sponsor and the FDA to reach agreement on the next phase of development. Sponsors typically use the end of Phase 2 meetings to discuss their Phase 2 clinical results and present their plans for the pivotal Phase 3 registration trial that they believe will support approval of the new drug.

Concurrent with clinical trials, companies usually complete additional animal safety studies and must also develop additional information about the chemistry and physical characteristics of the drug and finalize a process for manufacturing the product in accordance with current Good Manufacturing Practice, or cGMP, requirements. The manufacturing process must be capable of consistently producing quality batches of the drug candidate and the manufacturer must develop methods for testing the identity, strength, quality and purity of the final drugs. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the drug candidate does not undergo unacceptable deterioration over its shelf-life.

The results of product development, non-clinical studies and clinical trials, along with descriptions of the manufacturing process, analytical tests conducted on the chemistry of the drug, proposed labeling and other relevant information are submitted to the FDA as part of an NDA requesting approval to market the product. The FDA reviews all NDAs submitted to ensure that they are sufficiently complete for substantive review before it files them. It may request additional information rather than accept a NDA for filing. In this event, the NDA must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA files it. The FDA has

60 days from its receipt of an NDA to conduct an initial review to determine whether the application will be filed based on the agency's threshold determination that the application is sufficiently complete to permit substantive review. If the NDA submission is filed, the FDA reviews the NDA to determine, among other things, whether the proposed product is safe and effective for its intended use, and whether the product is being manufactured in accordance with cGMP to assure and preserve the product's identity, strength, quality and purity. The FDA has agreed to specific performance goals on the review of NDAs and seeks to review standard NDAs in 12 months from

Table of Contents

submission of the NDA. The review process may be extended by the FDA for three additional months to consider certain late submitted information or information intended to clarify information already provided in the submission. After the FDA completes its initial review of an NDA, it will communicate to the sponsor that the drug will either be approved, or it will issue a complete response letter to communicate that the NDA will not be approved in its current form and inform the sponsor of changes that must be made or additional clinical, non-clinical or manufacturing data that must be received before the application can be approved, with no implication regarding the ultimate approvability of the application or the timing of any such approval, if ever. If, or when, those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the NDA, the FDA will issue an approval letter. FDA has committed to reviewing such resubmissions in two to six months depending on the type of information included. The FDA may refer applications for novel drug products or drug products that present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and, if so, under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving an NDA, the FDA typically will inspect the facilities at which the product is manufactured. The FDA will not approve the product 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. Additionally, before approving an NDA, the FDA may inspect one or more clinical sites to assure compliance with GCP. If the FDA determines the application, manufacturing process or manufacturing facilities are not acceptable, it typically will outline the deficiencies and often will request additional testing or information. This may significantly delay further review of the application. If the FDA finds that a clinical site did not conduct the clinical trial in accordance with GCP, the FDA may determine the data generated by the clinical site should be excluded from the primary efficacy analyses provided in the NDA. Additionally, notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

The FDA may require, or companies may pursue, additional clinical trials after a product is approved. These so-called Phase 4 trials may be made a condition to be satisfied for continuing drug approval. The results of Phase 4 trials can confirm the effectiveness of a product candidate and can provide important safety information. In addition, the FDA now has express statutory authority to require sponsors to conduct post-marketing trials to specifically address safety issues identified by the agency. See "—Post-Marketing Requirements" below.

The FDA also has authority to require a Risk Evaluation and Mitigation Strategy, or a REMS, from manufacturers to ensure that the benefits of a drug outweigh its risks. A sponsor may also voluntarily propose a REMS as part of the NDA submission. The need for a REMS is determined as part of the review of the NDA. Based on statutory standards, elements of a REMS may include "dear doctor letters," a medication guide, more elaborate targeted educational programs, and in some cases elements to assure safe use, or ETASU. ETASU can include, but are not limited to, special training or certification for prescribing or dispensing, dispensing only under certain circumstances, special monitoring and the use of patient registries. These elements are negotiated as part of the NDA approval, and in some cases if consensus is not obtained until after the PDUFA review cycle, the approval date may be delayed. Once adopted, REMS are subject to periodic assessment and modification.

Changes to some of the conditions established in an approved application, including changes in indications, labeling, manufacturing processes or facilities, require submission and FDA approval of a new NDA or NDA supplement before the change can be implemented. An NDA supplement for a new indication typically requires clinical data similar to that in the original application, and the FDA uses the same procedures and actions in reviewing NDA supplements as it does in reviewing NDAs.

Even if a product candidate receives regulatory approval, the approval may be limited to specific disease states, patient populations and dosages, or might contain significant limitations on use in the form of warnings, precautions or contraindications, or in the form of onerous risk management plans, restrictions on distribution, or post-marketing trial requirements. Further, even after regulatory approval is obtained, later discovery of previously unknown

problems with a product may result in restrictions on the product or even complete withdrawal of the product from the market. Delay in obtaining, or failure to obtain, regulatory approval for our products, or obtaining approval but for significantly limited use, would harm our business. In addition, we cannot predict what adverse governmental regulations may arise from future U.S. or foreign governmental action.

The Hatch-Waxman Amendments

Under the Drug Price Competition and Patent Term Restoration Act of 1984, referred to as the Hatch-Waxman Amendments, a portion of a product's U.S. patent term that was lost during clinical development and regulatory review by the FDA may be

Table of Contents

restored. The Hatch-Waxman Amendments also provide a process for listing patents pertaining to approved products in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations (commonly known as the Orange Book) and for a competitor seeking approval of an application that references a product with listed patents to make certifications pertaining to such patents. In addition, the Hatch-Waxman Amendments provide for a statutory protection, known as non-patent exclusivity, against the FDA's acceptance or approval of certain competitor applications.

Patent Term Restoration

Patent term restoration can compensate for time lost during product development and the regulatory review process by returning up to five years of patent life for a patent that covers a new product or its use. This period is generally one-half the time between the effective date of an IND (falling after issuance of the patent) and the submission date of an NDA, plus the time between the submission date of an NDA and the approval of that application, provided the sponsor acted with diligence. Patent term restorations, however, cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only one patent applicable to an approved drug may be extended and the extension must be applied for prior to expiration of the patent. The USPTO, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration.

Orange Book Listing

In seeking approval for a drug through an NDA, applicants are required to list with the FDA each patent with claims covering the applicant's product or method of using the product. Upon approval of a drug, each of the patents listed in the application for the drug are then published in the FDA's Orange Book. Drugs listed in the Orange Book can, in turn, be cited by potential generic competitors in support of approval of an abbreviated new drug application, or ANDA. An ANDA provides for marketing of a drug product that has the same active ingredients in the same strengths and dosage form as the listed drug and has been shown to be bioequivalent to the listed drug. Other than the requirement for bioequivalence testing, ANDA applicants are not required to conduct, or submit results of, preclinical or clinical tests to prove the safety or effectiveness of their drug product. Drugs approved in this way are commonly referred to as "generic equivalents" to the listed drug, and can often be substituted by pharmacists under prescriptions written for the original listed drug.

The ANDA applicant is required to certify to the FDA concerning any patents listed for the approved product in the FDA's Orange Book. Specifically, the applicant must certify that: (i) the required patent information has not been filed; (ii) the listed patent has expired; (iii) the listed patent has not expired, but will expire on a particular date and approval is sought after patent expiration; or (iv) the listed patent is invalid or will not be infringed by the new product. The ANDA applicant may also elect to submit a Section VIII statement certifying that its proposed ANDA labeling does not contain (or carves out) any language regarding the patented method-of-use rather than certify to a listed method-of-use patent. If the applicant does not challenge the listed patents, the ANDA application will not be approved until all the listed patents claiming the referenced product have expired.

A certification that the new product will not infringe the already approved product's listed patents, or that such patents are invalid, is called a Paragraph IV certification. If the ANDA applicant has provided a Paragraph IV certification to the FDA, the applicant must also send notice of the Paragraph IV certification to the NDA and patent holders once the ANDA has been filed by the FDA. The NDA and patent holders 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 automatically prevents the FDA from approving the ANDA until the earlier of 30 months, expiration of the patent, settlement of the lawsuit or a decision in the infringement case that is favorable to the ANDA applicant.

An applicant submitting an NDA under Section 505(b)(2) of the FDCA, which 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, is required to certify to the FDA regarding any patents listed in the Orange Book for the approved product it references to the same extent that an ANDA applicant would.

Market Exclusivity

Market exclusivity provisions under the FDCA also can delay the submission or the approval of certain applications. The FDCA provides a five-year period of non-patent marketing exclusivity within the United States to the first applicant to gain approval of an NDA for a new chemical entity, or NCE. A drug is entitled to NCE exclusivity if it contains a drug substance no active moiety of which has been previously approved by the FDA. This means that, in the case of a fixed-dosed combination product, the FDA makes the NCE exclusivity determination for each drug substance in the drug product and not for the drug product as a whole. During the exclusivity period, the FDA may not accept for review an ANDA or a 505(b)(2) NDA submitted

Table of Contents

by another company for another version of such drug where the applicant does not own or have a legal right of reference to all the data required for approval. However, an application may be submitted after four years if it contains a Paragraph IV certification. The FDCA also provides three years of marketing exclusivity for an NDA, 505(b)(2) NDA or supplement to an existing NDA if new clinical investigations, other than bioavailability studies, that were conducted or sponsored by the applicant are deemed by the FDA to be essential to the approval of the application, for example, for new indications, dosages or strengths of an existing drug. This three-year exclusivity covers only the conditions associated with the new clinical investigations and does not prohibit the FDA from approving ANDAs for drugs for the original conditions of use, such as the originally approved indication. Five-year and three-year exclusivity will not delay the submission or approval of a full NDA; however, an applicant submitting a full NDA would be required to conduct or obtain a right of reference to all of the non-clinical studies and adequate and well-controlled clinical trials necessary to demonstrate safety and effectiveness.

Post-Marketing Requirements

Following approval of a new product, a pharmaceutical company and the approved product are subject to continuing regulation by the FDA, including, among other things, monitoring and recordkeeping activities, reporting to the applicable regulatory authorities of adverse experiences with the product, providing the regulatory authorities with updated safety and efficacy information, product sampling and distribution requirements, and complying with promotion and advertising requirements, which include, among others, standards for direct-to-consumer advertising, restrictions on promoting drugs for uses or in patient populations that are not described in the drug's approved labeling (known as "off-label use"), limitations on industry-sponsored scientific and educational activities and requirements for promotional activities involving the internet. Although physicians may prescribe legally available drugs for off-label uses, manufacturers may not market or promote such off-label uses. Modifications or enhancements to the product or its labeling or changes of the site of manufacture are often subject to the approval of the FDA and other regulators, who may or may not grant approval or may include in a lengthy review process.

Prescription drug advertising is subject to federal, state and foreign regulations. In the United States, the FDA regulates prescription drug promotion, including direct-to-consumer advertising. Prescription drug promotional materials must be submitted to the FDA in conjunction with their first use. Any distribution of prescription drug products and pharmaceutical samples must comply with the U.S. Prescription Drug Marketing Act, or the PDMA, a part of the FDCA.

In the United States, once a product is approved, its manufacture is subject to comprehensive and continuing regulation by the FDA. The FDA regulations require that products be manufactured in specific approved facilities and in accordance with cGMP. We rely, and expect to continue to rely, on third parties for the production of clinical and commercial quantities of our products in accordance with cGMP regulations. cGMP regulations require among other things, quality control and quality assurance as well as the corresponding maintenance of records and documentation and the obligation to investigate and correct any deviations from cGMP. Drug manufacturers and other entities involved in the manufacture and distribution of approved drugs 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 and other laws. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain cGMP compliance. These regulations also impose certain organizational, procedural and documentation requirements with respect to manufacturing and quality assurance activities. NDA holders using contract manufacturers, laboratories or packagers are responsible for the selection and monitoring of qualified firms, and, in certain circumstances, qualified suppliers to these firms. These firms and, where applicable, their suppliers are subject to inspections by the FDA at any time, and the discovery of violative conditions, including failure to conform to cGMP, could result in enforcement actions that interrupt the operation of any such product or may result in restrictions on a product, manufacturer, or holder of an approved NDA, including, among other things, recall or withdrawal of the product from the market.

In addition, the manufacturer and/or sponsor under an approved NDA are subject to annual product and establishment fees, currently exceeding $100,000 per product and $550,000 per establishment for fiscal year 2016. These fees are typically increased annually.

The FDA also may require post-marketing testing, also known as Phase 4 testing, REMS to monitor the effects of an approved product or place conditions on an approval that could restrict the distribution or use of the product. Discovery of previously unknown problems with a product or the failure to comply with applicable FDA requirements can have negative consequences, including adverse publicity, judicial or administrative enforcement, untitled or warning letters from the FDA, mandated corrective advertising or communications with doctors, withdrawal of approval, and civil or criminal penalties, among others. Newly discovered or developed safety or effectiveness data may require changes to a product's approved labeling, including the addition of new warnings and contraindications, and also may require the implementation of other risk management measures. Also, new government requirements, including those resulting from new legislation, may be established, or the FDA's policies may change, which could delay or prevent regulatory approval of our products under development.

Table of Contents

Reimbursement, Anti-Kickback and False Claims Laws and Other Regulatory Matters

In the United States, the research, manufacturing, distribution, sale and promotion of drug products and medical devices are potentially subject to regulation by various federal, state and local authorities in addition to the FDA, including the Centers for Medicare & Medicaid Services, other divisions of the U.S. Department of Health and Human Services (e.g., the Office of Inspector General), the Drug Enforcement Administration, the Consumer Product Safety Commission, the Federal Trade Commission, the Occupational Safety & Health Administration, the Environmental Protection Agency, state Attorneys General and other state and local government agencies. For example, sales, marketing and scientific/educational grant programs must comply with the Federal Anti-Kickback Statute, the False Claims Act, as amended, the privacy regulations promulgated under the Health Insurance Portability and Accountability Act (HIPAA), as amended, and similar state laws. Pricing and rebate programs must comply with the Medicaid Drug Rebate Program requirements of the Omnibus Budget Reconciliation Act of 1990, as amended, and the Veterans Health Care Act of 1992, as amended. If products are made available to authorized users of the Federal Supply Schedule of the General Services Administration, additional laws and requirements apply. The handling of any controlled substances must comply with the U.S. Controlled Substances Act and Controlled Substances Import and Export Act. Products must meet applicable child-resistant packaging requirements under the U.S. Poison Prevention Packaging Act. All of these activities are also potentially subject to federal and state consumer protection and unfair competition laws.

The Medicare Prescription Drug, Improvement, and Modernization Act of 2003, or the MMA, established the Medicare Part D program to provide a voluntary prescription drug benefit to Medicare beneficiaries. Under Part D, Medicare beneficiaries may enroll in prescription drug plans offered by private entities which will provide coverage of outpatient prescription drugs. Unlike Medicare Part A and B, part D coverage is not standardized. Part D prescription drug plan sponsors are not required to pay for all covered Part D drugs, and each drug plan can develop its own drug formulary that identifies which drugs it will cover and at what tier or level. However, Part D prescription drug formularies must include drugs within each therapeutic category and class of covered Part D drugs, though not necessarily all the drugs in each category or class. Any formulary used by a part D prescription drug plan must be developed and reviewed by a pharmacy and therapeutic committee. Government payment for some of the costs of prescription drugs may increase demand for products for which we receive regulatory approval. However, any negotiated prices for our products covered by a Part D prescription drug plan will likely be lower than the prices we might otherwise obtain. Moreover, while the MMA applies only to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own payment rates. Any reduction in payment that results from the MMA may result in a similar reduction in payments from non-government payors.

The distribution of pharmaceutical products is subject to additional requirements and regulations, including extensive record-keeping, licensing, storage and security requirements intended to prevent the unauthorized sale of pharmaceutical products.

The American Recovery and Reinvestment Act of 2009 provides funding for the federal government to compare the effectiveness of different treatments for the same illness. A plan for the research will be developed by the Department of Health and Human Services, the Agency for Healthcare Research and Quality and the National Institutes for Health, and periodic reports on the status of the research and related expenditures will be made to Congress. Although the results of the comparative effectiveness studies are not intended to mandate coverage policies for public or private payors, it is not clear what effect, if any, the research will have on the sales of our product candidate, if any such product or the condition that it is intended to treat is the subject of a trial. It is also possible that comparative effectiveness research demonstrating benefits in a competitor’s product could adversely affect the sales of our product candidate. If third-party payors do not consider our products to be cost-effective compared to other available therapies, they may not cover our products after approval as a benefit under their plans or, if they do, the level of payment may not be sufficient to allow us to sell our products on a profitable basis.

In addition, in some foreign countries, the proposed pricing for a drug must be approved before it may be lawfully marketed. The requirements governing drug pricing vary widely from country to country. For example, the European Union provides options for its member states to restrict the range of medicinal products for which their national health insurance systems provide reimbursement and to control the prices of medicinal products for human use. A member state may approve a specific price for the medicinal product or it may instead adopt a system of direct or indirect controls on the profitability of the company placing the medicinal product on the market. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products. Historically, products launched in the European Union do not follow price structures of the United States and generally tend to be significantly lower.

As noted above, in the United States, we are subject to complex laws and regulations pertaining to healthcare “fraud and abuse,” including, but not limited to, the Federal Anti-Kickback Statute, the Federal False Claims Act, and other state and federal laws and regulations. The Federal Anti-Kickback Statute makes it illegal for any person, including a prescription drug manufacturer (or a party acting on its behalf) to knowingly and willfully solicit, receive, offer, or pay any remuneration that is

Table of Contents

intended to induce the referral of business, including the purchase, order, or prescription of a particular drug, for which payment may be made under a federal healthcare program, such as Medicare or Medicaid. Violations of this law are punishable by up to five years in prison, criminal fines, administrative civil money penalties, and exclusion from participation in federal healthcare programs. In addition, many states have adopted laws similar to the Federal Anti-Kickback Statute. Some of these state prohibitions apply to the referral of patients for healthcare services reimbursed by any insurer, not just federal healthcare programs such as Medicare and Medicaid. Due to the breadth of these federal and state anti-kickback laws, the absence of guidance in the form of regulations or court decisions, and the potential for additional legal or regulatory change in this area, it is possible that our future sales and marketing practices and/or our future relationships with eye-care professionals might be challenged under anti-kickback laws, which could harm us. Because we intend to commercialize products that could be reimbursed under a federal healthcare program and other governmental healthcare programs, we plan to develop a comprehensive compliance program that establishes internal controls to facilitate adherence to the rules and program requirements to which we will or may become subject.

The Federal False Claims Act prohibits anyone from knowingly presenting, or causing to be presented, for payment to federal programs (including Medicare and Medicaid) claims for items or services, including drugs, that are false or fraudulent, claims for items or services not provided as claimed, or claims for medically unnecessary items or services. Although we would not submit claims directly to payors, manufacturers can be held liable under these laws if they are deemed to "cause" the submission of false or fraudulent claims by, for example, providing inaccurate billing or coding information to customers or promoting a product off-label. In addition, our future activities relating to the reporting of wholesaler or estimated retail prices for our products, the reporting of prices used to calculate Medicaid rebate information and other information affecting federal, state and third-party reimbursement for our products, and the sale and marketing of our products, are subject to scrutiny under this law. For example, pharmaceutical companies have been found liable under the Federal False Claims Act in connection with their off-label promotion of drugs. Penalties for a False Claims Act violation include three times the actual damages sustained by the government, plus mandatory civil penalties of between $5,500 and $11,000 for each separate false claim, the potential for exclusion from participation in federal healthcare programs, and, although the Federal False Claims Act is a civil statute, conduct that results in a False Claims Act violation may also implicate various federal criminal statutes. If the government were to allege that we were, or convict us of, violating these false claims laws, we could be subject to a substantial fine and may suffer a decline in our stock price. In addition, private individuals have the ability to bring actions under the Federal False Claims Act and certain states have enacted laws modeled after the Federal False Claims Act.

There are also an increasing number of state laws that require manufacturers to make reports to states on pricing and marketing information. Many of these laws contain ambiguities as to what is required to comply with the laws. In addition, as discussed below, beginning in 2013, a similar federal requirement will require manufacturers to track and report to the federal government certain payments made to physicians and teaching hospitals made in the previous calendar year. These laws may affect our sales, marketing and other promotional activities by imposing administrative and compliance burdens on us. In addition, given the lack of clarity with respect to these laws and their implementation, our reporting actions could be subject to the penalty provisions of the pertinent state, and soon federal, authorities.

The failure to comply with regulatory requirements subjects firms to possible legal or regulatory action. Depending on the circumstances, failure to meet applicable regulatory requirements can result in criminal prosecution, fines or other penalties, injunctions, recall or seizure of products, total or partial suspension of production, denial or withdrawal of product approvals, or refusal to allow a firm to enter into supply contracts, including government contracts.

Changes in regulations, statutes or the interpretation of existing regulations could impact our business in the future by required, for example: (i) changes to our manufacturing arrangements; (ii) additions or modifications to product labeling; (iii) the recall or discontinuation of our products; or (iv) additional record-keeping requirements. If any such changes were to be imposed, they could adversely affect the operation of our business.

Patient Protection and Affordable Care Act

In March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010 (collectively, PPACA) was enacted, which includes measures that have or will significantly change the way healthcare is financed by both governmental and private insurers. Among the provisions of PPACA of greatest importance to the pharmaceutical industry are the following:

- The Medicaid Drug Rebate Program requires pharmaceutical manufacturers to enter into and have in effect a national rebate agreement with the Secretary of the Department of Health and Human Services a condition for states to receive federal matching funds for the manufacturer's covered outpatient drugs furnished to Medicaid patients. Effective in 2010, PPACA made several changes to the Medicaid Drug Rebate Program,

Table of Contents

including increasing pharmaceutical manufacturers' rebate liability by raising the minimum basic Medicaid rebate on most branded prescription drugs and biologic agents to 23.1% of AMP and adding a new rebate calculation for "line extensions" (i.e., new formulations, such as extended release formulations) of solid oral dosage forms of branded products, as well as potentially impacting their rebate liability by modifying the statutory definition of AMP. PPACA also expanded the universe of Medicaid utilization subject to drug rebates by requiring pharmaceutical manufacturers to pay rebates on Medicaid managed care utilization as of 2010 and by, beginning in 2011, expanding the population potentially eligible for Medicaid drug benefits. The Centers for Medicare & Medicaid Services, or CMS, expanded Medicaid rebate liability to the territories of the United States as well, effective April 1, 2017. In addition, PPACA provides for the public availability of retail survey prices and certain weighted average AMPs under the Medicaid program. The implementation of this requirement by the CMS, beginning in April 2016, may also provide for the public availability of pharmacy acquisition of cost data, which could negatively impact our sales.

- In order for a pharmaceutical product to receive federal reimbursement under the Medicare Part B and Medicaid programs or to be sold directly to U.S. government agencies, the manufacturer must extend discounts to entities eligible to participate in the 340B drug pricing program. The required 340B discount on a given product is calculated based on the AMP and Medicaid rebate amounts reported by the manufacturer. Effective in 2010, PPACA expanded the types of entities eligible to receive discounted 340B pricing, although, under the current state of the law, with the exception of children's hospitals, these newly eligible entities will not be eligible to receive discounted 340B pricing on orphan drugs when used for the orphan indication. In addition, as 340B drug pricing is determined based on AMP and Medicaid rebate data, the revisions to the Medicaid rebate formula and AMP definition described above could cause the required 340B discount to increase.
- Effective in 2011, PPACA imposed a requirement on manufacturers of branded drugs and biologic agents to provide a 50% discount off the negotiated price of branded drugs dispensed to Medicare Part D patients in the coverage gap (i.e., "donut hole").
- Effective in 2011, PPACA imposed an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drugs and biologic agents, apportioned among these entities according to their market share in certain government healthcare programs, although this fee would not apply to sales of certain products approved exclusively for orphan indications.
- PPACA requires pharmaceutical manufacturers to track certain financial arrangements with physicians and teaching hospitals, including any "transfer of value" made or distributed to such entities, as well as any investment interests held by physicians and their immediate family members. Manufacturers were required to track this information beginning in 2013, and the first reports were due in 2014. The information reported each year is made publicly available on a searchable website.
- As of 2010, a new Patient-Centered Outcomes Research Institute was established pursuant to PPACA to oversee, identify priorities in and conduct comparative clinical effectiveness research, along with funding for such research. The research conducted by the Patient-Centered Outcomes Research Institute may affect the market for certain pharmaceutical products.
- PPACA created the Independent Payment Advisory Board, which has the authority to recommend certain changes to the Medicare program to reduce expenditures by the program that could result in reduced payments for prescription drugs. Under certain circumstances, these recommendations will become law unless Congress enacts legislation that will achieve the same or greater Medicare cost savings.
- PPACA established the Center for Medicare and Medicaid Innovation within CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending. Funding has been allocated to support the mission of the Center for Medicare and Medicaid Innovation from 2011 to 2019.

Many of the details regarding the implementation and impact of PPACA are yet to be determined, and at this time, it remains unclear the full effect that PPACA would have on our business.

Table of Contents

European Union Drug Development

In the European Union, our products will also be subject to extensive regulatory requirements. As in the United States, medicinal products can only be marketed if a marketing authorization from the competent regulatory agencies has been obtained, and the various phases of preclinical and clinical research in the European Union are subject to significant regulatory controls. Although the EU Clinical Trials Directive 2001/20/EC has sought to harmonize the EU clinical trial regulatory framework, setting out common rules for the control and authorization of clinical trials in the European Union, the EU Member States have transposed and applied the provisions of the Directive differently. This has led to significant variations in the member state regimes. Under the current regime, before a clinical trial can be initiated it must be approved in each of the EU countries where the trial is to be conducted by two distinct bodies: the National Competent Authority, or NCA, and one or more Ethics Committees, or ECs. In addition, all suspected unexpected serious adverse reactions to the investigated drug that occur during the clinical trial must be reported to the NCA and ECs of the Member State where they occurred.

The EU clinical trials legislation is currently undergoing a revision process mainly aimed at making more uniform and streamlining the clinical trials authorization process, simplifying adverse event reporting procedures, improving the supervision of clinical trials and increasing the transparency of clinical trials.

European Union Drug Review Approval

In the European Economic Area, or EEA, which is comprised of the 27 Member States of the European Union plus Norway, Iceland and Liechtenstein, medicinal products can only be commercialized after obtaining a Marketing Authorization, or MA. There are two types of marketing authorizations: the Community MA, which is issued by the European Commission through the Centralized Procedure based on the opinion of the Committee for Medicinal Products for Human Use, or CHMP, a body of the EMA, and which is valid throughout the entire territory of the EEA; and the National MA, which is issued by the competent authorities of the Member States of the EEA and only authorized marketing in that Member State's national territory and not the EEA as a whole.

The Centralized Procedure is mandatory for certain types of products, such as biotechnology medicinal products, orphan medicinal products and medicinal products containing a new active substance indicated for the treatment of AIDS, cancer, neurodegenerative disorders, diabetes, auto-immune and viral diseases. The Centralized Procedure is optional for products containing a new active substance not yet authorized in the EEA, or for products that constitute a significant therapeutic, scientific or technical innovation or which are in the interest of public health in the European Union. The National MA is for products not falling within the mandatory scope of the Centralized Procedure. Where a product has already been authorized for marketing in a Member State of the EEA, this National MA can be recognized in another Member States through the Mutual Recognition Procedure. If the product has not received a National MA in any Member State at the time of application, it can be approved simultaneously in various Member States through the Decentralized Procedure. Under the Decentralized Procedure an identical dossier is submitted to the competent authorities of each of the Member States in which the MA is sought, one of which is selected by the applicant as the Reference Member state, or RMS. If the RMS proposes to authorize the product, and the other Member States do not raise objections, the product is granted a national MA in all the Member States where the authorization was sought. Before granting the MA, the EMA or the competent authorities of the Member States of the EEA make an assessment of the risk-benefit balance of the product on the basis of scientific criteria concerning its quality, safety and efficacy.

Other Regulations

We are also subject to numerous federal, state and local laws relating to such matters as safe working conditions, manufacturing practices, environmental protection, fire hazard control and disposal of hazardous or potentially hazardous substances. In addition, our international operations and relationships with partners, collaborators, contract research organizations, vendors and other agents are subject to anti-corruption and anti-bribery laws and regulations, including the U.S. Foreign Corrupt Practices Act ("FCPA"), which prohibits U.S. companies and their representatives from engaging in bribery or other prohibited payments to foreign officials for the purpose of obtaining or retaining business. Failure to comply with the FCPA, or similar applicable laws and regulations in other countries, could expose us and our personnel to civil and criminal sanctions. We may incur significant costs to comply with such laws and

regulations now or in the future.

Employees

We had 70 full-time employees as of December 31, 2015. None of our employees are represented by any collective bargaining unit. We believe that we maintain good relations with our employees.

Table of Contents

Corporate and Available Information

Our principal executive offices are located at 2030 Main Street, Suite 1500, Irvine, California 92614 and our telephone number is (949) 526-8700. We were incorporated in Delaware in June 2005. Our internet address is www.aeriepharma.com. We make available on our website, free of charge, our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Our SEC reports can be accessed through the Investors section of our website. Further, a copy of this Annual Report on Form 10-K is located at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D. C. 20549. Information on the operation of the Public Reference Room can be obtained by calling the SEC at 1-800-SEC-0330. The SEC maintains a website that contains reports, proxy and information statements and other information regarding our filings at www.sec.gov. The information found on our website is not incorporated by reference into this report or any other report we file with or furnish to the SEC.

Table of Contents

ITEM 1A. RISK FACTORS

We operate in an industry that involves numerous risks and uncertainties. The risks and uncertainties described below are not the only ones we face. Other risks and uncertainties, including those that we do not currently consider material, may impair our business. If any of the risks discussed below actually occur, our business, financial condition, operating results or cash flows could be materially adversely affected. This could cause the trading price of our common stock to decline.

Risks Related to Development, Regulatory Approval and Commercialization

We depend substantially on the success of our product candidates, particularly Rhopressa™ and Roclatan™, which are still in development. If we are unable to successfully commercialize our product candidates, or experience significant delays in doing so, our business will be materially harmed.

Our business and the ability to generate revenue related to product sales, if ever, will depend on the successful development, regulatory approval and commercialization of our product candidates for the treatment of patients with glaucoma and other diseases of the eye, particularly Rhopressa™ and Roclatan™, which are still in development, and other potential products we may develop or license. We have invested a significant portion of our efforts and financial resources in the development of our existing product candidates. The success of our product candidates will depend on several factors, including:

- successful completion of clinical trials;
- receipt of regulatory approvals from applicable regulatory authorities;
- establishment of internal manufacturing capacity or arrangements with third-party manufacturers;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity;
- protecting our rights in our intellectual property;
- launching commercial sales of our product candidates, if and when approved;
- obtaining reimbursement from third-party payors for product candidates, if and when approved;
- competition with other products; and
- continued acceptable safety profile for our product candidates following regulatory approval, if and when received.

If we do not achieve one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize our product candidates, which could materially harm our business and we may not be able to earn sufficient revenues and cash flows to continue our operations.

We have not obtained regulatory approval for any of our product candidates in the United States or any other country. We currently do not have any product candidates that have gained regulatory approval for sale in the United States or any other country, and we cannot guarantee that we will ever have marketable products. Our business is substantially dependent on our ability to complete the development of, obtain regulatory approval for and successfully commercialize product candidates in a timely manner. We cannot commercialize product candidates in the United States without first obtaining regulatory approval to market each product from the FDA; similarly, we cannot commercialize product candidates outside of the United States without obtaining regulatory approval from comparable foreign regulatory authorities.

Phase 3 trials for Rhopressa™ commenced in July 2014 and we completed our initial Phase 3 registration trial, named “Rocket 1,” which was designed to measure efficacy over three months. The Rocket 1 trial did not meet its primary efficacy endpoint of demonstrating non-inferiority of intraocular pressure, or IOP, lowering for once-daily Rhopressa™ compared to twice-daily timolol, but did achieve its pre-specified secondary endpoint. We evaluated the data and results from Rocket 1 and obtained agreement from the FDA to change the IOP range used for the primary endpoint of our second Phase 3 registration trial, named “Rocket 2,” which is designed to measure efficacy over three months and assess safety over 12 months. The modified clinical endpoint range for Rocket 2 was set to a level where Rocket 1 would have been successful. In September 2015, the Rocket 2 trial achieved its primary efficacy endpoint of demonstrating non-inferiority of Rhopressa™ compared to timolol. In addition, the recently reported topline 12-month

safety data from Rocket 2 confirmed a positive safety profile for the drug and demonstrated a consistent IOP lowering effect throughout the 12-month period at the specified timepoint. We are also currently conducting a one year, safety-only study in Canada, named “Rocket 3,” and an additional Phase 3 registration trial for

Table of Contents

Rhopressa™, named “Rocket 4,” which commenced in September 2015. Rocket 4 was initiated by Aerie in part to gain adequate safety data for regulatory filings in Europe. Based upon recent discussions with the FDA, we expect to submit a new drug application (“NDA”) for Rhopressa™ in the third quarter of 2016 utilizing Rocket 2 as the pivotal clinical trial and Rocket 1 as supportive in nature. We do not anticipate that completion of Rocket 4 will be necessary prior to submitting the NDA.

The first Phase 3 registration trial for Roclatan™, named “Mercury 1,” commenced in September 2015. We expect to commence our second Phase 3 registration trial for Roclatan™, named “Mercury 2,” in the first quarter of 2016. If both of these trials are successful, we expect to file our NDA for Roclatan™ in the second half of 2017, approximately one year behind Rhopressa™. We also plan to initiate a third Phase 3 registration trial in Europe, named “Mercury 3,” in the first half of 2017. Mercury 3 will be designed to compare Roclatan™ to a broadly marketed fixed dose combination product in Europe.

We cannot predict whether these trials and future trials will be successful or whether regulators will agree with our conclusions regarding the preclinical studies and clinical trials we have conducted to date.

Before obtaining regulatory approvals for the commercial sale of any product candidate for a target indication, we must demonstrate in preclinical studies and well-controlled clinical trials, and, with respect to approval in the United States, to the satisfaction of the FDA, that the product candidate is safe and effective for use for that target indication and that the manufacturing facilities, processes and controls are adequate. In the United States, we have not submitted an NDA for any of our product candidates. An NDA must include extensive preclinical and clinical data and supporting information to establish the product candidate’s safety and effectiveness for each desired indication. The NDA must also include significant information regarding the chemistry, manufacturing and controls for the product. Obtaining approval of an NDA is a lengthy, expensive and uncertain process, and approval may not be obtained. If we submit an NDA to the FDA, the FDA must decide whether to file the NDA or refuse to file the NDA. We cannot be certain that any submissions will be filed by the FDA.

Regulatory authorities outside of the United States, such as in Europe and Japan and in emerging markets, also have requirements for approval of drugs for commercial sale with which we must comply prior to marketing in those areas. Regulatory requirements can vary widely from country to country and could delay or prevent the introduction of our product candidates. Clinical trials conducted in one country may not be accepted by regulatory authorities in other countries, and obtaining regulatory approval in one country does not mean that regulatory approval will be obtained in any other country. Approval processes vary among countries and can involve additional product testing and validation and additional administrative review periods. Seeking foreign regulatory approval could require additional non-clinical studies or clinical trials, which could be costly and time consuming. The foreign regulatory approval process may include all of the risks associated with obtaining FDA approval. For all of these reasons, we may not obtain foreign regulatory approvals on a timely basis, if at all.

The process to develop, obtain regulatory approval for and commercialize product candidates is long, complex and costly both inside and outside of the United States, and approval is never guaranteed. Even if our product candidates were to successfully obtain approval from the regulatory authorities, any approval might significantly limit the approved indications for use, or require that precautions, contraindications, or warnings be included on the product labeling, or require expensive and time-consuming post-approval clinical studies or surveillance as conditions of approval. Following any approval for commercial sale of our product candidates, certain changes to the product, such as changes in manufacturing processes and additional labeling claims, will be subject to additional FDA review and approval. Also, regulatory approval for any of our product candidates may be withdrawn. If we are unable to obtain regulatory approval for our product candidates in one or more jurisdictions, or any approval contains significant limitations, our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed. Furthermore, we may not be able to obtain sufficient funding or generate sufficient revenue and cash flows to continue the development of any other product candidate in the future.

Regulatory approval may be substantially delayed or may not be obtained for one or all of our product candidates if regulatory authorities require additional time or studies to assess the safety and efficacy of our product candidates.

We may be unable to initiate or complete development of our product candidates on schedule, if at all. If regulatory authorities require additional time or studies to assess the safety or efficacy of our product candidates, we may require funding beyond the amounts currently on our balance sheet. In addition, in the event of any unforeseen costs or other business decisions, we may not have or be able to obtain adequate funding to complete the necessary steps for approval for any or all of our product candidates. Preclinical studies and clinical trials required to demonstrate the safety and efficacy of our product candidates are time consuming and expensive and together take several years or more to complete. Delays in regulatory approvals or rejections of applications for regulatory approval in the United States, Europe, Japan or other markets may result from many factors, including:

- our inability to obtain sufficient funds required for a clinical trial;

Table of Contents

- regulatory requests for additional analyses, reports, data, non-clinical and preclinical studies and clinical trials;
- regulatory questions regarding interpretations of data and results and the emergence of new information regarding our product candidates or other products;
- clinical holds, other regulatory objections to commencing or continuing a clinical trial or the inability to obtain regulatory approval to commence a clinical trial in countries that require such approvals;
- failure to reach agreement with the FDA or non-U.S. regulators regarding the scope or design of our clinical trials;
- our inability to enroll a sufficient number of patients who meet the inclusion and exclusion criteria in our clinical trials;
- our inability to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols;
- unfavorable or inconclusive results of clinical trials and supportive non-clinical studies, including unfavorable results regarding effectiveness of product candidates during clinical trials;
- any determination that a clinical trial presents unacceptable health risks;
- lack of adequate funding to continue the clinical trial due to unforeseen costs or other business decisions;
- our inability to reach agreements on acceptable terms with prospective contract research organizations, or CROs, and trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- our inability to identify and maintain a sufficient number of sites, many of which may already be engaged in other clinical trial programs, including some that may be for the same indications targeted by our product candidates;
- our inability to obtain approval from institutional review boards to conduct clinical trials at their respective sites;
- our inability to timely manufacture or obtain from third parties sufficient quantities or quality of the product candidate or other materials required for a clinical trial; and
- difficulty in maintaining contact with patients after treatment, resulting in incomplete data.

Changes in regulatory requirements and guidance may also occur and we may need to amend clinical trial protocols submitted to applicable regulatory authorities to reflect these changes. Amendments may require us to resubmit clinical trial protocols to institutional review boards for re-examination, which may impact the costs, timing or successful completion of a clinical trial.

If we are required to conduct additional clinical trials or other studies with respect to any of our product candidates beyond those that we initially contemplated, if we are unable to successfully complete our clinical trials or other studies or if the results of these studies are not positive or are only modestly positive, we may be delayed in obtaining regulatory approval for that product candidate, we may not be able to obtain regulatory approval at all or we may obtain approval for indications that are not as broad as intended. Our product development costs will also increase if we experience delays in testing or approvals and we may not have sufficient funding to complete the testing and approval process. Significant clinical trial delays could allow our competitors to bring products to market before we do and impair our ability to commercialize our products if and when approved. If any of this occurs, our business will be materially harmed.

Failure can occur at any stage of clinical development. If the clinical trials for our current and potential future product candidates are unsuccessful, we could be required to abandon development.

A failure of one or more clinical trials can occur at any stage of testing for a variety of reasons. The outcome of preclinical testing and early clinical trials may not be predictive of the outcome of later clinical trials, and interim results of a clinical trial do not necessarily predict final results. In addition, adverse events may occur or other risks may be discovered in Phase 3 clinical trials that may cause us to suspend or terminate our clinical trials. In some instances, there can be significant variability in safety and/or efficacy results between different trials of the same product candidate due to numerous factors, including changes in or adherence to trial protocols, differences in size and type of the patient populations and the rates of dropout among clinical trial participants. Our future clinical trial results therefore may not demonstrate safety and efficacy sufficient to obtain regulatory approval for our current and potential future product candidates.

Table of Contents

Flaws in the design of a clinical trial may not become apparent until the clinical trial is well-advanced or after data results have been obtained. We have limited experience in designing clinical trials and may be unable to design and execute a clinical trial to support regulatory approval. In addition, clinical trials often reveal that it is not practical or feasible to continue development efforts. Further, we have never submitted an NDA for any potential products.

We may voluntarily suspend or terminate our clinical trials if at any time we believe that they present an unacceptable risk to participants. Further, regulatory agencies, institutional review boards or data safety monitoring boards may at any time order the temporary or permanent discontinuation of our clinical trials or request that we cease using investigators in the clinical trials if they believe that the clinical trials are not being conducted in accordance with applicable regulatory requirements, or that they present an unacceptable safety risk to participants. Since our inception, we have not voluntarily or involuntarily suspended or terminated a clinical trial due to unacceptable safety risks to participants.

If the results of our clinical trials for our current product candidates or clinical trials for any future product candidates do not achieve the primary efficacy endpoints or demonstrate unexpected safety issues, the prospects for approval of our product candidates will be materially adversely affected. Moreover, preclinical and clinical data are often susceptible to varying interpretations, analyses and entry criteria, and many companies that believed their product candidates performed satisfactorily in preclinical studies and clinical trials have failed to achieve similar results in later clinical trials, including longer term trials, or have failed to obtain regulatory approval of their product candidates. Many compounds that initially showed promise in clinical trials or earlier stage testing have later been found to cause undesirable or unexpected adverse effects that have prevented further development of the compound. Our clinical trials for our primary product candidates, Rhopressa™ and Roclatan™, may not produce the results that we expect and remain subject to the risks associated with clinical drug development as indicated above.

Several companies have previously pursued ROCK inhibitors for ophthalmic use but to date no ROCK inhibitors have been approved and most of those companies have chosen to discontinue clinical development of their ROCK inhibitors. One of our ROCK inhibitors, AR-12286, was discontinued in the clinical stage of development due to an inability to maintain its effectiveness over time. In a 28-day Phase 2b clinical trial, AR-12286 lowered IOP by 6.7 mmHg on day seven, but lowered IOP by only 5.3 mmHg on day 28. This trend continued in a follow-up three-month study. As a result, in June 2013 we discontinued any further clinical development of AR-12286 and its fixed-dose combination product PG286.

In April 2015, we announced that Rocket 1 did not meet its primary efficacy endpoint of demonstrating non-inferiority of IOP lowering for once-daily Rhopressa™ compared to twice-daily timolol, but did achieve its pre-specified secondary endpoint. We evaluated the data and results from Rocket 1 and obtained agreement from the FDA to change the IOP range used for the primary endpoint of Rocket 2 which is designed to measure efficacy over three months and assess safety over 12 months. The modified clinical endpoint range for Rocket 2 was set to a level where Rocket 1 would have been successful. In September 2015, the Rocket 2 trial achieved its primary efficacy endpoint of demonstrating non-inferiority of Rhopressa compared to timolol. In addition to successfully achieving non-inferiority to timolol at this endpoint range, the recently reported topline 12-month safety data from Rocket 2 confirmed a positive safety profile for the drug and demonstrated a consistent IOP lowering effect throughout the 12-month period at the specified timepoint.

If based on the clinical results of Rhopressa™, we discontinue the advancement of this product candidate, in certain circumstances we may similarly determine not to advance Roclatan™, which combines Rhopressa™ with latanoprost. Additionally, our clinical trials are designed to test the use of Rhopressa™ and Roclatan™ as a monotherapy, rather than as an add-on therapy. Accordingly, the efficacy of our primary product candidates may not be similar or correspond directly to their efficacy when used as an add-on therapy, which we expect will be a primary use of Rhopressa™.

In February 2014, we reported the results of a preclinical animal study sponsored by Aerie, whereby the administration of Rhopressa™ eye drops demonstrated statistically significant reductions in EVP and IOP in rabbits following the third daily dose. Based on the results of this preclinical study, together with the consistent IOP-lowering effect of Rhopressa™ demonstrated in our prior clinical trials, we believe the reduction of EVP is an additional MOA of Rhopressa™ and Roclatan™. However, like the other differentiated MOAs of our product candidates, increasing

outflow through the TM and decreasing fluid production in the eye, our product candidates' effect on EVP has not been studied in humans and neither our ongoing, nor our planned, Phase 3 registration trials for Rhopressa™ or Roclatan™ will be designed to demonstrate reduction of EVP or other MOAs of our product candidates. If we are not able to demonstrate to the satisfaction of the FDA and relevant non-U.S. regulators the reduction of EVP, or any of the other differentiated MOAs of our product candidates, even if we otherwise obtain regulatory approval for Rhopressa™ and Roclatan™, it could limit the types of claims we will be able to make in our marketing and labeling of our product candidates.

Table of Contents

We believe Rhopressa™, if approved, will compete against non-PGA products as a preferred adjunctive therapy to PGAs. In addition, if approved, we believe that Rhopressa ™ may also become a preferred therapy in several populations including where patients have low to moderately elevated IOPs at the time of diagnosis. No patients with low-tension glaucoma have been or will be included in these clinical trials, and our expectations with respect to subjects with low IOP are based to a large extent on extrapolation of results for subjects with moderately elevated IOP. Even if our product candidates were to obtain regulatory approval, if we are unable to support claims about our product candidates to the satisfaction of the FDA and relevant non-U.S. regulators, including claims with respect to the efficacy of Rhopressa™ as an adjunctive therapy or for patients with low IOP, it could limit the types of claims we will be able to make in our marketing and product labeling of these product candidates.

In addition to the circumstances noted above, we may experience numerous unforeseen events that could cause our clinical trials to be unsuccessful, delayed, suspended or terminated, or which could delay or prevent our ability to receive regulatory approval or commercialize our current and potential future product candidates, including:

- clinical trials of our product candidates may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical trials or implement a clinical hold;
- the number of patients required for clinical trials of our product candidates may be larger than we anticipate,
- enrollment in these clinical trials may be slower than we anticipate or participants may drop out of these clinical trials at a higher rate than we anticipate;
- 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;
- regulators or institutional review boards may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- we may have delays in reaching or fail to reach agreement on acceptable clinical trial contracts or clinical trial protocols with prospective trial sites;
- we may elect or be required to suspend or terminate clinical trials of our product candidates based on a finding that the participants are being exposed to health risks;
- the cost of clinical trials of our product candidates may be greater than we anticipate;
- the supply or quality of our product candidates or other materials necessary to conduct clinical trials of our product candidates may be insufficient or inadequate; and
- our product candidates may have undesirable adverse effects or other unexpected characteristics.

If we elect or are required to suspend or terminate a clinical trial of any of our current and potential future product candidates, our commercial prospects will be adversely impacted and our ability to generate product revenues may be delayed or eliminated.

If we are unable to establish a direct sales force, our business may be harmed.

We currently do not have an established sales organization and do not have a marketing or distribution infrastructure. To achieve commercial success for any approved product, we must either develop a sales and marketing organization or outsource these functions to third parties. If our product candidates are approved by the FDA for commercial sale, we intend to market directly to eye-care professionals in North America through our own sales force, targeting approximately 10,000 high-prescribing eye-care professionals. If our product candidates are approved in Europe for commercial sale and if we self-commercialize our product candidates in Europe, we will need to establish similar functions or outsource these functions to third parties. We will need to incur significant additional expenses and commit significant additional time and management resources to establish and train a sales force to market and sell our products. We may not be able to successfully establish these capabilities despite these additional expenditures. Factors that may inhibit our efforts to successfully establish a sales force include:

- our inability to compete with other pharmaceutical companies to recruit, hire, train and retain adequate numbers of effective sales and marketing personnel with requisite knowledge of our target market;
-

- the inability of sales personnel to obtain access to adequate numbers of eye-care professionals to prescribe any future approved products;
- unforeseen costs and expenses associated with creating an independent sales and marketing organization; and

Table of Contents

- a delay in bringing products to market after efforts to hire and train our sales force have already commenced.

In the event we are unable to successfully market and promote our products, our business may be harmed.

We currently have international operations and intend to explore the licensing of commercialization rights or other forms of collaboration outside of North America, which will expose us to additional risks of conducting business in international markets.

Markets outside of North America are an important component of our growth strategy. As part of this strategy, in March 2015 and April 2015, we formed Aerie Limited and Aerie Ireland Limited, respectively. If we fail to commercialize, obtain licenses or enter into collaboration arrangements with selling parties, or if these parties are not successful, our revenue-generating growth potential will be adversely affected. Moreover, international operations and business relationships subject us to additional risks that may materially adversely affect our ability to attain or sustain profitable operations, including:

- efforts to enter into or expand collaboration or licensing arrangements with third parties in connection with our international sales, marketing and distribution efforts may increase our expenses or divert our management's attention from the acquisition or development of product candidates;
- changes in a specific country's or region's political and cultural climate or economic condition;
- differing regulatory requirements for drug approvals and marketing internationally;
- difficulty of effective enforcement of contractual provisions in local jurisdictions;
- potentially reduced protection for intellectual property rights;
- potential third-party patent rights in countries outside of the United States;
- unexpected changes in tariffs, trade barriers and regulatory requirements;
- economic weakness, including inflation, or political instability, particularly in non-U.S. economies and markets, including several countries in Europe;
- compliance with tax, employment, immigration and labor laws for employees traveling abroad;
- the effects of applicable foreign tax structures and potentially adverse tax consequences;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incidental to doing business in another country;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- the potential for so-called parallel importing, which is what happens when a local seller, faced with high or higher local prices, opts to import goods from a foreign market (with low or lower prices) rather than buying them locally;
- failure of our employees and contracted third parties to comply with Office of Foreign Asset Control rules and regulations and the Foreign Corrupt Practices Act;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geo-political actions, including war and terrorism, or natural disasters, including earthquakes, volcanoes, typhoons, floods, hurricanes and fires.

These and other risks may materially adversely affect our ability to attain or sustain revenue from international markets.

Our product candidates may have undesirable adverse effects, which may delay or prevent regulatory approval or, if approval is received, require our products to be taken off the market, require them to include safety warnings or otherwise limit their sales.

Unforeseen adverse effects from any of our product candidates could arise either during clinical development or, if approved, after the approved product has been marketed. To date, the main tolerability finding of Rhopressa™ has been mild hyperemia, or eye redness. We recently reported 12-month safety data from Rocket 2, in which some patients also experienced conjunctival hemorrhages, corneal deposits, blurry vision, and decreased visual acuity as adverse events. Roclatan™ combines Rhopressa™ with latanoprost. To date, the main tolerability finding of Roclatan™ has also been mild hyperemia. The main adverse effects

31

Table of Contents

of latanoprost include hyperemia, irreversible change in iris color, discoloration of the skin around the eyes and droopiness of eyelids caused by the loss of orbital fat.

Any undesirable adverse effects that may be caused by our product candidates could interrupt, delay or halt clinical trials and could result in the denial of regulatory approval by the FDA or other regulatory authorities for any or all targeted indications, and in turn prevent us from commercializing our product candidates and generating revenues from their sale. In addition, if any of our product candidates receives regulatory approval and we or others later identify undesirable adverse effects caused by the product, we could face one or more of the following consequences:

- regulatory authorities may require the addition of labeling statements, such as a “black box” warning or a contraindication, or other labeling changes;
- regulatory authorities may withdraw their approval of the product;
- regulatory authorities may seize the product;
- we may be required to change the way that the product is administered, conduct additional clinical trials or recall the product;
- we may be subject to litigation or product liability claims fines, injunctions, or criminal penalties; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the affected product or could substantially increase the costs and expenses of commercializing such product, which in turn could delay or prevent us from generating revenues from its sale.

We face competition from established branded and generic pharmaceutical companies and if our competitors are able to develop and market products that are preferred over our products, our commercial opportunity will be reduced or eliminated.

The development and commercialization of new drug products is highly competitive. We face competition from established branded and generic pharmaceutical companies, as well as from academic institutions, government agencies and private and public research institutions, which may in the future develop products to treat patients with glaucoma or other diseases of the eye. Many of our competitors have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. In July 2015, Bausch + Lomb Inc., a wholly owned subsidiary of Valeant Pharmaceuticals International, Inc., filed an NDA for a nitric oxide-donating latanoprost, which is currently under review by the FDA for the treatment of open angle glaucoma and ocular hypertension. Additionally, early-stage companies are also developing treatments for glaucoma and other diseases of the eye and may prove to be significant competitors, including Inotek Pharmaceuticals, which is developing an adenosine receptor agonist. We expect that our competitors will continue to develop new treatments for glaucoma and other diseases of the eye, which may include eye drops, oral treatments, surgical procedures, implantable devices or laser treatments. Alternative treatments beyond eye drops continue to develop. For example, although surgical procedures are currently used in severe cases, less invasive procedures are currently under development and we expect that we will compete with other companies that develop implantable devices or other products or procedures for use in the treatment of glaucoma or other diseases of the eye.

Other early-stage companies may also compete through collaborative arrangements with large and established companies. 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 will be reduced or eliminated if our competitors develop and commercialize products that are safer, more effective, have fewer adverse effects, are more convenient or are less expensive than our potential products. We expect that our ability to compete effectively will depend upon, among other things, our ability to:

- successfully complete clinical trials and obtain all requisite regulatory approvals in a timely and cost- effective manner;
-

obtain and maintain patent protection and non-patent exclusivity for our products and otherwise prevent the introduction of generics of our products;

- attract and retain key personnel;
- build an effective selling and marketing infrastructure;

Table of Contents

- demonstrate the advantages of our product candidates compared to alternative therapies, including currently marketed PGA and non-PGA products;
- compete against other products with fewer contraindications; and
- obtain and sustain adequate reimbursement from third-party payors.

If our competitors market products that are more effective, safer, have fewer side effects or are less expensive than our potential products or that reach the market sooner than our future products, if any, we may not achieve commercial success.

The commercial success of our potential products will depend on the degree of market acceptance among eye-care professionals, patients, patient advocacy groups, healthcare payors and the medical community.

Our potential products may not gain market acceptance among eye-care professionals, patients, patient advocacy groups, healthcare payors and the medical community. There are a number of available therapies marketed for the treatment of glaucoma and other diseases of the eye. Some of these drugs are branded and subject to patent protection, but most others, including latanoprost and many beta blockers, in the case of glaucoma treatment, are available on a generic basis. Many of these approved drugs are well established therapies and are widely accepted by eye-care professionals, patients and third-party payors. Insurers and other third-party payors may also encourage the use of generic products. The degree of market acceptance of our potential products will depend on a number of factors, including:

- the market price, affordability and patient out-of-pocket costs of our potential products relative to other available products, which are predominantly generics;
- the effectiveness of our potential products as compared with currently available products;
- patient willingness to adopt our potential products in place of current therapies;
- varying patient characteristics including demographic factors such as age, health, race and economic status;
- changes in the standard of care for the targeted indications for any of our product candidates;
- the prevalence and severity of any adverse effects;
- limitations or warnings contained in a product candidate’s FDA-approved labeling;
- limitations in the approved clinical indications and MOAs for our product candidates;
- relative convenience and ease of administration;
- the strength of our selling, marketing and distribution capabilities;
- the quality of our relationships with eye-care professionals, patient advocacy groups, third-party payors and the medical community;
- sufficient third-party coverage or reimbursement; and
- potential product liability claims.

In addition, the potential market opportunity for our potential products is difficult to precisely estimate. Our estimates of the potential market opportunity for our potential products include several key assumptions based on our industry knowledge, industry publications, third-party research reports and other surveys. While we believe that our internal assumptions are reasonable, independent sources have not verified all of our assumptions. If any of these assumptions proves to be inaccurate, then the actual market for our potential products could be smaller than our estimates of our potential market opportunity. If the actual market for our potential products is smaller than we expect, our product revenue may be limited, and it may be more difficult for us to achieve or maintain profitability. If we fail to achieve market acceptance of our potential products in the United States and abroad, our revenue will be more limited and it will be more difficult to achieve profitability.

If we fail to obtain and sustain an adequate level of reimbursement for our potential products by third-party payors, potential future sales would be materially adversely affected.

The course of treatment for glaucoma patients includes primarily older drugs, and the leading products for the treatment of glaucoma currently in the market, including latanoprost and timolol, are available as generic brands. There will be no commercially viable market for our potential products without reimbursement from third-party payors, and any reimbursement policy may be affected by future healthcare reform measures. We cannot be certain

that reimbursement will be available for our potential products or any other product candidate we develop for glaucoma or other diseases of the eye. Additionally, even if

Table of Contents

there is a commercially viable market, if the level of reimbursement is below our expectations, our anticipated revenue and gross margins will be adversely affected.

Third-party payors, such as government or private healthcare insurers, carefully review and increasingly question and challenge the coverage of and the prices charged for drugs. Reimbursement rates from private health insurance companies vary depending on the company, the insurance plan and other factors. Reimbursement rates may be based on reimbursement levels already set for lower cost drugs and may be incorporated into existing payments for other services. A current trend in the United States healthcare industry is toward cost containment. Large public and private payors, managed care organizations, group purchasing organizations and similar organizations are exerting increasing influence on decisions regarding the use of, and reimbursement levels for, particular treatments. Such third-party payors, including Medicare, may question the coverage of, and challenge the prices charged for, medical products and services, and many third-party payors limit coverage of or reimbursement for newly approved healthcare products. In particular, third-party payors may limit the covered indications. Cost-control initiatives could decrease the price we might establish for products, which could result in product revenues being lower than anticipated. We believe our drugs will be priced significantly higher than existing generic drugs and consistently with current branded drugs. If we are unable to show a significant benefit relative to existing generic drugs, Medicare, Medicaid and private payors may not be willing to reimburse for our drugs, which would significantly reduce the likelihood of them gaining market acceptance. Reimbursement systems in international markets vary significantly by country and by region, and reimbursement approvals must be obtained on a country-by-country basis. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted.

We expect that private insurers will consider the efficacy, cost effectiveness, safety and tolerability of our potential products in determining whether to approve reimbursement for such products and at what level. Obtaining these approvals can be a time consuming and expensive process. Our business would be materially adversely affected if we do not receive approval for reimbursement of our potential products from private insurers on a timely or satisfactory basis. Limitations on coverage could also be imposed at the local Medicare carrier level or by fiscal intermediaries. Medicare Part D, which provides a pharmacy benefit to Medicare patients as discussed below, does not require participating prescription drug plans to cover all drugs within a class of products. Our business could be materially adversely affected if Part D prescription drug plans were to limit access to, or deny or limit reimbursement of, our product candidates or other potential products.

Reimbursement in the European Union must be negotiated on a country-by-country basis and in many countries the product cannot be commercially launched until reimbursement is approved. The negotiation process in some countries can exceed 12 months. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our products to other available therapies. If the prices for our potential products decrease or if governmental and other third-party payors do not provide adequate coverage and reimbursement levels, our revenue, potential for future cash flows and prospects for profitability will suffer.

If we are found in violation of federal or state “fraud and abuse” laws or other healthcare laws and regulations, we may be required to pay a penalty and/or be suspended from participation in federal or state healthcare programs, which may adversely affect our business, financial condition and results of operation.

In the United States, we are subject to various federal and state healthcare “fraud and abuse” laws, including anti-kickback laws, false claims laws and other laws intended, among other things, to reduce fraud and abuse in federal and state healthcare programs. The Federal Anti-Kickback Statute makes it illegal for any person, including a prescription drug manufacturer (or a party acting on its behalf), to knowingly and willfully solicit, receive, offer or pay any remuneration that is intended to induce the referral of business, including the purchase, order or prescription of a particular drug for which payment may be made under a federal healthcare program, such as Medicare or Medicaid. Although we seek to structure our business arrangements in compliance with all applicable requirements, these laws are broadly written, and it is often difficult to determine precisely how the law will be applied in specific circumstances. Accordingly, it is possible that our practices may be challenged under the Federal Anti-Kickback Statute. The Federal False Claims Act prohibits anyone from, among other things, knowingly presenting or causing to be presented for payment to the government, including the federal healthcare programs, claims for reimbursed drugs

or services that are false or fraudulent, claims for items or services that were not provided as claimed, or claims for medically unnecessary items or services. Many states have similar false claims laws. Cases have been brought under false claims laws alleging that off-label promotion of pharmaceutical products or the provision of kickbacks have resulted in the submission of false claims to governmental healthcare programs. Under the Health Insurance Portability and Accountability Act of 1996, we are prohibited from knowingly and willfully executing a scheme to defraud any healthcare benefit program, including private payors, or knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services to obtain money or property of any healthcare benefit program. Violations of fraud and abuse laws may be punishable by criminal and/or civil sanctions, including penalties, fines and/or exclusion or suspension from federal and state

Table of Contents

healthcare programs such as Medicare and Medicaid and debarment from contracting with the U.S. government. In addition, private individuals have the ability to bring actions on behalf of the government under the Federal False Claims Act as well as under the false claims laws of several states.

Many states have adopted laws similar to the Federal Anti-Kickback Statute, some of which apply to the referral of patients for healthcare services reimbursed by any source, not just governmental payors. In addition, some states have passed laws that require pharmaceutical companies to comply with the April 2003 Office of Inspector General Compliance Program Guidance for Pharmaceutical Manufacturers and/or the Pharmaceutical Research and Manufacturers of America's Code on Interactions with Healthcare Professionals. Several states also impose other marketing restrictions or require pharmaceutical companies to make marketing or price disclosures to the state. There are ambiguities as to what is required to comply with these state requirements and if we fail to comply with an applicable state law requirement we could be subject to penalties.

Neither the government nor the courts have provided definitive guidance on the application of fraud and abuse laws to our business. Law enforcement authorities are increasingly focused on enforcing these laws, and it is possible that some of our practices may be challenged under these laws. Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations will involve substantial costs. While we believe we have structured our business arrangements to comply with these laws, it is possible that the government could allege violations of, or convict us of violating, these laws. If we are found in violation of one of these laws, we could be subject to significant civil, criminal and administrative penalties, damages, fines, exclusion from governmental funded federal or state healthcare programs and the curtailment or restructuring of our operations. Were this to occur, our business, financial condition and results of operations and cash flows may be materially adversely affected.

Recently enacted and future legislation may increase the difficulty and cost of commercializing our potential products and may affect the prices we may obtain.

In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay regulatory approval of our potential products, restrict or regulate post-marketing activities and affect our ability to profitably sell our potential products for which we obtain regulatory approval.

In the United States, the MMA changed the way Medicare covers and pays for pharmaceutical products. The legislation expanded Medicare coverage for drug purchases by the elderly by establishing Medicare Part D and introduced a reimbursement methodology based on average sales prices for physician-administered drugs under Medicare Part B. In addition, this legislation provided authority for limiting the number of drugs that are covered in any therapeutic class under the Part D program. Cost reduction initiatives and other provisions of this legislation could decrease the coverage and reimbursement rate that we receive for any of our approved products. While the MMA only applies to drug benefits for Medicare beneficiaries, private payors often follow Medicare coverage policy and payment limitations in setting their own reimbursement rates. Therefore, any reduction in reimbursement that results from the MMA may result in a similar reduction in payments from private payors.

In March 2010, President Obama signed into law the PPACA, a sweeping law intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against healthcare fraud and abuse, add new transparency requirements for healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms. PPACA increased manufacturers' rebate liability under the Medicaid Drug Rebate Program by increasing the minimum rebate amount for both branded and generic drugs and revised the definition of "average manufacturer price," or AMP, which may also increase the amount of Medicaid drug rebates manufacturers are required to pay to states. The legislation also expanded Medicaid drug rebates, which previously had been payable only on fee-for-service utilization, to Medicaid managed care utilization, and created an alternative rebate formula for certain new formulations of certain existing products that is intended to increase the rebates due on those drugs. The Centers for Medicare & Medicaid Services, which administers the Medicaid Drug Rebate Program, also expanded Medicaid rebates to the utilization that occurs in the territories of the United States, such as Puerto Rico and the Virgin Islands, effective April 1, 2017. Further, beginning in 2011, PPACA imposed a significant annual fee on companies that manufacture or import branded prescription drug products and

requires manufacturers to provide a 50% discount off the negotiated price of prescriptions filled by beneficiaries in the Medicare Part D coverage gap, referred to as the “donut hole.” Substantial new provisions affecting compliance have also been enacted, which may require us to modify our business practices with healthcare practitioners. For example, pharmaceutical companies are required to track certain payments made to physicians and teaching hospitals, and the first reports were due in 2014 and the reported information was made publicly available on a searchable website in September 2014. We will not know the full effects of PPACA until applicable federal and state agencies issue regulations or guidance under the new law. Although it is too early to determine the full effect of PPACA, the new law appears likely to continue the downward pressure on

Table of Contents

pharmaceutical pricing, especially under the Medicare program, and may also increase our regulatory burdens and operating costs.

Legislative and regulatory proposals have been introduced at both the state and federal level to expand post-approval requirements and restrict sales and promotional activities for pharmaceutical products. We are not sure whether additional legislative changes will be enacted, or whether the FDA regulations, guidance or interpretations will be changed, or what the impact of such changes on the marketing approvals of our product candidates, if any, may be. In addition, increased scrutiny by the U.S. Congress of the FDA's approval process may significantly delay or prevent marketing approval, as well as subject us to more stringent product labeling and post-marketing approval testing and other requirements.

If we face allegations of noncompliance with the law and encounter sanctions, our reputation, revenues and liquidity may suffer, and our potential products could be subject to restrictions or withdrawal from the market.

Any government investigation of alleged violations of law could require us to expend significant time and resources in response, and could generate negative publicity. Any failure to comply with ongoing regulatory requirements may significantly and adversely affect our ability to commercialize and generate revenues from our potential products. If regulatory sanctions are applied or if regulatory approval is withdrawn, the value of our company and our operating results will be adversely affected. Additionally, if we are unable to generate revenues from our product sales, our potential for achieving profitability will be diminished and the capital necessary to fund our operations will be increased.

If our product candidates receive regulatory approval, we will be subject to ongoing regulatory requirements and we may face future development, manufacturing and regulatory difficulties.

Our product candidates, if approved, will also be subject to ongoing regulatory requirements for labeling, packaging, storage, advertising, promotion, sampling, record-keeping, submission of safety and other post- market approval information, importation and exportation. In addition, approved products, manufacturers and manufacturing facilities are required to comply with extensive FDA and EMA, requirements and the requirements of other similar agencies, including ensuring that quality control and manufacturing procedures conform to cGMP requirements. As such, we and our potential future contract manufacturers will be subject to continual review and periodic inspections to assess compliance with cGMPs. Accordingly, we and others with whom we work will be required to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production and quality control. We will also be required to report certain adverse reactions and production problems, if any, to the FDA and EMA and other similar agencies and to comply with certain requirements concerning advertising and promotion for our potential products. Promotional communications with respect to prescription drugs also are subject to a variety of legal and regulatory restrictions and must be consistent with the information in the product's approved labeling. Accordingly, once approved, we may not promote our products, if any, for indications, uses or claims for which they are not approved.

If a regulatory agency discovers 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, or disagrees with the promotion, marketing or labeling of a product, it may impose restrictions on that product or us, including requiring withdrawal of the product from the market. If our potential products fail to comply with applicable regulatory requirements, a regulatory agency may:

- issue warning letters or untitled letters;
- require product recalls;
- mandate modifications to promotional materials or require us to provide corrective information to healthcare practitioners;
- require us or our potential future collaborators to enter into a consent decree or permanent injunction, which can include shutdown of manufacturing facilities, imposition of various fines, reimbursements for inspection costs, required due dates for specific actions and penalties for noncompliance;

- impose other administrative or judicial civil or criminal penalties or pursue criminal prosecution;
- withdraw regulatory approval;
- refuse to approve pending applications or supplements to approved applications filed by us or by our potential future collaborators;
- impose restrictions on operations, including costly new manufacturing requirements; or
- seize or detain products.

Table of Contents

We may not be able to identify additional therapeutic opportunities for our potential product candidates or to expand our portfolio of product candidates.

We may explore other therapeutic opportunities in ophthalmology and seek to commercialize a portfolio of new ophthalmic drugs in addition to our product candidates that we are currently developing.

Research programs to pursue the development of our product candidates for additional indications and to identify new product candidates and disease targets require substantial technical, financial and human resources whether or not we ultimately are successful. Our research programs may initially show promise in identifying potential indications and/or product candidates, yet fail to yield results for clinical development for a number of reasons, including:

- the research methodology used may not be successful in identifying potential indications and/or product candidates;
- potential product candidates may, after further study, be shown to have harmful adverse effects or other characteristics that indicate they are unlikely to be effective drugs; or
- it may take greater human and financial resources to identify additional therapeutic opportunities for our product candidates or to develop suitable potential product candidates through internal research programs than we will possess, thereby limiting our ability to diversify and expand our product portfolio.

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 for other indications that later prove to have greater commercial potential or a greater likelihood of success. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities.

Accordingly, there can be no assurance that we will ever be able to identify additional therapeutic opportunities for our product candidates or any uses for our existing proprietary compounds beyond glaucoma or to develop suitable potential product candidates through internal research programs, which could materially adversely affect our future growth and prospects.

Our current product candidates are all designed to treat patients with glaucoma, and the success or failure of any one of our product candidates could impact sales of our other potential products in the future.

Our current product candidates are designed to be once-daily dosed ROCK inhibitor eye drops to be applied topically to lower IOP for the treatment of glaucoma through various MOAs. Accordingly, increased sales for one of our potential products may negatively impact sales for our other potential products. Our commercialization strategy is unique for each of our product candidates. However, we cannot guarantee that cannibalization of sales among our potential product lines will not occur in the future. Because each of our current product candidates are ROCK inhibitor eye drops designed to treat patients with glaucoma, any challenges or failures with respect to any of these potential products could negatively impact sales or the public perception of our other potential products.

Risks Related to Our Financial Position and Need for Additional Capital

We currently have no source of revenue and may never become profitable.

We are a clinical-stage pharmaceutical company with a limited operating history. Our ability to generate revenue and become profitable depends upon our ability to successfully complete the development of our product candidates for the management of glaucoma and obtain the necessary regulatory approvals for our product candidates. We have never been profitable, have no products approved for commercial sale and to date have not generated any revenue from product sales. Even if we receive regulatory approval for our product candidates for commercial sale, we do not know when such potential products will generate revenue, if at all. Our ability to generate product revenue depends on a number of factors, including our ability to:

- successfully complete clinical development, and receive regulatory approval, for our product candidates;
- set an acceptable price for our potential products and obtain adequate reimbursement from third-party payors;
- obtain or manufacture commercial quantities of our potential products at acceptable cost levels; and
- successfully market and sell our potential products in the United States and abroad.

In addition, because of the numerous risks and uncertainties associated with product development, we are unable to predict the timing or amount of increased expenses, or when, or if, we will be able to achieve or maintain profitability. In addition, our expenses could increase beyond expectations if we are required by the FDA or other regulatory authorities to perform studies in

Table of Contents

addition to those that we currently anticipate. Even if our product candidates are approved for commercial sale, we anticipate incurring significant costs associated with the commercial launch of these product candidates.

Our ability to become and remain profitable depends on our ability to generate revenue. Even if we are able to generate revenues from the sale of our potential products, we may not become profitable and may need to obtain additional funding to continue operations. If we fail to become profitable or are unable to sustain profitability on a continuing basis, then we may be unable to continue our operations at planned levels and be forced to reduce our operations. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain profitable would decrease the value of our company and could impair our ability to raise capital, expand our business or continue our operations.

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

We have incurred losses in each year since our inception in June 2005. Our net losses were $74.4 million, $48.1 million and $31.1 million for the years ended December 31, 2015, 2014 and 2013, respectively. As of December 31, 2015, we had an accumulated deficit of $217.6 million.

Investment in pharmaceutical product development is highly speculative because it entails substantial upfront capital expenditures and significant risk that a product candidate will fail to gain regulatory approval or become commercially viable. We have devoted the majority of our financial resources to research and development, including our non-clinical development activities and clinical trials. To date, we have financed our operations primarily through the sale of equity securities and issuance of convertible debt, including the completion of our IPO in October 2013, the issuance of the 2014 Convertible Notes in September 2014 and the issuance and sale of common stock pursuant to our "at-the-market" sales agreements. Our product candidates will require the completion of regulatory review, significant marketing efforts and substantial investment before they can provide us with any revenue.

We expect our research and development expenses to continue to be significant in connection with our ongoing and planned Phase 3 registration trials. In addition, if we obtain regulatory approval for our product candidates, we expect to incur increased sales and marketing expenses. As a result, we expect to continue to incur significant and increasing operating losses and negative cash flows for the foreseeable future. These losses have had and will continue to have a material adverse effect on our stockholders' equity (deficit), financial position, cash flows and working capital.

We may need to obtain additional financing to fund our operations and, if we are unable to obtain such financing, we may be unable to complete the development and commercialization of our primary product candidates.

Our operations have consumed substantial amounts of cash since inception. In October 2013, we received net proceeds from our IPO of approximately $68.3 million, after deducting underwriting discounts and commissions and expenses. Since our IPO, we have raised additional net proceeds of approximately $122.9 million from the issuance of the 2014 Convertible Notes and approximately $50.5 million through "at-the-market" sales during 2015. We may need to obtain additional financing to fund our future operations. Additionally, we may need to obtain additional financing to conduct additional trials for the approval of our drug candidates if requested by regulatory bodies, and completing the development of any additional product candidates we might acquire. Moreover, our fixed expenses such as rent and other contractual commitments are substantial and are expected to increase in the future.

Our future funding requirements will depend on many factors, including, but not limited to:

- the progress, timing, scope and costs of our clinical trials, including the ability to timely enroll patients in our planned and potential future clinical trials;
- the time and cost necessary to obtain regulatory approvals that may be required by regulatory authorities;
- the time and cost necessary to establish internal manufacturing capabilities, if any, or arrangements with third-party manufacturers;
- our ability to successfully commercialize our product candidates;
- the amount of sales and other revenues from product candidates that we may commercialize, if any, including the selling prices for such potential products and the availability of adequate third-party reimbursement;

- selling and marketing costs associated with our potential products, including the cost and timing of expanding our marketing and sales capabilities;

Table of Contents

- the terms and timing of any collaborations, licensing or other arrangements that we may establish;
- cash requirements of any future acquisitions and/or the development of other product candidates;
- the costs of operating as a public company;
- the time and cost necessary to respond to technological and market developments; and
- the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights.

Until we can generate a sufficient amount of revenue, we may finance future cash needs through public or private equity offerings, license agreements, debt financings, collaborations, strategic alliances and marketing or distribution arrangements. Additional funds may not be available when we need them on terms that are acceptable to us, or at all. If adequate funds are not available, we may be required to delay or reduce the scope of or eliminate one or more of our research or development programs or our commercialization efforts. We may seek to access the public or private capital markets whenever conditions are favorable, even if we do not have an immediate need for additional capital at that time. In addition, if we raise additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams or product candidates or to grant licenses on terms that may not be favorable to us.

We believe that our existing cash and cash equivalents and investments and any future sales under our current "at-the-market" sales agreements will be sufficient to complete all currently known non-clinical and clinical requirements for our development programs advancing Rhopressa™ and Roclatan™, approval by the FDA and product commercialization, pending successful outcome of the trials. However, until we can generate a sufficient amount of revenue, we may be required to obtain further funding through other public or private offerings, debt financing, collaboration and licensing arrangements or other sources. Adequate additional funding may not be available to us on acceptable terms, or at all. If we are unable to raise capital when needed or on attractive terms, we would be forced to delay, reduce or eliminate our research and development programs or future commercialization efforts. Our forecast of the period of time through which our financial resources will be adequate to support our operating requirements is a forward-looking statement and involves risks and uncertainties, and actual results could vary as a result of a number of factors, including the factors discussed elsewhere in this "Risk Factors" section. We have based this estimate on a number of assumptions that may prove to be wrong, and changing circumstances beyond our control may cause us to consume capital more rapidly than we currently anticipate. Our inability to obtain additional funding when we need it could seriously harm our business.

Our substantial leverage and related obligations could adversely affect our financial condition and restrict our operating flexibility.

We have substantial debt and related obligations. As of December 31, 2015, our total indebtedness consisted of our $125.0 million aggregate principal amount of 2014 Convertible Notes. Our substantial level of debt and related obligations, including interest payments, covenants and restrictions, could have important consequences, including the following:

- impairing our ability to successfully complete the development of our product candidates, which would prevent us from generating a source of revenue and becoming profitable;
- making it more difficult for us to satisfy our obligations with respect to our indebtedness, which could result in an event of default under the agreement governing the 2014 Convertible Notes;
- limiting our ability to obtain additional financing on satisfactory terms to fund our working capital requirements, capital expenditures, acquisitions, debt obligations and other general corporate requirements;
- increasing our vulnerability to general economic downturns, competition and industry conditions, which could place us at a competitive disadvantage compared to our competitors that are less leveraged and therefore we may be unable to take advantage of opportunities that our leverage prevents us from exploiting; and
- imposing additional restrictions on the manner in which we conduct our business, including restrictions on our ability to pay dividends, incur additional debt and sell assets.

The occurrence of any one of these events could have an adverse effect on our business, financial condition, operating results or cash flows and ability to satisfy our obligations under our indebtedness.

Although the agreement governing the 2014 Convertible Notes contains restrictions on the incurrence of additional indebtedness, these restrictions are subject to a number of significant qualifications and exceptions, and any indebtedness

Table of Contents

incurred in compliance with these restrictions could be substantial. In addition, the agreement governing the 2014 Convertible Notes allows us to incur a significant amount of indebtedness in connection with acquisitions and a significant amount of purchase money debt. If new debt is added to current debt levels, the related risks that we and noteholders face would be increased.

The terms of the agreement governing the 2014 Convertible Notes may restrict our current and future operations, particularly our ability to respond to changes in our business or to take certain actions.

The agreement governing the 2014 Convertible Notes contains, and the terms of any future indebtedness of ours would likely contain, a number of restrictive covenants that impose significant operating restrictions, including restrictions on our ability to engage in acts that may be in our best long-term interests. The agreement governing the 2014 Convertible Notes includes covenants that, among other things, restrict or otherwise limit our ability to:

- incur additional indebtedness and create liens;
- pay dividends on capital stock and make other restricted payments;
- enter into any merger, partnership, joint venture, syndicate, pool, profit-sharing or royalty agreement, or engage in any transactions with our affiliates;
- sell or transfer assets;
- merge; and
- issue equity securities senior to our common stock or convertible or exercisable for equity securities senior to our common stock.

If not cured, as applicable, a breach of any of these provisions could result in a default under the agreement governing the 2014 Convertible Notes that would allow noteholders to declare the outstanding debt immediately due and payable. In addition, the 2014 Convertible Notes are secured by substantially all of our existing and hereafter created or acquired assets, including our intellectual property, accounts receivable, equipment, general intangibles, inventory and investment property, and all of the proceeds and products of the foregoing. If we are unable to pay those amounts because we do not have sufficient cash on hand or are unable to obtain alternative financing on acceptable terms, the noteholders could initiate a bankruptcy proceeding or proceed against any assets that serve as collateral to secure the 2014 Convertible Notes.

These restrictions could limit our ability to obtain future financings, make needed capital expenditures, withstand future downturns in the economy or otherwise conduct necessary corporate activities. We may also be prevented from taking advantage of business opportunities that arise because of limitations imposed on us by the restrictive covenants under the 2014 Convertible Notes.

We may sell additional equity or debt securities to fund our operations, which may result in dilution to our stockholders and impose restrictions on our business.

In order to raise additional funds to support our operations, we may sell additional equity or debt securities, which would result in dilution to all of our stockholders or impose restrictive covenants that adversely impact our business. The incurrence of indebtedness would result in increased fixed payment obligations and could also result in restrictive covenants, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. If we are unable to expand our operations or otherwise capitalize on our business opportunities, our business, financial condition and results of operations could be materially adversely affected.

Our short operating history may make it difficult for investors to evaluate the success of our business to date and to assess our future viability.

We are a clinical-stage company. We were incorporated and commenced active operations in the second quarter of 2005. Our operations to date have been limited to organizing and staffing our company, business planning, raising capital and developing our product candidates. We have not yet demonstrated our ability to successfully complete a Phase 3 program, obtain regulatory approval, manufacture a commercial scale product, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. Consequently, any predictions about our future success or viability may not be as accurate as they could be if we had a longer operating history.

40

Table of Contents

In addition, as a new business, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors. We will need to transition from a company with a product development focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

Determining our income tax rate is complex and subject to uncertainty.

The computation of income tax provisions is complex, as it is based on the laws of numerous taxing jurisdictions and requires significant judgment on the application of complicated rules governing accounting for tax provisions under U.S. GAAP. Our provision for income tax can be materially impacted, for example, by the geographical mix of our profits and losses, changes in our business, such as internal restructuring and acquisitions, changes in tax laws and accounting guidance and other regulatory, legislative or judicial developments, tax audit determinations, changes in our uncertain tax positions, changes in our intent and capacity to permanently reinvest foreign earnings, changes to our transfer pricing practices, tax deductions attributed to equity compensation and changes in our need for a valuation allowance for deferred tax assets. For these reasons, our actual income taxes may be materially different than our provision for income tax.

Our ability to use our net operating loss carry-forwards may be limited.

If we experience an “ownership change” for purposes of Section 382 of the Internal Revenue Code of 1986, as amended (Section 382), or similar state provisions, we may be subject to annual limits on our ability to utilize net operating loss carry-forwards. An ownership change is, as a general matter, triggered by sales or acquisitions of our stock in excess of 50% on a cumulative basis during a three-year period by persons owning 5% or more of our total equity value. As of December 31, 2015, we had federal and state net operating losses of approximately $61.1 million which begin to expire at various dates beginning in 2024, if not utilized. Certain transactions occurred in 2015 and prior years that resulted in ownership changes as defined under Section 382 and similar state provisions, which will limit the future use of certain federal and state net operating loss carry-forwards. Those federal and state net operating losses that are not limited are included as deferred tax assets and have been fully offset by a valuation allowance as of December 31, 2015.

The enactment of legislation implementing changes in the U.S. taxation of international business activities or the adoption of other tax reform policies could materially impact our financial position and results of operations.

Recent changes to U.S. tax laws, including limitations on the ability of taxpayers to claim and utilize foreign tax credits, as well as changes to U.S. tax laws that may be enacted in the future, could impact the tax treatment of our potential future foreign earnings. Due to the expansion of our international business activities, any changes in the U.S. taxation of such activities may increase our worldwide effective tax rate and adversely affect our financial position and results of operations.

Our international operations subject us to potentially adverse tax consequences.

We generally conduct our international operations through wholly-owned subsidiaries and report our taxable income in various jurisdictions worldwide based upon our business operations in those jurisdictions. Our intercompany relationships are subject to complex transfer pricing regulations administered by taxing authorities in various jurisdictions. The relevant taxing authorities may disagree with our determinations as to the income and expenses attributable to specific jurisdictions. If such a disagreement were to occur, and our position was not sustained, we could be required to pay additional taxes, interest and penalties, which could result in one-time tax charges, higher effective tax rates and reduced cash flows.

Risks Related to Our Reliance on Third Parties

We currently have no manufacturing capacity and anticipate continued reliance on third-party manufacturers for the development and commercialization of our product candidates in accordance with manufacturing regulations until such a time when we can develop internal manufacturing capabilities, if at all.

We do not currently operate manufacturing facilities for clinical or commercial production of our product candidates. We have no experience in drug formulation, and we lack the resources and the capabilities to manufacture our product candidates and potential products on a clinical or commercial scale. We currently rely on third-party manufacturers to produce the active pharmaceutical ingredient and final drug product for our clinical trials. We manage such production

with all our vendors on a purchase order basis in accordance with applicable master service and supply agreements. We do not have long-term agreements with any of these or any other third-party suppliers to support our clinical trials. To the extent we terminate our existing supplier arrangements in the future and seek to enter into arrangements with alternative suppliers, we might experience a delay in our ability to obtain our commercial supplies.

Table of Contents

With respect to production of our potential commercial products in the future, if and when our product candidates are approved for marketing by the applicable regulatory authorities, we plan to outsource the production of the active pharmaceutical ingredients and final product manufacturing until such a time when we can develop internal manufacturing capabilities, if at all. We have entered into a contractual relationship for the final commercial drug product manufacturing. However, we do not have any current contractual relationships for the commercial production of the active pharmaceutical ingredients. This process is difficult and time consuming and we can give no assurance that we will enter any future commercial supply agreements with any manufacturers on favorable terms or at all. Reliance on third-party manufacturers entails risks, including:

- manufacturing delays if our third-party manufacturers give greater priority to the supply of other products over our product candidates or otherwise do not satisfactorily perform according to the terms of their agreements with us;
- the possible termination or nonrenewal of the agreement by the third party at a time that is costly or inconvenient for us;
- the possible breach of the manufacturing agreement by the third party;
- product loss due to contamination, equipment failure or improper installation or operation of equipment or operator error;
- the failure of the third-party manufacturer to comply with applicable regulatory requirements; and
- the possible misappropriation of our proprietary information, including our trade secrets and know-how.

Our manufacturers may not perform as agreed or may not remain in the contract manufacturing business. In the event of a natural disaster, business failure, strike or other difficulty, we may be unable to replace a third-party manufacturer in a timely manner and the production of our product candidates and potential products could be interrupted, resulting in delays and additional costs. We may also have to incur other charges and expenses for products that fail to meet specifications and undertake remediation efforts.

If we or third-party manufacturers fail to comply with manufacturing regulations, our financial results and financial condition will be adversely affected.

Before we or a third party can begin commercial manufacture of our product candidates and potential products, we or the third party must obtain regulatory approval of our or their manufacturing facilities, processes and quality systems. Due to the complexity of the processes used to manufacture pharmaceutical products and product candidates, we or any potential third-party manufacturer may be unable to initially pass federal, state or international regulatory inspections in a cost effective manner. If we or our contract manufacturers are not approved by the FDA, our commercial supply of drug substance will be significantly delayed and may result in significant additional costs.

In addition, pharmaceutical manufacturing facilities are continuously subject to inspection by the FDA and foreign regulatory authorities, before and after product approval, and must comply with cGMP. We or our contract manufacturers may encounter difficulties in achieving quality control and quality assurance and may experience shortages in qualified personnel. In addition, failure to achieve and maintain high manufacturing standards in accordance with applicable regulatory requirements, or the incidence of manufacturing errors, could result in patient injury, product liability claims, product shortages, product recalls or withdrawals, delays or failures in product testing or delivery, cost overruns or other problems that could seriously harm our business. If we or a third-party manufacturer with whom we contract is unable to comply with manufacturing regulations, we may be subject to fines, unanticipated compliance expenses, recall or seizure of our products, product liability claims, total or partial suspension of production and/or enforcement actions, including injunctions, and criminal or civil prosecution. These possible sanctions could materially adversely affect our financial results and financial condition.

Furthermore, changes in the manufacturing process or procedure, including a change in the location where the product is manufactured or a change of a third-party manufacturer, will require prior FDA review and/or approval of the manufacturing process and procedures in accordance with the FDA's regulations, or comparable foreign requirements. This review may be costly and time consuming and could delay or prevent the launch of a product. The new facility

will also be subject to pre-approval inspection. In addition, we have to demonstrate that the product made at the new facility is equivalent to the product made at the former facility by physical and chemical methods, which are costly and time consuming. It is also possible that the FDA may require clinical testing as a way to prove equivalency, which would result in additional costs and delay.

Table of Contents

Any current collaboration arrangement or collaboration arrangement that we may enter into in the future may not be successful, which could adversely affect our ability to develop and commercialize our current and potential future product candidates.

We continually explore and discuss additional opportunities for new ophthalmic products, delivery alternatives and new therapeutic areas with potential partners. We may seek collaboration arrangements with pharmaceutical or biotechnology companies for the development or commercialization of our current and potential future product candidates. We will face, to the extent that we decide to enter into additional collaboration agreements, significant competition in seeking appropriate collaborators. Moreover, collaboration arrangements are complex and time consuming to negotiate, document and implement. We may not be successful in our efforts to establish and implement collaborations or other alternative arrangements and the terms of such arrangements may not be favorable to us. If and when we collaborate with a third party for development and commercialization of a product candidate, we can expect to relinquish some or all of the control over the future success of that product candidate to the third party. The success of our collaboration arrangements will depend heavily on the efforts and activities of our collaborators. Collaborators generally have significant discretion in determining the efforts and resources that they will apply to these collaborations.

Disagreements between parties to a collaboration arrangement regarding research, clinical development and commercialization matters can lead to delays in the development process or commercializing the applicable product candidate and, in some cases, termination of the collaboration arrangement. These disagreements can be difficult to resolve if neither of the parties has final decision making authority. Collaborations with pharmaceutical or biotechnology companies and other third parties often are terminated or allowed to expire by the other party. Any such termination or expiration would adversely affect us financially and could harm our business reputation.

We currently depend on third parties to conduct some of the operations of our clinical trials and other portions of our operations, and we may not be able to control their work as effectively as if we performed these functions ourselves.

We rely on third parties, such as CROs, clinical data management organizations, medical institutions and clinical investigators, to oversee and conduct our clinical trials, and to perform data collection and analysis of our product candidates. We expect to rely on these third parties to conduct clinical trials of any other potential products that we develop. These parties are not our employees and we cannot control the amount or timing of resources that they devote to our program. In addition, any CRO that we retain will be subject to the FDA's regulatory requirements or similar foreign standards and we do not have control over compliance with these regulations by these providers. Our agreements with third-party service providers are on a trial-by-trial and project-by-project bases. Typically, we may terminate the agreements with notice and are responsible for the third party's incurred costs. If any of our relationships with our third-party CROs terminate, we may not be able to enter into arrangements with alternative CROs or to do so on commercially reasonable terms. We also rely on other third parties to store and distribute drug supplies for our clinical trials. Any performance failure on the part of our distributors could delay clinical development or regulatory approval of our product candidates or commercialization of our potential products, producing additional losses and depriving us of potential product revenue.

Our reliance on these third parties for clinical development activities reduces our control over these activities but does not relieve us of our responsibilities, and we remain responsible for ensuring that each of our clinical trials is conducted in accordance with the general investigational plan, the protocols for the trial and the FDA's regulations and international standards, referred to as GCP requirements, for conducting, recording and reporting the results of clinical trials to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of trial participants are protected. Preclinical studies must also be conducted in compliance with the Animal Welfare Act requirements. Managing performance of third-party service providers can be difficult, time consuming and cause delays in our development programs. We currently have a small number of employees, which limits the internal resources we have available to identify and monitor our third-party providers.

Furthermore, these third parties may produce or manufacture competing drugs or may have relationships with other entities, some of which may be our competitors. The use of third-party service providers requires us to disclose our proprietary information to these parties, which could increase the risk that this information will be misappropriated.

If these third parties do not successfully carry out their contractual duties or obligations and meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols according to regulatory requirements or for other reasons, our financial results and the commercial prospects for our current product candidates or our other potential product candidates could be harmed, our costs could increase and our ability to obtain regulatory approval and commence product sales could be delayed.

Table of Contents

If we fail to establish an effective distribution process our business may be adversely affected.

We do not currently have the infrastructure necessary for distributing pharmaceutical products to patients. We intend to contract with third-party logistics wholesalers to warehouse these products and distribute them to pharmacies. This distribution network will require significant coordination with our sales and marketing and finance organizations. Failure to secure contracts with wholesalers could negatively impact the distribution of our potential products, and failure to coordinate financial systems could negatively impact our ability to accurately report product revenue. If we are unable to effectively establish and manage the distribution process, the commercial launch and sales of our potential products will be delayed or severely compromised and our results of operations may be harmed.

Risks Related to Intellectual Property

We may not be able to protect our proprietary technology in the marketplace.

We depend on our ability to protect our proprietary technology. We rely on trade secret, patent, copyright and trademark laws, and confidentiality, licensing and other agreements with employees and third parties, all of which offer only limited protection. Our success depends in large part on our ability and any future licensee's ability to obtain and maintain patent protection in the United States and other countries with respect to our proprietary technology and products. We believe we will be able to obtain, through prosecution of our current pending patent applications, adequate patent protection for our proprietary drug technology. If we are compelled to spend significant time and money protecting or enforcing our patents, designing around patents held by others or licensing or acquiring, potentially for large fees, patents or other proprietary rights held by others, our business and financial prospects may be harmed. If we are unable to effectively protect the intellectual property that we own, other companies may be able to offer the same or similar products for sale, which could materially adversely affect our competitive business position and harm our business prospects. Our patents may be challenged, narrowed, invalidated, or circumvented, which could limit our ability to stop competitors from marketing the same or similar products or limit the length of term of patent protection that we may have for our products.

The patent positions of pharmaceutical products are often complex and uncertain. The breadth of claims allowed in pharmaceutical patents in the United States and many jurisdictions outside of the United States is not consistent. For example, in many jurisdictions the support standards for pharmaceutical patents are becoming increasingly strict. Some countries prohibit method of treatment claims in patents. Changes in either the patent laws or interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property or create uncertainty. In addition, publication of information related to our current product candidates and potential products may prevent us from obtaining or enforcing patents relating to these product candidates and potential products, including without limitation composition-of-matter patents, which are generally believed to offer the strongest patent protection.

Our intellectual property includes issued patents and pending patent applications for compositions of matter and methods of use. As of December 31, 2015, we own 18 patents and have 16 patent applications in the United States and certain foreign jurisdictions for our primary product candidates Rhopressa™ and Roclatan™. Patent protection for Roclatan™ arises from the U.S. patents that cover Rhopressa™. The patents cover composition of matter and method of use. We own 40 patents and have 11 pending patent applications in the United States and certain foreign jurisdictions relating to our previously discontinued product candidates and other proprietary technology. See "Business—Intellectual Property" included elsewhere in this report for further information about our issued patents and patent applications.

Patents that we own or may license in the future do not necessarily ensure the protection of our intellectual property for a number of reasons, including without limitation the following:

- our patents may not be broad or strong enough to prevent competition from other products that are identical or similar to our product candidates;
- there can be no assurance that the term of a patent can be extended under the provisions of patent term extension afforded by U.S. law or similar provisions in foreign countries, where available;
- our issued patents and patents that we may obtain in the future may not prevent generic entry into the market for our Rhopressa™ and Roclatan™ product candidates;

- we do not at this time own or control issued foreign patents outside of Europe that would prevent generic entry into those markets for our product candidates;
- we may be required to disclaim part of the term of one or more patents;
- there may be prior art of which we are not aware that may affect the validity or enforceability of a patent claim;

Table of Contents

- there may be prior art of which we are aware, which we do not believe affects the validity or enforceability of a patent claim, but which, nonetheless, ultimately may be found to affect the validity or enforceability of a patent claim;
- there may be other patents issued to others that will affect our freedom to operate;
- if our patents are challenged, a court could determine that they are invalid or unenforceable;
- there might be a significant change in the law that governs patentability, validity and infringement of our patents that adversely affects the scope of our patent rights;
- a court could determine that a competitor's technology or product does not infringe our patents; and
- our patents could irretrievably lapse due to failure to pay fees or otherwise comply with regulations or could be subject to compulsory licensing.

If we encounter delays in our development or clinical trials, the period of time during which we could market our potential products under patent protection would be reduced.

Our competitors may be able to circumvent our patents by developing similar or alternative technologies or products in a non-infringing manner. Our competitors may seek to market generic versions of any approved products by submitting ANDAs to the FDA in which our competitors claim that our patents are invalid, unenforceable and/or not infringed.

Alternatively, our competitors may seek approval to market their own products similar to or otherwise competitive with our products. In these circumstances, we may need to defend and/or assert our patents, including by filing lawsuits alleging patent infringement. In any of these types of proceedings, a court or other agency with jurisdiction may find our patents invalid and/or unenforceable. We may also fail to identify patentable aspects of our research and development before it is too late to obtain patent protection. Even if we have valid and enforceable patents, these patents still may not provide protection against competing products or processes sufficient to achieve our business objectives.

The issuance of a patent is not conclusive as to its inventorship, scope, ownership, priority, validity or enforceability. In that regard, third parties may challenge our patents in the courts or patent offices in the United States and abroad. Such challenges may result in loss of exclusivity or freedom to operate or in patent claims being narrowed, invalidated or held unenforceable, in whole or in part, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and potential products. In addition, 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.

A significant portion of our intellectual property portfolio currently comprises pending patent applications that have not yet been issued as granted patents. If our pending patent applications fail to issue our business will be adversely affected.

Our commercial success will depend significantly on maintaining and expanding patent protection for our product candidates, as well as successfully defending our current and future patents against third-party challenges. As of December 31, 2015, we own 58 patents and have 27 pending patent applications in the United States and certain foreign jurisdictions relating to our current and previously discontinued product candidates and proprietary technology. See "Business—Intellectual Property" included elsewhere in this report for further information about our issued patents and patent applications. Our issued patents include 18 patents for composition of matter and method of use covering our lead product candidate, Rhopressa™ in the United States and certain foreign jurisdictions. These patents also cover our other primary product candidate Roclatan™ to the extent that Rhopressa™ forms a part of Roclatan™. The remainder of our portfolio is made up of patents covering previously discontinued product candidates and other proprietary technology and pending patent applications that have not yet been issued by the USPTO, or any other jurisdiction that cover our current and previously discontinued product candidates or other proprietary technology. There can be no assurance that our pending patent applications will result in issued patents in the United States or foreign jurisdictions in which such applications are pending. Even if patents do issue on any of these applications,

there can be no assurance that a third party will not challenge their validity or that we will obtain sufficient claim scope in those patents to prevent a third party from competing successfully with our products.

We may not be able to enforce our intellectual property rights throughout the world.

The laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of the United States. Many companies have encountered significant problems in protecting and defending intellectual property rights in

Table of Contents

certain foreign jurisdictions. The legal systems of some countries, particularly developing countries, do not favor the enforcement of patents and other intellectual property protection, especially those relating to life sciences. It may be difficult for us to stop the infringement of our patents or the misappropriation of these intellectual property rights in any foreign jurisdictions. For example, some foreign countries have compulsory licensing laws under which a patent owner must grant licenses to third parties. In addition, many countries limit the enforceability of patents against third parties, including government agencies or government contractors. In these countries, patents may provide limited or no benefit.

Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business. Accordingly, our efforts to protect our intellectual property rights in such countries may be inadequate. In addition, changes in the law and legal decisions by courts in the United States and foreign countries may affect our ability to obtain adequate protection for our technology and the enforcement of intellectual property.

We may infringe the intellectual property rights of others, which may prevent or delay our product development efforts and stop us from commercializing or increase the costs of commercializing our products.

Our commercial success depends significantly on our ability to operate without infringing the patents and other intellectual property rights of third parties. For example, there could be issued patents of which we are not aware that our product candidates or potential products infringe. There also could be patents that we believe we do not infringe, but that we may ultimately be found to infringe.

Moreover, patent applications are in some cases maintained in secrecy until patents are issued. The publication of discoveries in the scientific or patent literature frequently occurs substantially later than the date on which the underlying discoveries were made and patent applications were filed. Because patents can take many years to issue, there may be currently pending applications of which we are unaware that may later result in issued patents that our product candidates or potential products infringe. For example, pending applications may exist that claim or can be amended to claim subject matter that our product candidates or potential products infringe. Competitors may file continuing patent applications claiming priority to already issued patents in the form of continuation, divisional, or continuation-in-part applications, in order to maintain the pendency of a patent family and attempt to cover our product candidates.

Third parties may assert that we are employing their proprietary technology without authorization and may sue us for patent or other intellectual property infringement. These lawsuits are costly and could adversely affect our results of operations and divert the attention of managerial and scientific personnel. If we are sued for patent infringement, we would need to demonstrate that our product candidates, potential products or methods either do not infringe the claims of the relevant patent or that the patent claims are invalid, and we may not be able to do this. Proving invalidity is difficult. For example, in the United States, proving invalidity requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents. Even if we are successful in these proceedings, we may incur substantial costs and the time and attention of our management and scientific personnel could be diverted in pursuing these proceedings, which could have a material adverse effect on us. In addition, we may not have sufficient resources to bring these actions to a successful conclusion. If a court holds that any third-party patents are valid, enforceable and cover our products or their use, the holders of any of these patents may be able to block our ability to commercialize our products unless we acquire or obtain a license under the applicable patents or until the patents expire. We may not be able to enter into licensing arrangements or make other arrangements at a reasonable cost or on reasonable terms. Any inability to secure licenses or alternative technology could result in delays in the introduction of our products or lead to prohibition of the manufacture or sale of products by us. Even if we are able to obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. We could be forced, including by court order, to cease commercializing the infringing technology or product. In addition, in any such proceeding or litigation, we could be found liable for monetary damages, including treble damages and attorneys' fees if we are found to have willfully infringed a patent. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations, which could materially harm our business. Any claims by third parties that we have misappropriated their confidential information or trade

secrets could have a similar negative impact on our business. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise the funds necessary to continue our operations.

We may be subject to claims that we or our employees have misappropriated the intellectual property, including trade secrets, of a third party, or claiming ownership of what we regard as our own intellectual property.

Many of our employees were previously employed at universities, biotechnology companies or other pharmaceutical companies, including our competitors or potential competitors. Some of these employees, including each member of our senior management, executed proprietary rights, non-disclosure and non-competition agreements in connection with such previous employment. Although we try to ensure that our employees do not use the intellectual property and other proprietary

Table of Contents

information or know-how of others in their work for us, we may be subject to claims that we or these employees have used or disclosed such intellectual property, including trade secrets or other proprietary information. Litigation may be necessary to defend against these claims. We are not aware of any threatened or pending claims related to these matters or concerning the agreements with our senior management, but litigation may be necessary in the future to defend against such 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 could result in substantial costs and be a distraction to management.

In addition, while we typically require our employees, consultants and contractors who may be involved in the development of intellectual property to execute agreements assigning such intellectual property to us, we may be unsuccessful in executing such an agreement with each party who in fact develops intellectual property that we regard as our own, which may result in claims by or against us related to the ownership of such intellectual property. If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights. Even if we are successful in prosecuting or defending against such claims, litigation could result in substantial costs and be a distraction to our management and scientific personnel.

We may be unable to adequately prevent disclosure of trade secrets and other proprietary information.

We rely on trade secrets to protect our proprietary know-how and technological advances, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect. We rely in part on confidentiality agreements with our employees, consultants, outside scientific collaborators, sponsored researchers and other advisors to protect our trade secrets and other proprietary information. However, any party with whom we have executed such an agreement may breach that agreement and disclose our proprietary information, including our trade secrets. Accordingly, these agreements may not effectively prevent disclosure of confidential information and may not provide an adequate remedy in the event of unauthorized disclosure of confidential information. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights. In addition, others may independently discover our trade secrets and proprietary information. Further, the FDA, as part of its Transparency Initiative, a proposal by the FDA to increase disclosure and make data more accessible to the public, is currently considering whether to make additional information publicly available on a routine basis, including information that we may consider to be trade secrets or other proprietary information, and it is not clear at the present time how the FDA’s disclosure policies may change in the future, if at all. Failure to obtain or maintain trade secret protection could enable competitors to use our proprietary information to develop products that compete with our products or cause additional, material adverse effects upon our competitive business position and financial results.

Any lawsuits relating to infringement of intellectual property rights brought by or against us will be costly and time consuming and may adversely impact the price of our common stock.

We may be required to initiate litigation to enforce or defend our intellectual property. These lawsuits can be very time consuming and costly. There is a substantial amount of litigation involving patent and other intellectual property rights in the pharmaceutical industry generally. Such litigation or proceedings could substantially increase our operating expenses and reduce the resources available for development activities or any future sales, marketing or distribution activities.

In any infringement litigation, any award of monetary damages we receive may not be commercially valuable. 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 litigation. Moreover, there can be no assurance that we will have sufficient financial or other resources to file and pursue such infringement claims, which typically last for years before they are resolved. Further, any claims we assert against a perceived infringer could provoke these parties to assert counterclaims against us alleging that we have infringed their patents. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other proceedings could have a material adverse effect on our ability to compete in the marketplace.

In addition, our patents and patent applications could face other challenges, such as interference proceedings, opposition proceedings, re-examination proceedings, and other forms of post-grant review. In the United States, for example, post-grant review has recently been expanded. Any of these challenges, if successful, could result in the invalidation of, or in a narrowing of the scope of, any of our patents and patent applications subject to challenge. Any of these challenges, regardless of their success, would likely be time consuming and expensive to defend and resolve and would divert our management and scientific personnel's time and attention. 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 material adverse effect on the market price of our common stock.

Table of Contents

We will need to obtain FDA approval of any proposed product names, and any failure or delay associated with such approval may adversely affect our business.

We assigned the trade names Rhopressa™ and Roclatan™ to our lead product candidates in 2014, with trademark applications for registration pending from the USPTO. These and any other names we intend to use for our product candidates will require approval from the FDA regardless of whether we have secured a formal trademark registration from the USPTO. The FDA typically conducts a review of proposed product names, including an evaluation of the potential for confusion with other product names. The FDA may also object to a product name if it believes the name inappropriately implies medical claims or contributes to an overstatement of efficacy. If the FDA objects to any of our proposed product names, we may be required to adopt an alternative name for our product candidates. If we adopt an alternative name, we would lose the benefit of our existing trademark applications for such product candidate and may be required to expend significant additional resources in an effort to identify a suitable product name that would qualify under applicable trademark laws, not infringe the existing rights of third parties and be acceptable to the FDA. We may be unable to build a successful brand identity for a new trademark in a timely manner or at all, which would limit our ability to commercialize our product candidates.

If we do not obtain additional protection under the Hatch-Waxman Amendments and similar foreign legislation extending the terms of our patents and obtaining data exclusivity for our product candidates, our business may be materially harmed.

Depending upon the timing, duration and specifics of FDA regulatory approval for our product candidates, one or more of our U.S. patents may be eligible for limited patent term restoration under the Drug Price Competition and Patent Term Restoration Act of 1984, referred to as the Hatch-Waxman Amendments. The Hatch-Waxman Amendments permit a patent restoration term of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. Patent term restorations, however, cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval by the FDA.

The application for patent term extension is subject to approval by the USPTO, in conjunction with the FDA. It takes at least six months to obtain approval of the application for patent term extension. We may not be granted an extension because of, for example, failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents or otherwise failing to satisfy applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request. If we are unable to obtain patent term extension or restoration or the term of any such extension is less than we request, the period during which we will have the right to exclusively market our product will be shortened and our competitors may obtain earlier approval of competing products, and our ability to generate revenues could be materially adversely affected.

Risks Related to Our Business Operations and Industry

We depend upon our key personnel and our ability to attract and retain employees.

Our future growth and success depend on our ability to recruit, retain, manage and motivate our employees. We are highly dependent on our senior management team and our scientific founders, as well as the other principal members of our management and scientific teams. Although we have formal employment agreements with our executive officers, these agreements do not prevent them from terminating their employment with us at any time. The loss of the services of any member of our senior management or scientific team or the inability to hire or retain experienced management personnel could adversely affect our ability to execute our business plan and harm our operating results.

Because of the specialized scientific and managerial nature of our business, we rely heavily on our ability to attract and retain qualified scientific, technical and managerial personnel. In particular, the loss of Vicente Anido, Jr., our Chairman of the Board of Directors and Chief Executive Officer, Thomas A. Mitro, our President and Chief Operating Officer, Richard J. Rubino, our Chief Financial Officer or Casey C. Kopczynski, our Chief Scientific Officer, could be detrimental to us if we cannot recruit suitable replacements in a timely manner. We do not currently carry “key person” insurance on the lives of members of executive management. The competition for qualified personnel in the pharmaceutical field is intense. Due to this intense competition, we may be unable to continue to attract and retain qualified personnel necessary for the development of our business or to recruit suitable replacement personnel. In

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

We will need to significantly increase the size of our organization, and we may experience difficulties in managing growth.

We are currently a small company with 70 full-time employees as of December 31, 2015. In order to commercialize our potential products, we will need to substantially increase our operations. We plan to continue to build our compliance, financial

Table of Contents

and operating infrastructure to ensure the maintenance of a well-managed company. We expect to expand our employment base to approximately 300 when we are in the full commercial stages of our current potential products' life cycle.

Future growth will impose significant added responsibilities on members of management, including the need to identify, recruit, maintain and integrate additional employees. Our management, personnel and systems currently in place may not be adequate to support our future growth. Our future financial performance and our ability to commercialize our potential products and to compete effectively will depend, in part, on our ability to manage any future growth effectively. To that end, we must be able to:

- manage our clinical trials and the regulatory process effectively;
- manage the manufacturing of product candidates and potential products for clinical and commercial use;
- integrate current and additional management, administrative, financial and sales and marketing personnel;
- develop a marketing and sales infrastructure;
- hire new personnel necessary to effectively commercialize our product candidates;
- continue to develop and maintain our administrative, accounting and management information systems and controls; and
- hire and train additional qualified personnel.

Product candidates that we may acquire or develop in the future may be intended for patient populations that are large. In order to continue development and marketing of these product candidates, if approved, we would need to significantly expand our operations. Our staff, financial resources, systems, procedures or controls may be inadequate to support our operations and our management may be unable to manage successfully future market opportunities or our relationships with customers and other third parties.

Our employees may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements and insider trading, which could significantly harm our business.

We are exposed to the risk of employee fraud or other misconduct. Misconduct by employees could include intentional failures to comply with the regulations of the FDA and non-U.S. regulators, provide accurate information to the FDA and non-U.S. regulators, comply with healthcare fraud and abuse laws and regulations in the United States and abroad, report financial information or data accurately or disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws and regulations intended to prevent fraud, misconduct, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Employee misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. We adopted a code of conduct, but it is not always possible to identify and deter employee misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of significant fines or other sanctions.

Our business is affected by macroeconomic conditions.

Various macroeconomic factors could adversely affect our business and the results of our operations and financial condition, including changes in inflation, interest rates and foreign currency exchange rates and overall economic conditions and uncertainties, including those resulting from the current and future conditions in the global financial markets. For instance, if and when our product candidates are approved, if inflation or other factors were to significantly increase our business costs, it may not be feasible to pass through price increases to patients. Interest rates, the liquidity of the credit markets and the volatility of the capital markets could also affect the value of our investments and our ability to liquidate our investments in order to fund our operations.

Interest rates and the ability to access credit markets could also adversely affect the ability of patients, payors and distributors to purchase, pay for and effectively distribute our potential products. Similarly, these macroeconomic factors could affect the ability of our potential future contract manufacturers, sole-source or single-source suppliers, collaboration partners or licensees

Table of Contents

to remain in business or otherwise develop, manufacture or supply product. Failure by any of them to remain in business could affect our ability to manufacture potential products.

If we engage in acquisitions or licenses in the future, we will incur a variety of costs and we may never realize the anticipated benefits of such acquisitions or licenses.

We may attempt to acquire or license businesses, technologies, services, products or product candidates in the future that we believe are a strategic fit with our business. We have no present agreement regarding any material acquisitions or licenses. However, if we do undertake any acquisitions or licenses, the process of integrating an acquired or licensed business, technology, service, product or product candidate into our business may result in unforeseen operating difficulties and expenditures, including diversion of resources and management's attention from our core business. In addition, we may fail to retain key executives and employees of the companies we acquire, which may reduce the value of the acquisition or give rise to additional integration costs. Future acquisitions or licenses could result in additional issuances of equity securities that would dilute the ownership of existing stockholders. Future acquisitions or licenses could also result in the incurrence of debt, actual or contingent liabilities or the amortization of expenses related to intangible assets, any of which could adversely affect our operating results.

We have limited experience identifying, negotiating and implementing acquisitions or licenses of additional businesses, technologies, services, products or product candidates, which is a lengthy and complex process. The market for acquiring or licensing businesses, technologies, services, products or product candidates is intensely competitive, and other companies, including some with substantially greater financial, marketing and sales resources, may also pursue strategies to acquire or license businesses, technologies, products or product candidates that we may consider attractive. In addition, companies that perceive us to be a competitor may be unwilling to assign or license rights to us.

We have limited resources to identify and execute the acquisition or licensing of additional businesses, technologies, services, products, or product candidates and integrate them into our current infrastructure. Moreover, we may devote resources to potential acquisitions or licensing opportunities that are never completed, or we may fail to realize the anticipated benefits of such efforts. We may not be able to acquire or license the rights to additional businesses, technologies, services, products or product candidates on terms that we find acceptable, or at all. In particular, any product candidate that we acquire or license may require additional development efforts prior to commercial sale, including extensive clinical testing and approval by the FDA and applicable foreign regulatory authorities. All product candidates are prone to risks of failure typical of pharmaceutical product development, including the possibility that a product candidate will not be shown to be sufficiently safe and effective for approval by regulatory authorities.

Business interruptions could delay us in the process of developing our potential products and could disrupt our potential sales.

Our principal executive offices are located in Irvine, California, our clinical and finance operations are located in Bedminster, New Jersey and our research and development facility is located in Durham, North Carolina. We are vulnerable to natural disasters, such as severe storms and other events that could disrupt our operations. We do not carry insurance for natural disasters and we may not carry sufficient business interruption insurance to compensate us for losses that may occur. Any losses or damages we incur could have a material adverse effect on our business operations.

Our business and operations would suffer in the event of system failures.

Despite the implementation of security measures, our internal computer systems, and those of our CROs and other third parties on which we rely, are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. If such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our drug development programs. For example, the loss of clinical trial data from completed or ongoing or planned clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development of our product candidates could be delayed.

Our disclosure controls and procedures may not prevent or detect all errors or acts of fraud.

As a public company, we are subject to the periodic reporting requirements of the Exchange Act. Our disclosure controls and procedures are designed to reasonably assure that information required to be disclosed by us in reports we file or submit under the Exchange Act is accumulated and communicated to management, and recorded, processed, summarized and reported within

Table of Contents

the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures or internal controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

If product liability lawsuits are successfully brought against us, our insurance may be inadequate and we may incur substantial liability.

We face an inherent risk of product liability claims as a result of the clinical testing of our product candidates. We will face an even greater risk if we commercially sell our potential products or any other product candidate that we develop. We maintain primary product liability insurance and excess product liability insurance that cover our clinical trials, and we plan to maintain insurance against product liability lawsuits for commercial sale of our potential products. Historically, the potential liability associated with product liability lawsuits for pharmaceutical products has been unpredictable. Although we believe that our current insurance is a reasonable estimate of our potential liability and represents a commercially reasonable balancing of the level of coverage as compared to the cost of the insurance, we may be subject to claims in connection with our clinical trials and, in the future, commercial use of our potential products, for which our insurance coverage may not be adequate, and the cost of any product liability litigation or other proceeding, even if resolved in our favor, could be substantial.

For example, we may be sued if any product we develop allegedly causes injury or is found to be otherwise unsuitable during clinical testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability or a breach of warranties. Large judgments have been awarded in class action lawsuits based on drugs that had unanticipated adverse effects. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our product candidates. Regardless of the merits or eventual outcome, liability claims may result in:

- reduced resources of our management to pursue our business strategy;
- decreased demand for our product candidates or products that we may develop;
- injury to our reputation and significant negative media attention;
- withdrawal of clinical trial participants;
- termination of clinical trial sites or entire trial programs;
- initiation of investigations by regulators;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- significant costs to defend resulting litigation;
- diversion of management and scientific resources from our business operations;
- substantial monetary awards to trial participants or patients;
- loss of revenue; and
- the inability to commercialize any products that we may develop.

We will need to increase our insurance coverage if and when we begin selling our product candidates if and when they receive marketing approval. However, the product liability insurance we will need to obtain in connection with the commercial sales of our product candidates if and when they receive regulatory approval may be unavailable in meaningful amounts or at a reasonable cost. In addition, insurance coverage is becoming increasingly expensive. If we are unable to obtain or maintain sufficient insurance coverage at an acceptable cost or to otherwise protect against potential product liability claims, it could prevent or inhibit the development and commercial production and sale of our product candidates if and when they obtain regulatory approval, which could materially adversely affect our

business, financial condition, results of operations, cash flows and prospects.

Table of Contents

Additionally, we do not carry insurance for all categories of risk that our business may encounter. Some of the policies we currently maintain include general liability, employment practices liability, property, auto, workers' compensation, products liability and directors' and officers' insurance. We do not know, however, if we will be able to maintain insurance with adequate levels of coverage. Any significant uninsured liability may require us to pay substantial amounts, which would materially adversely affect our financial position, cash flows and results of operations.

Risks Related to Ownership of Our Common Stock

The market price of our common stock has been, and may continue to be, highly volatile.

Our stock price has been volatile and is likely to continue to be volatile. The following factors, in addition to other factors described in this "Risk Factors" section, may have a significant impact on the market price of our common stock:

- the results of our testing and clinical trials, including the results of our Phase 3 registration trials for Rhopressa™ and Roclatan™;
- announcements of regulatory approval or a complete response letter, or specific label indications or patient populations for its use, or changes or delays in the regulatory review process;
- announcements of therapeutic innovations or new products by us or our competitors;
- adverse actions taken by regulatory agencies with respect to our clinical trials, manufacturing supply chain or sales and marketing activities;
- any adverse changes to our relationships with manufacturers, suppliers, licensees or collaboration partners;
- the results of our efforts to acquire or license additional product candidates;
- variations in the level of expenses related to our existing product candidates or preclinical and clinical development programs;
- any intellectual property infringement actions in which we may become involved;
- announcements concerning our competitors or the pharmaceutical industry in general;
- achievement of expected product sales and profitability;
- manufacture, supply or distribution shortages;
- actual or anticipated fluctuations in our quarterly or annual operating results;
- changes in financial estimates or recommendations by securities analysts;
- trading volume of our common stock;
- sales of our common stock by us, our executive officers and directors or our stockholders in the future;
- general economic and market conditions and overall fluctuations in the capital markets;
- changes in accounting principles; and
- the loss of any of our key scientific or management personnel.

In addition, the stock market, in general, and small pharmaceutical and biotechnology companies have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance. Further, the current decline in the financial markets and related factors beyond our control may cause our stock price to decline rapidly and unexpectedly.

We have been named a defendant in a purported securities class action lawsuit. This, and any additional securities litigation, could result in substantial damages and may divert management's time and attention from our business.

On April 23, 2015, we announced that Rocket 1 did not meet its primary efficacy endpoint. A putative securities class action lawsuit captioned Kelley et al. v. Aerie Pharmaceuticals, Inc., et al., Case No. 3:15-cv-03007, was filed against us and certain of our officers and directors in the United States District Court for the District of New Jersey on April 29, 2015. An amended complaint was filed on September 28, 2015 on behalf of a purported class of persons and entities who purchased or otherwise acquired our publicly traded securities between June 25, 2014 and April 23, 2015. The amended complaint asserts claims under

52

Table of Contents

the Exchange Act and alleges that the defendants made materially false and misleading statements or omitted allegedly material information during that period related to, among other things, the prospects of Rocket 1 and Rhopressa™.

We believe that we have meritorious defenses and intend to defend the lawsuit vigorously. The outcome of this lawsuit is necessarily uncertain, we could be forced to expend significant resources in the defense of this suit and we may not prevail. We are not currently able to estimate the possible cost to us from this matter, as this lawsuit is currently at an early stage and we cannot be certain how long it may take to resolve this matter or the possible amount of any damages that we may be required to pay. It is possible that we could, in the future, incur judgments or enter into settlements of claims for monetary damages. A decision adverse to our interests on this action could result in the payment of substantial damages, or possibly fines, and could have a material adverse effect on our business, financial condition and results of operations. In addition, the uncertainty of the currently pending litigation could lead to volatility in our stock price.

If our stock price experiences volatility, we may be the subject of additional securities litigation in the future. Litigation of this type could result in substantial costs and diversion of management's attention and resources, which could adversely impact our business. Monitoring and defending against legal actions is time-consuming for our management and detracts from our ability to fully focus on our business activities. Any adverse determination in litigation could also subject us to significant liabilities.

Certain of our existing stockholders, executive officers and directors own a significant percentage of our common stock and may be able to influence or control matters submitted to our stockholders for approval.

Our officers and directors, and stockholders who own more than 5% of our outstanding common stock, beneficially own approximately 66.1% of our common stock as of December 31, 2015. This significant concentration of share ownership may adversely affect the trading price for our common stock because investors often perceive disadvantages in owning stock in companies with ownership concentration. Some or all of our stockholders may be able to influence or determine matters requiring stockholder approval. The interests of these stockholders may not always coincide with our interests or the interests of other stockholders.

This may also prevent or discourage unsolicited acquisition proposals or offers for our common stock that other stockholders may feel are in their best interest, and certain of our existing stockholders may act in a manner that advances their best interests and not necessarily those of other stockholders, including seeking a premium value for their common stock, and might affect the prevailing market price for our common stock.

Additionally, under certain circumstances, our amended and restated certificate of incorporation renounces any interest or expectancy that we have in, or in being offered an opportunity to participate in, corporate opportunities that are presented to certain of our existing stockholders or their affiliates and certain other related parties (whether or not any such person is our director). These provisions will apply even if the opportunity is one that we might reasonably have pursued or had the ability or desire to pursue if granted the opportunity to do so.

Sales of a substantial number of shares of our common stock in the public market 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.

If securities or industry analysts do not publish or cease publishing research or reports about us, our business or our market, or if they adversely change their recommendations or publish negative reports regarding our business or our stock, our stock price and trading volume could decline.

The trading market for our common stock may be influenced by the research and reports that industry or securities analysts may publish about us, our business, our market or our competitors. We do not have any control over these analysts and we cannot provide any assurance that analysts will continue to cover us or provide favorable coverage. If any of the analysts who may cover us adversely change their recommendation regarding our stock, or provide more favorable relative recommendations about our competitors, our stock price could decline. If any analyst who may cover us were to cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in

the financial markets, which in turn could cause our stock price or trading volume to decline.

Because we do not intend to declare cash dividends on our shares of common stock in the foreseeable future, stockholders must rely on appreciation of the value of our common stock for any return on their investment.

Table of Contents

We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends in the foreseeable future. In addition, the terms of the 2014 Convertible Notes and any future debt agreements may preclude us from paying dividends. As a result, we expect that only appreciation of the price of our common stock, if any, will provide a return to investors for the foreseeable future.

The requirements associated with being a public company require significant company resources and management attention.

We are subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act, the listing requirements of the securities exchange on which our common stock is traded, and other applicable securities rules and regulations. The Exchange Act requires that we file annual, quarterly and current reports with respect to our business and financial condition and maintain effective disclosure controls and procedures and internal control over financial reporting. In addition, subsequent rules implemented by the SEC and NASDAQ may also impose various additional requirements on public companies. As a result, we have incurred, and we will continue to incur, additional legal, accounting and other expenses that we did not incur as a nonpublic company, particularly after we are no longer an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. Further, the need to establish the corporate infrastructure demanded of a public company may divert management’s attention from implementing our growth strategy. We have made, and will continue to make, changes to our corporate governance standards, disclosure controls and financial reporting and accounting systems to meet our reporting obligations. However, the measures we take may not be sufficient to satisfy our obligations as a public company, which could subject us to delisting of our common stock, fines, sanctions and other regulatory action and potentially civil litigation.

The JOBS Act allows us to postpone the date by which we must comply with some of the laws and regulations intended to protect investors and to reduce the amount of information we provide in our reports filed with the SEC, which could undermine investor confidence in our company and adversely affect the market price of our common stock.

For so long as we remain an “emerging growth company” as defined in the JOBS Act, we may take advantage of certain exemptions from various requirements that are applicable to public companies that are not “emerging growth companies” including:

- the provisions of Section 404(b) of the Sarbanes-Oxley Act requiring that our independent registered public accounting firm provide an attestation report on the effectiveness of our internal control over financial reporting;
- the “say on pay” provisions (requiring a non-binding stockholder vote to approve compensation of certain executive officers) and the “say on golden parachute” provisions (requiring a non-binding stockholder vote to approve golden parachute arrangements for certain executive officers in connection with mergers and certain other business combinations) of the Dodd-Frank Act and some of the disclosure requirements of the Dodd-Frank Act relating to compensation of its chief executive officer; and
- the requirement to provide detailed compensation discussion and analysis in proxy statements and reports filed under the Exchange Act, and instead provide a reduced level of disclosure concerning executive compensation.

We may take advantage of these exemptions until we are no longer an “emerging growth company.” We would cease to be an “emerging growth company” upon the earliest of: (i) December 31, 2018; (ii) the last day of the first fiscal year in which our annual gross revenues are $1 billion or more; (iii) the date on which we have, during the previous three-year period, issued more than $1 billion in non-convertible debt securities; or (iv) as of the end of any fiscal year in which the market value of our common stock held by non-affiliates exceeded $700 million as of the end of the second quarter of that fiscal year.

We currently take advantage of some, but not all, of the reduced regulatory and reporting requirements that are available to us so long as we qualify as an “emerging growth company.” For example, we have irrevocably elected under Section 107 of the JOBS Act not to take advantage of the extension of time to comply with new or revised financial accounting standards available under Section 102(b) of the JOBS Act. Our independent registered public

accounting firm is not required to provide an attestation report on the effectiveness of our internal control over financial reporting so long as we qualify as an “emerging growth company,” which may increase the risk that weaknesses or deficiencies in our internal control over financial reporting go undetected. Likewise, so long as we qualify as an “emerging growth company,” we may elect not to provide investors with certain information, including certain financial information and certain information regarding compensation of our executive officers, that we would otherwise have been required to provide in filings we make with the SEC, which may make it more difficult for investors and securities analysts to evaluate our company. We cannot predict if investors will find our common

Table of Contents

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 be more volatile and may decline.

Some provisions of our charter documents and Delaware law may have anti-takeover effects that could discourage an acquisition of us by others, even if an acquisition would be beneficial to our stockholders, and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our restated certificate of incorporation and our bylaws, as well as provisions of the Delaware General Corporation Law, or DGCL, could make it more difficult for a third party to acquire us or increase the cost of acquiring us, even if doing so would benefit our stockholders, including transactions in which stockholders might otherwise receive a premium for their shares. These provisions include:

- establishing a classified board of directors such that not all members of the board are elected at one time;
- allowing the authorized number of our directors to be changed only by resolution of our board of directors;
- limiting the removal of directors by the stockholders;
- authorizing the issuance of "blank check" preferred stock, the terms of which may be established and shares of which may be issued without stockholder approval;
- prohibiting stockholder action by written consent, thereby requiring all stockholder actions to be taken at a meeting of our stockholders;
- eliminating the ability of stockholders to call a special meeting of stockholders;
- establishing advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted upon at stockholder meetings; and
- requiring the approval of the holders of at least 75% of the votes that all our stockholders would be entitled to cast to amend or repeal our bylaws.

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, which is responsible for appointing the members of our management. In addition, we are subject to Section 203 of the DGCL, which generally prohibits a Delaware corporation from engaging in any of a broad range of business combinations with an interested stockholder for a period of three years following the date on which the stockholder became an interested stockholder, unless such transactions are approved by our board of directors. This provision could have the effect of delaying or preventing a change of control, whether or not it is desired by or beneficial to our stockholders.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our principal executive offices are located in Irvine, California, our clinical and finance operations are located in Bedminster, New Jersey and our research and development facility is located in Durham, North Carolina. Our Irvine, California location consists of approximately 14,500 square feet of office space under a lease that expires in January 2021 and our Bedminster, New Jersey location consists of approximately 14,000 square feet of office space under a lease that expires in August 2020. Our research and development facility consists of approximately 19,500 square feet of laboratory and office space under a lease agreement that expires in January 2022. We may require additional space and facilities as our business expands.

ITEM 3. LEGAL PROCEEDINGS

We may periodically become subject to legal proceedings and claims arising in connection with our business. Except as set forth below, we are not a party to any known litigation, are not aware of any unasserted claims and do not have contingency reserves established for any litigation liabilities.

A putative securities class action lawsuit captioned Kelley et al. v. Aerie Pharmaceuticals, Inc., et al., Case No. 3:15-cv-03007, was filed against us and certain of our officers and directors in the United States District Court for the District of New Jersey on April 29, 2015. An amended complaint was filed on September 28, 2015 on behalf of a purported class of persons and entities

55

Table of Contents

who purchased or otherwise acquired our publicly traded securities between June 25, 2014 and April 23, 2015. The amended complaint asserts claims under the Exchange Act and alleges that the defendants made materially false and misleading statements or omitted allegedly material information during that period related to, among other things, the prospects of Rocket 1 and Rhopressa™.

We believe that the claims in the asserted action are without merit and intend to defend the lawsuit vigorously, and we expect to incur costs associated with defending the action. In addition, we have various insurance policies related to the risks associated with our business, including directors' and officers' liability insurance policies. However, there is no assurance that we will be successful in our defense of the action, and there is no assurance that our insurance coverage, which contains a self-insured retention, will be sufficient or that our insurance carriers will cover all claims or litigation costs. At this time, we cannot accurately predict the ultimate outcome of this matter. Due to the inherent uncertainties of litigation, we cannot reasonably predict the timing or outcomes, or estimate the amount of loss, or range of loss, if any, or their effect, if any, on our financial statements.

ITEM 4. MINE SAFETY DISCLOSURES

None.

Table of Contents

PART II

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

Market Information

Our common stock is traded on the NASDAQ Global Market under the symbol "AERI." On February 25, 2016, the closing price for our common stock as reported on the NASDAQ Global Market was $16.34. The following table sets forth the high and low intraday sale prices per share of our common stock for the periods indicated as reported by the NASDAQ Global Market.

	High	Low
2015		
Fourth Quarter	$28.21	$16.52
Third Quarter	33.25	14.29
Second Quarter	35.89	8.84
First Quarter	32.07	22.36
2014		
Fourth Quarter	$32.50	$19.46
Third Quarter	27.25	16.05
Second Quarter	29.71	13.66
First Quarter	27.15	15.03

Stockholders

As of February 25, 2016, we had 26,511,882 shares of common stock outstanding held by approximately 8 stockholders of record. 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.

Table of Contents

Stock Performance Graph

The following graph illustrates a comparison of the total cumulative stockholder return on our common stock since October 25, 2013, which is the date our common stock first began trading on the NASDAQ Global Market, to two indices: the NASDAQ Composite Index and the NASDAQ Biotechnology Index. The graph assumes an initial investment of $100 on October 25, 2013, in our common stock and in the stocks comprising each index. It also assumes reinvestment of dividends, if any. Historical stockholder return shown is not necessarily indicative of future performance, and we do not make or endorse any predictions as to future stockholder returns.

*This performance graph shall not be deemed “soliciting material” or be deemed “filed” for purposes of Section 18 of 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, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

Dividend Policy

We have not declared or paid any cash dividends on our capital stock in the last two fiscal years. We currently anticipate that we will retain future earnings, if any, for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends in the foreseeable future. In addition, the terms of our current and any future debt agreements may preclude us from paying dividends. As a result, we anticipate that only appreciation of the price of our common stock, if any, will provide a return to investors for at least the foreseeable future.

Purchase of Equity Securities

We did not purchase any of our equity securities during the period covered by this report.

Recent Sales of Unregistered Securities

None.

Use of Proceeds from Registered Securities

On November 3, 2014, we filed a shelf registration statement on Form S-3 (Registration No. 333-199821), which was declared effective by the SEC on November 10, 2014. The shelf registration statement permits: (i) the offering, issuance and sale by us

Table of Contents

of up to a maximum aggregate offering price of $150.0 million of our common stock; (ii) sales of common stock by certain selling stockholders; and (iii) the offering, issuance and sale of up to a maximum aggregate offering price of $50.0 million of our common stock that may be issued and sold by us under an “at-the-market” sales agreement with Cantor Fitzgerald & Co. The common stock that was offered, issued and sold by us under the “at-the-market” sales agreement was included in the $150.0 million of common stock that may be offered, issued and sold by us under the shelf registration statement. As of December 31, 2015, we had no availability to issue shares under this “at-the-market” sales agreement.

On November 6, 2015, we filed a prospectus supplement to the base prospectus dated November 10, 2014. The prospectus supplement permits the offering, issuance and sale of up to a maximum aggregate offering price of $50.0 million of our common stock that may be issued and sold by us under separate “at-the-market” sales agreements with RBC Capital Markets, LLC and Cantor Fitzgerald & Co. The common stock that may be offered, issued and sold by us under these “at-the-market” sales agreements is included in the $150.0 million of common stock that may be offered, issued and sold by us under the shelf registration statement. As of December 31, 2015, $48.1 million remained available for issuance under these “at-the-market” sales agreements.

For the year ended December 31, 2015, we issued and sold 1,754,556 shares of our common stock under the “at-the-market” sales agreements and received net proceeds of $50.5 million, after deducting commissions at a rate of up to 3% of the gross sales price per share sold and other fees and expenses. There were no sales of securities registered pursuant to the shelf registration statement for the year ended December 31, 2014.

We currently hold the net proceeds from the “at-the-market” sales as cash deposits and in a variety of capital preservation investments, including short-term, investment-grade, interest-bearing instruments and U.S. government securities. There has been no material change in our planned use of the net proceeds as described in our shelf registration statement filed on November 3, 2014.

Table of Contents

ITEM 6. SELECTED FINANCIAL DATA

The following table sets forth our selected financial data for the periods and as of the dates indicated. You should read the following selected financial data together with the "Management's Discussion and Analysis of Financial Condition and Results of Operations" section of this report and our audited consolidated financial statements and the accompanying notes included elsewhere in this report. We have derived the statements 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 from our audited consolidated financial statements included elsewhere in this report. We have derived the statement of operations data for the years ended December 31, 2012 and 2011 and the balance sheet data as of December 31, 2013, 2012 and 2011 from our audited consolidated financial statements not included in this report. Our historical results for any prior period are not necessarily indicative of results to be expected in any future period.

	YEAR ENDED DECEMBER 31,				
	2015	2014	2013	2012	2011
	(in thousands)				
Statement of Operations Data:					
General and administrative	$(30,635)	$(20,103)	$(10,287)	$(5,020)	$(3,521)
Research and development	(44,451)	(29,869)	(11,883)	(9,273)	(10,695)
Loss from operations	(75,086)	(49,972)	(22,170)	(14,293)	(14,216)
Other income (expense), net	862	1,839	(8,978)	(685)	1,249
Net loss before income taxes	$(74,224)	$(48,133)	$(31,148)	$(14,978)	$(12,967)
Income tax expense	(139)	—	—	—	—
Net loss	$(74,363)	$(48,133)	$(31,148)	$(14,978)	$(12,967)
Net loss attributable to common stockholders—basic and diluted[1]	$(74,363)	$(48,133)	$(31,598)	$(15,643)	$(13,419)
Net loss per share attributable to common stockholders—basic and diluted[1]	$(2.88)	$(2.00)	$(6.38)	$(16.39)	$(14.50)
Weighted average number of common shares outstanding—basic and diluted[1]	25,781,230	24,086,651	4,955,760	954,695	925,625

	AS OF DECEMBER 31,				
	2015	2014	2013	2012	2011
	(in thousands)				
Balance Sheet Data:					
Cash and cash equivalents	$91,060	$85,586	$69,649	$2,925	$15,068
Short-term investments	45,502	54,339	—	—	—
Long-term investments	13,808	18,275	—	—	—
Total assets	159,127	159,835	70,458	3,219	15,458
Notes payable, net of discount, and accrued interest thereon	—	—	—	2,347	—
Warrants liability—related parties	—	—	—	2,456	1,098
Convertible notes, net of discounts	123,236	122,906	—	—	—
Convertible preferred stock	—	—	—	60,898	60,348
Total stockholders' equity (deficit)	18,775	28,042	66,976	(63,919)	(48,697)

(1)

Prior to 2014, net loss attributable to common stockholders reflects the accretion on convertible preferred stock and, where applicable, preferred stock dividends. See Note 2 to our audited consolidated financial statements appearing elsewhere in this report for an explanation of the method used to calculate the basic and diluted net loss per share attributable to common stockholders.

Table of Contents

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

The following management's discussion and analysis should be read in conjunction with our audited financial statements and related notes that appear elsewhere in this Annual Report on Form 10-K. This management's discussion and analysis contains forward-looking statements that involve risks and uncertainties. Please see "Special Note Regarding Forward-Looking Statements" for additional factors relating to such statements, and see "Risk Factors" in Part I, Item 1A of this report for a discussion of certain risk factors applicable to our business, financial condition and results of operations. Past operating results are not necessarily indicative of operating results in any future periods.

Overview

We are a clinical-stage pharmaceutical company focused on the discovery, development and commercialization of first-in-class therapies for the treatment of patients with glaucoma and other diseases of the eye. Our two advanced stage product candidates are designed to lower intraocular pressure, or IOP, in patients with open-angle glaucoma and ocular hypertension. Both product candidates are taken once-daily and have shown in preclinical and clinical trials to be effective in lowering IOP, with novel mechanisms of action, or MOAs, and a positive safety profile. Our lead product candidate is once-daily, Rhopressa™ (netarsudil ophthalmic solution) 0.02%. We successfully completed our second Phase 3 registration trial for Rhopressa™, named "Rocket 2," in September 2015, which will be the pivotal trial for a New Drug Application, or NDA, filing with the U.S. Food and Drug Administration, or FDA, that we expect to submit in the third quarter of 2016. The primary clinical efficacy endpoint was to demonstrate non-inferiority of IOP lowering for Rhopressa™ compared to timolol in a 90-day efficacy period. The final primary baseline IOP ranges for Rocket 2 were above 20 mmHg, or millimeters of mercury, to below 25 mmHg. In addition to successfully achieving non-inferiority to timolol at this endpoint range, the recently reported topline 12-month safety data from Rocket 2 confirmed a positive safety profile for the drug and demonstrated a consistent IOP lowering effect throughout the 12-month period at the specified timepoint.

As background, the final primary endpoint range for Rocket 2 was updated from the original trial design, which included baseline IOPs of up to 27 mmHg. This change in endpoint range was made while Rocket 2 was in progress and prior to the database being locked, and was performed with FDA agreement. The reason for the change was the failure of our first Phase 3 registration trial for Rhopressa™, named "Rocket 1." This 90-day efficacy trial did not meet its primary clinical efficacy endpoint of demonstrating non-inferiority of IOP lowering for Rhopressa™ compared to timolol at its primary range of above 20 mmHg to below 27 mmHg, which we reported in April 2015 (while Rocket 2 was already underway). Rocket 1 was successful at its pre-specified secondary endpoint range of above 20 mmHg and below 24 mmHg, and it was agreed by the FDA that Rocket 1, because of its success in meeting the secondary endpoint range, could be used as supportive to Rocket 2 for the upcoming NDA filing.

We are also conducting a third Phase 3 registration trial for Rhopressa™, named "Rocket 3," in Canada, which is a supplementary 12-month safety-only trial and is not required for NDA filing purposes. In addition, we are conducting a fourth Phase 3 registration trial for Rhopressa™, named "Rocket 4," in the U.S., which is designed to generate the six-month safety data that will be needed for European approval purposes, and is also not required for NDA filing purposes. We expect to report the topline 90-day interim efficacy data for Rocket 4 in the fourth quarter of 2016.

Our second product candidate is once-daily Roclatan™ (netarsudil/latanoprost ophthalmic solution) 0.02%/0.005%. Roclatan™ is a fixed-dose combination of Rhopressa™ and latanoprost, which is the most commonly prescribed drug for the treatment of patients with glaucoma. It currently has one Phase 3 registration trial in process with a second about to start, after having successfully completed a Phase 2b clinical trial for patients with open-angle glaucoma and ocular hypertension in June 2014. In the Phase 2b clinical trial, Roclatan™ achieved its primary efficacy endpoint on day 29 and statistical superiority over individual components at all timepoints. We believe Roclatan™ has the potential to

provide a greater IOP-lowering effect than any currently approved glaucoma product. Therefore, we believe that Roclatan™, if approved, could compete with both PGA and non-PGA therapies and become the product of choice for patients requiring maximal IOP lowering, including those with higher IOPs and those who present with significant disease progression despite currently available therapies.

The first Phase 3 registration trial for Roclatan™ , named “Mercury 1,” commenced in September 2015. We expect to commence our second Phase 3 registration trial for Roclatan™ , named “Mercury 2,” in March 2016. Mercury 1 is a 12-month safety trial which includes a 90-day interim efficacy readout and Mercury 2 is a 90-day efficacy trial. If both Mercury

Table of Contents

1 and Mercury 2 are successful, we expect to file an NDA for Roclatan™ in the second half of 2017, approximately one year after the NDA filing for Rhopressa™.

We believe our clinical plans for both Rhopressa™ and Roclatan™ are already in place to satisfy European regulatory requirements. In addition to Rocket 1 and Rocket 2, the Rocket 4 trial is designed to provide adequate six-month safety data for Rhopressa™ to meet European requirements. Based on our Rhopressa™ clinical plan, we expect to file for regulatory approval in Europe by mid-2017. While Mercury 1 and Mercury 2 will be used for European approval of Roclatan™, we also plan to initiate a third Phase 3 registration trial for Roclatan™, named Mercury 3," in Europe in the first half of 2017. Mercury 3 will be designed to compare Roclatan™ to a fixed dose combination product broadly marketed in Europe, which if successful should improve our commercialization prospects in that region.

Our stated objective is to build a major ophthalmic pharmaceutical company. In addition to our primary product candidates, Rhopressa™ and Roclatan™, we are also exploring the longer-term impact of Rhopressa™ on the diseased trabecular meshwork, as well as neuroprotection, and evaluating possible uses of our existing proprietary portfolio of Rho Kinase inhibitors beyond glaucoma. In February 2015, we issued a research update on preclinical results demonstrating the potential for Rhopressa™ to have disease-modifying activity in glaucoma patients by stopping fibrosis in the trabecular meshwork, and also increasing perfusion in the trabecular outflow pathway thus increasing both drainage and the delivery of nutrients to the diseased tissue. Additionally, our preclinical small molecule, AR-13154, has shown preclinically the potential to decrease lesion size in wet age-related macular degeneration (AMD) at numerically higher levels than a current market-leading product.

We may license, acquire or develop additional product candidates and technologies to broaden our presence in ophthalmology. In August 2015 and September 2015, we entered into collaboration and license arrangements with GrayBug, Inc. and Ramot at Tel Aviv University, Ltd., respectively, neither of which represents a material financial commitment by Aerie. Our collaboration with GrayBug is focused on researching the potential use of their biodegradable polymer technology to deliver a version of AR-13154 to the back of the eye over a sustained period of time. With Ramot, we are evaluating a Ramot preclinical anti-beta amyloid small molecule, named EG-30, for neuroprotection in glaucoma and reduction of geographic atrophy in advanced dry AMD. We continually explore and discuss potential additional opportunities for new ophthalmic products, delivery alternatives and new therapeutic areas with potential partners.

Our strategy includes developing our business outside of North America, including obtaining regulatory approval on our own for our lead product candidates in Europe and possibly obtaining regulatory approval through the use of a partner in Japan. Regarding our international commercialization strategy, if our product candidates are successful, we may potentially commercialize ourselves or with a partner in Europe, and likely with a partner in Japan. We expect to finalize our European commercialization strategy by the end of 2016.
In March 2015, we revised our corporate structure to align with our business strategy outside of North America by establishing Aerie Pharmaceuticals Limited, a wholly-owned subsidiary organized under the laws of the Cayman Islands ("Aerie Limited"). In addition, we assigned the beneficial rights to our non-U.S. and non-Canadian intellectual property to Aerie Limited (the "IP Assignment"). As part of the IP Assignment, we and Aerie Limited entered into a research and development agreement and cost sharing agreement pursuant to which we and Aerie Limited will share the costs of the development of intellectual property. Additionally, in April 2015, we continued to prepare for foreign-based activities and established Aerie Pharmaceuticals Ireland Limited ("Aerie Ireland Limited") as a wholly-owned subsidiary of Aerie Limited to develop and commercialize the beneficial rights of the intellectual property assigned as part of the IP Assignment pursuant to a license arrangement to be entered into between Aerie Limited and Aerie Ireland Limited. We are currently evaluating the possibility of constructing an Aerie manufacturing plant in Ireland.

We have incurred net losses since our inception in June 2005. Our operations to date have been limited to research and development and raising capital. As of December 31, 2015, we had an accumulated deficit of $217.6 million. We recorded net losses of $74.4 million, $48.1 million and $31.1 million for the years ended December 31, 2015, 2014 and 2013, respectively. We anticipate that a substantial portion of our capital resources and efforts in the foreseeable future will be focused on completing the development and obtaining regulatory approval and preparing for potential commercialization of our product candidates.

We expect our research and development expenses to increase as we continue to initiate and conduct clinical trials for our Rhopressa™ and Roclatan™ product candidates and pursue regulatory approval. As we prepare for commercialization, we will likely incur significant commercial, sales, marketing and manufacturing expenses. Since our initial public offering ("IPO") in October 2013, we are also incurring additional expenses associated with operating as a public company. As a result, we expect to continue to incur significant and increasing operating losses at least for the next several years.

Table of Contents

Prior to our IPO, we raised net cash proceeds of $78.6 million from the private placement of convertible preferred stock and convertible notes. Prior to and in connection with our IPO, all outstanding shares of convertible preferred stock and all convertible notes were converted into shares of common stock. On October 30, 2013, we completed our IPO and raised net proceeds of approximately $68.3 million, after deducting underwriting discounts and commissions of $5.4 million and expenses of $3.6 million.

Since our IPO, we have issued $125.0 million aggregate principal amount of senior secured convertible notes (the "2014 Convertible Notes"), for which we received net proceeds of approximately $122.9 million, after deducting discounts and issuance costs of $2.1 million, and issued 1,754,556 shares of our common stock under our "at-the-market" sales agreements, for which we received net proceeds of approximately $50.5 million, after deducting commissions at a rate of up to 3% of the gross sales price per share sold and other fees and expenses.

Proceeds from our "at-the-market" sales in 2015, the 2014 Convertible Notes financing in September 2014, our IPO in October 2013 and any future sales under our current "at-the-market" sales agreements are currently expected to provide sufficient resources to complete all currently known non-clinical and clinical requirements for our development programs advancing Rhopressa™ and Roclatan™, approval by the FDA and product commercialization, pending successful outcome of the trials. We also intend to use the proceeds in part for general corporate purposes and potentially for strategic growth opportunities.

To date, we have not generated product revenue and we do not expect to generate product revenue unless and until we successfully complete development and obtain regulatory approval for one or more of our product candidates. If we do not successfully commercialize any of our product candidates, we may be unable to generate product revenue or achieve profitability.

We may be required to obtain further funding through public or private offerings, debt financing, collaboration and licensing arrangements or other sources. Adequate additional funding may not be available to us on acceptable terms, or at all. If we are unable to raise capital when needed or on acceptable terms, we would be forced to delay, reduce or eliminate our research and development programs or commercialization efforts.

Financial Overview

Revenue

We have not generated any revenue from the sale of any products, and we do not expect to generate any revenue unless or until we obtain regulatory approval of and commercialize our products.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries, benefits and stock-based compensation for all officers and employees in general management, finance and administration. Other significant expenses include facilities expenses and professional fees for accounting, legal and other services.

We expect that our general and administrative expenses will increase with the continued advancement of our product candidates and with our increased management, legal, compliance, accounting and investor relations expenses as we continue to grow. We expect these increases will likely include higher expenses for insurance, expenses related to the hiring of additional personnel and payments to outside service providers, lawyers and accountants.

Research and Development Expenses

Since our inception, we have focused on our development programs. Research and development expenses consist primarily of costs incurred for the research and development of our preclinical and clinical candidates, which include:

- employee-related expenses, including salaries, benefits, travel and stock-based compensation expense for research and development personnel;
- expenses incurred under agreements with contract research organizations ("CROs"), contract manufacturing organizations and service providers that assist in conducting clinical trials and preclinical studies;
- costs associated with preclinical activities and development activities;
- costs associated with regulatory operations; and

Table of Contents

- depreciation expense for assets used in research and development activities.

We expense research and development costs to operations as incurred. The costs for certain development activities, such as clinical trials, are recognized based on the terms of underlying agreements as well as an evaluation of the progress to completion of specific tasks using data such as patient enrollment, clinical site activations along with additional information provided to us by our vendors.

Expenses relating to activities, such as manufacturing and stability and toxicology studies, that are supportive of the product candidate itself, are classified as direct non-clinical. Expenses relating to clinical trials and similar activities, including costs associated with CROs, are classified as direct clinical. Expenses relating to activities that support more than one development program or activity such as personnel costs, stock-based compensation, facilities and depreciation are not allocated to direct clinical or non-clinical expenses and are separately classified as "unallocated."

The following table shows our research and development expenses by product candidate and by type of activity for the years ended December 31, 2015, 2014 and 2013:

	YEAR ENDED DECEMBER 31,		
	2015	2014	2013
	(in thousands)		
Rhopressa™			
Direct non-clinical	$6,958	$8,765	$3,410
Direct clinical	15,635	10,994	1,607
Total	$22,593	$19,759	$5,017
Roclatan™			
Direct non-clinical	$2,151	$690	$481
Direct clinical	4,240	1,869	234
Total	$6,391	$2,559	$715
Discontinued product candidates			
Direct non-clinical	$56	$89	$596
Direct clinical	—	1	2,965
Total	$56	$90	$3,561
Unallocated	15,411	7,461	2,590
Total research and development expense	$44,451	$29,869	$11,883

For the periods presented, we did not incur significant direct non-clinical or direct clinical costs for our exploration of the impact of Rhopressa™ on the diseased trabecular meshwork and neuroprotection or for possible uses of our existing proprietary portfolio of Rho Kinase inhibitors beyond glaucoma. Costs for these activities were primarily comprised of internal personnel costs and were included in unallocated expenses. Costs associated with our current collaboration arrangements were also included in unallocated expenses. Discontinued product candidates relate to previously developed AR-12286 and related compounds for which further development for the treatment of glaucoma was discontinued in 2013.

Research and development activities associated with the discovery and development of new drugs and products for the treatment of diseases of the eye are central to our business model. Product candidates in later stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials. We expect our research and development expenses to increase as we continue to conduct clinical trials for our product candidates, or if the FDA requires us to conduct additional trials for approval, and explore additional product candidates and technologies to broaden our presence in ophthalmology.

Our research and development expenditures are subject to numerous uncertainties in timing and cost to completion. Development timelines, the probability of success and development expenses can differ materially from expectations. The cost of clinical trials may vary significantly over the life of a project as a result of differences arising during

clinical development, including, among others, the following:

- number of trials required for approval;

Table of Contents

- number of sites included in the trials;
- length of time required to enroll suitable patients;
- number of patients that participate in the trials;
- drop-out or discontinuation rates of patients;
- duration of patient follow-up;
- costs related to compliance with regulatory requirements;
- number and complexity of analyses and tests performed during the trial;
- phase of development of the product candidate; and
- efficacy and safety profile of the product candidate.

Our expenses related to clinical trials are based on estimates of patient enrollment and related expenses at clinical investigator sites as well as estimates for the services received and efforts expended pursuant to contracts with research institutions, consultants and CROs that assist in conducting and managing clinical trials. We generally accrue expenses related to clinical trials based on contracted amounts applied to the level of patient enrollment and activity according to the protocol. If future timelines or contracts are modified based upon changes in the clinical trial protocol or scope of work to be performed, we modify our estimates of accrued expenses accordingly on a prospective basis. Historically, such modifications have not been material.

As a result of the uncertainties discussed above, we are unable to determine with certainty the duration and completion costs of our development programs or precisely when and to what extent we will receive revenue from the commercialization and sale of our product candidates. We may never succeed in achieving regulatory approval for one or more of our product candidates. The duration, costs and timing of clinical trials and development of any product candidates will depend on a variety of factors, including the uncertainties of future preclinical studies and clinical trials, uncertainties in the clinical trial enrollment rate and changing government regulation. In addition, the probability of success for each product candidate will depend on numerous factors, including efficacy and tolerability profiles, manufacturing capability, competition, and commercial viability.

Other Income (Expense), Net

Other income consists of interest earned on our cash and cash equivalents and investments as well as the net proceeds from the sale of our net operating loss tax benefits for the state of New Jersey. Refer to Note 3 to our audited consolidated financial statements appearing elsewhere in this report for further information.

Other expense consists of interest expense under our convertible notes, including the 2014 Convertible Notes, amortization of debt discounts and issuance costs and other miscellaneous expense.

Critical Accounting Policies and Use of Estimates

Our management’s discussion and analysis of financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States, or U.S. GAAP. The preparation of consolidated financial statements also requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, costs and expenses and related disclosures. We evaluate our estimates and judgments on an ongoing basis. Significant estimates include assumptions used in the determination of stock-based compensation and certain research and development expenses. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. Our significant accounting policies are more fully described in Note 2 to our audited consolidated financial statements included elsewhere in this report. The following accounting policies are the most critical in fully understanding and evaluating our reported financial results and affect significant judgments and estimates that we use in the preparation of our financial statements.

Table of Contents

Accrued Expenses

As part of the process of preparing our consolidated financial statements, we are required to estimate accrued expenses. This process involves reviewing open contracts and purchase orders, communicating with applicable vendor personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual cost. We make estimates of our accrued expenses as of each balance sheet date in our consolidated financial statements based on facts and circumstances known to us. We periodically confirm the accuracy of our estimates with the service providers and make adjustments if necessary. Examples of estimated accrued expenses include:

- fees paid to CROs in connection with clinical trials;
- fees paid to investigative sites in connection with clinical trials; and
- fees paid to contract manufacturing organizations and service providers that assist in conducting preclinical and clinical trials.

We accrue our expenses related to clinical trials based on our estimates of the services received and efforts expended pursuant to contracts with multiple research institutions and CROs that conduct research activities and/or manage clinical trials on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows. Payments under some of these contracts depend on factors such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If the level of effort varies from our estimate, we will adjust the accrual accordingly.

If we underestimate or overestimate the level of services performed or the costs of these services, our actual expenses could differ from our estimates. Although we do not currently anticipate the future settlement of existing accruals to differ materially from our estimates, our understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and could result in us reporting amounts that are too high or too low for any period. There have been no material changes in estimates for the periods presented.

Fair Value Measurements

We record certain financial assets and liabilities at fair value based on the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. The fair value of our financial instruments, including cash and cash equivalents, short-term investments, other current assets, accounts payable and accrued expenses approximate their respective carrying values due to the short-term nature of these instruments. The carrying amounts of long-term investments represent their estimated fair values. The estimated fair value of the 2014 Convertible Notes was $140.1 million and $163.8 million as of December 31, 2015 and 2014, respectively. As of December 31, 2015 and 2014, all outstanding warrants are classified as equity and are recorded within additional paid-in capital on the consolidated balance sheets.

Stock-Based Compensation

We recognize compensation costs related to stock options granted to employees ratably over the requisite service period, which in most cases is the vesting period of the award for employees, based on the estimated fair value of the awards on the date of grant. Compensation expense for options granted to non-employees is determined as the fair value of consideration received or the fair value of the equity instruments issued, whichever is more reliably measured. The fair value of the awards granted to non-employees is re-measured each period until the related service is complete. Compensation expense related to restricted stock awards is based on the market value of our common stock on the grant date and is expensed ratably over the vesting period. Compensation expense for stock purchase rights under our employee stock purchase plan is measured and recognized on the date that we become obligated to issue shares of our common stock and is based on the difference between the fair value of our common stock and the purchase price on such date.

Stock-based compensation expense was $12.9 million, $9.2 million and $2.9 million for the years ended December 31, 2015, 2014 and 2013, respectively. As of December 31, 2015, we had $29.9 million of unrecognized

compensation expense.

The intrinsic value of all stock options outstanding as of December 31, 2015 was $55.9 million, of which $37.3 million and $18.6 million related to stock options that were vested and unvested, respectively, at that date.

Table of Contents

Significant Factors, Assumptions and Methodologies Used in Determining Fair Value

Determining the appropriate fair value measurement of stock-based awards requires the use of subjective assumptions. In the absence of a public trading market for our common stock prior to the completion of our IPO, we conducted periodic assessments of the valuation of our common stock. The determination of the fair value measurement of options using the Black-Scholes option pricing model is affected by our estimated common stock fair values as well as assumptions regarding a number of other subjective variables. These other variables include the expected term of the options, our expected stock price volatility over the expected term of the options, stock option exercise and cancellation behaviors, risk-free interest rates and expected dividends.

We estimated the fair value of stock options at the grant date using the following assumptions:

- Fair Value of our Common Stock. For all stock options granted after the completion of our IPO, the fair value for our underlying common stock is determined using the closing price on the date of grant as reported on the NASDAQ Global Market. For all stock options granted prior to the completion of our IPO, the fair value for our underlying common stock was determined by our board of directors in its sole discretion based on recommendations from management and taking into account advice and assistance provided by third-party valuation consultants engaged to assist us in connection with such valuations.
- Volatility. We calculate expected volatility based on our historical volatility in combination with reported data for a selected group of similar publicly traded companies, or guideline peer group, for which the relevant historical information is available. We selected representative companies from the pharmaceutical industry with similar characteristics to us, including stage of product development and therapeutic focus. We will continue to use a combination of our historical volatility and the guideline peer group volatility information for the foreseeable future.
- Expected Term. We used the simplified method as prescribed by the SEC Staff Accounting Bulletin No. 107, Share-Based Payment, as we do not have sufficient historical exercise and post-vesting termination data to provide a reasonable basis upon which to estimate the expected term of stock options granted to employees. The simplified method is based on the vesting period and the contractual term for each grant, or for each vesting-tranche for awards with graded vesting. The midpoint between the vesting date and the maximum contractual expiration date is used as the expected term under this method.
- Risk-free Rate. The risk-free interest rate is based on the yields of U.S. Treasury securities with maturities similar to the expected time to exercise.
- Forfeiture. Forfeitures are estimated such that we only recognize expense for the shares expected to vest, and adjustments are made if actual forfeitures differ from those estimates. We estimate our annual forfeiture rates based on our historical analysis of actual stock option forfeitures and our future expectations.
- Dividend Yield. Except for a one-time cash dividend related to the spin-off of certain non-core intellectual property that occurred in 2012, we have never declared or paid any cash dividends and do not presently plan to pay cash dividends in the foreseeable future.

The estimation of the number of stock awards that will ultimately vest requires judgment, and to the extent actual results or updated estimates differ from our current estimates, such amounts will be recorded as a cumulative adjustment in the period in which estimates are revised.

Key weighted average assumptions utilized in the fair value calculation for the underlying common stock as of December 31, 2015, 2014 and 2013 appear in the table below.

	YEAR ENDED DECEMBER 31,		
	2015	2014	2013
Expected term (years)	6.07	6.25	6.25
Expected stock price volatility	74.11 %	80.44 %	79.20 %
Risk-free interest rate	1.63 %	1.90 %	1.78 %
Dividend yield	—	—	—

67

Table of Contents

Stock Purchase Warrants

We account for our stock purchase warrants as either equity or liabilities based upon the characteristics and provisions of the underlying instruments. Warrants classified as equity are recorded at their fair value on the date of issuance as additional paid-in capital on the consolidated balance sheets and no further adjustments are made to their valuation. Warrants classified as liabilities are recorded at their fair value on the date of issuance and are re-measured on each subsequent balance sheet date until the earlier of the exercise or expiration of the applicable warrants or until such time that the warrants are no longer determined to be derivative instruments. The fair value changes are recognized as income (decreases in fair value) or expense (increases in fair value) in Other income (expense), net in the consolidated statements of operations and comprehensive loss. The fair value of these liabilities is estimated using the Black-Scholes method, which, under our facts and circumstances, approximates, in all material respects, the values determined when using a Monte Carlo simulation.

The Black-Scholes method and the Monte Carlo simulation require the use of subjective assumptions, including but not limited to stock price volatility, the expected life of the warrants, the risk free interest rate and the fair value of the underlying equity securities. The fair value of the underlying common stock is determined as discussed above under "—Stock-Based Compensation."

Tax Valuation Allowance

A valuation allowance is recorded if it is more likely than not that a deferred tax asset will not be realized. We provided a full valuation allowance on our deferred tax assets that consist of net federal and state net operating losses, stock based compensation and tax credits. Due to our three year cumulative loss position, history of operating losses and lack of available evidence supporting future taxable income, we believe that a valuation allowance on our deferred tax assets as of December 31, 2015 remains appropriate.

Results of Operations

Comparison of the Years Ended December 31, 2015 and 2014

The following table summarizes the results of our operations for the years ended December 31, 2015 and 2014:

	YEAR ENDED DECEMBER 31,		INCREASE (DECREASE)	% INCREASE (DECREASE)
	2015	2014		
	(in thousands)			
Expenses				
General and administrative	$(30,635)	$(20,103)	$10,532	52%
Research and development	(44,451)	(29,869)	14,582	49%
Other income (expense), net	862	1,839	(977)	N/A
Net loss before income taxes	$(74,224)	$(48,133)		

General and administrative expenses

General and administrative expenses increased by $10.5 million for the year ended December 31, 2015 as compared to the year ended December 31, 2014. This increase was primarily associated with the expansion of our employee base to support the growth of our operations. Personnel costs increased by $4.5 million, including an increase in employee stock based compensation expense of $2.6 million and an increase in salaries and related expenses of $1.9 million, and facilities, travel and other expenses increased by $2.4 million. Outside professional fees increased by $3.6 million as a result of the IP Assignment and associated tax and legal activities, as well as increased system integration expenses.

Research and development expenses

For the year ended December 31, 2015, our research and development activity was primarily associated with Phase 3 registration trials for Rhopressa™ and Roclatan™. Research and development expenses increased by $14.6 million for the year ended December 31, 2015 as compared to the year ended December 31, 2014. Costs for Roclatan™ increased $3.8 million as direct clinical costs increased $2.4 million and direct non-clinical costs increased $1.4 million as a result of commencing Mercury 1 and preparatory activities for our other Phase 3 registration trials for Roclatan™. Costs for

Rhopressa™ increased by $2.8 million as direct clinical costs increased by $4.6 million and direct non-clinical costs decreased by $1.8 million. Both

Table of Contents

Rocket 1 and Rocket 2 commenced in July 2014. Rocket 1 was completed in April 2015 and we received three-month topline efficacy results for Rocket 2 in September 2015. Additionally, we began to incur expenses for Rocket 4 in mid-2015. Unallocated expenses, including employee compensation, facilities and travel costs, increased by $8.0 million.

Other income (expense), net

Other income (expense), net decreased by $1.0 million for the year ended December 31, 2015 as compared to the year ended December 31, 2014. The decrease was mainly due to an increase in interest and amortization expense of $1.9 million partially offset by an increase in income of $0.9 million related to both an increase in the sale of deferred state tax benefits to unrelated third parties of $0.6 million, as further described in Note 9 to our audited consolidated financial statements appearing elsewhere in this report, and an increase in investment income of $0.3 million.

Comparison of the Years Ended December 31, 2014 and 2013

The following table summarizes the results of our operations for the years ended December 31, 2014 and 2013:

	YEAR ENDED DECEMBER 31,		INCREASE (DECREASE)	% INCREASE (DECREASE)	
	2014	2013			
	(in thousands)				
General and administrative expenses	$(20,103)	$(10,287)	$9,816	95	%
Research and development expenses	(29,869)	(11,883)	17,986	151	%
Other income (expense), net	1,839	(8,978)	10,817	N/A	
Net loss before income taxes	$(48,133)	$(31,148)			

General and administrative expenses

General and administrative expenses increased by $9.8 million for the year ended December 31, 2014 as compared to the year ended December 31, 2013. This increase was primarily associated with the expansion of our employee base to support the growth of our operations. Personnel costs increased by $6.7 million, including employee stock based compensation expense of $5.2 million and new salaried employees and related expenses of $1.9 million. This increase in personnel costs was partially offset by a decrease in severance expense of $0.4 million related to a former employee. Outside professional fees, including audit and legal fees, board expenses and other business related activities, increased by $2.8 million and travel expenses increased by $0.3 million.

Research and development expenses

For the year ended December 31, 2014, our research and development activity was primarily associated with Phase 3 registration trials for Rhopressa™, Phase 2b clinical trials for Roclatan™ and preparatory activities for our Phase 3 clinical trials for Roclatan™. Research and development expenses increased by $18.0 million for the year ended December 31, 2014 as compared to the year ended December 31, 2013. Costs for Rhopressa™ increased by $14.8 million as direct clinical costs and direct non-clinical costs increased $9.4 million and $5.4 million, respectively. Costs for Roclatan™ increased $1.9 million as direct clinical costs increased $1.6 million and direct non-clinical costs increased $0.2 million. Additionally, unallocated expenses including employee compensation, consulting costs and related expenses increased by $4.9 million. Research and development expenses for discontinued product candidates decreased by $3.5 million.

Other income (expense), net

Other income (expense), net increased by $10.8 million for the year ended December 31, 2014 as compared to the year ended December 31, 2013. The increase was mainly due to a decrease of $3.7 million in non-cash expense related to the change in the fair value of warrant liabilities and a decrease of $3.2 million in interest and amortization expense related to the 2014 Convertible Notes and the $18.0 million of convertible notes initially sold in 2012 (the “2012 Convertible Notes”). Upon closing of the IPO in October 2013, the principal and accrued interest outstanding under our 2012 Convertible Notes were converted into 1,860,363 shares of common stock resulting in a $2.7 million loss. Additionally, for the years ended December 31, 2014 and 2013, we received $2.3 million and $1.3 million, respectively, of income from the sale of deferred state tax benefits to unrelated third parties, as further described in

Note 9 to our audited consolidated financial statements appearing elsewhere in this report.

Table of Contents

Liquidity and Capital Resources

Since our inception, we have funded operations primarily through the sale of equity securities, including our IPO, and the issuance of convertible notes. We have incurred losses and experienced negative operating cash flows since our inception and anticipate that we will continue to incur losses for at least the next two to three years, or until such a time when our product candidates are commercially successful, if at all.

Prior to our IPO, we raised net cash proceeds of $78.6 million from the private placement of convertible preferred stock and convertible notes. Prior to and in connection with our IPO, all outstanding shares of convertible preferred stock and all convertible notes were converted into shares of common stock.

On October 30, 2013, we completed our IPO and issued 7,728,000 shares of our common stock at an IPO price of $10.00 per share, including 1,008,000 shares of common stock issued upon the exercise in full by the underwriters of their option to purchase additional shares to cover over- allotments. We received net proceeds from the IPO of approximately $68.3 million, after deducting underwriting discounts and commissions of $5.4 million and expenses of $3.6 million.

On September 30, 2014, we issued $125.0 million aggregate principal amount of the 2014 Convertible Notes. We received net proceeds from the issuance of the 2014 Convertible Notes of approximately $122.9 million, after deducting discounts and issuance costs of $2.1 million.

On November 3, 2014, we filed a shelf registration statement on Form S-3 that permits: (i) the offering, issuance and sale by us of up to a maximum aggregate offering price of $150.0 million of the our common stock; (ii) sales of common stock by certain selling stockholders; and (iii) the offering, issuance and sale by us of up to a maximum aggregate offering price of $50.0 million of our common stock that may be issued and sold by us under an "at-the-market" sales agreement with Cantor Fitzgerald & Co. The common stock that was offered, issued and sold by us under this "at-the-market" sales agreement was included in the $150.0 million of common stock that may be offered, issued and sold by us under the shelf registration statement. As of December 31, 2015, we had no availability to issue shares under this "at-the-market" sales agreement.

On November 6, 2015, we filed a prospectus supplement to the base prospectus dated November 10, 2014. The prospectus supplement permits the offering, issuance and sale of up to a maximum aggregate offering price of $50.0 million of our common stock that may be issued and sold by us under separate "at-the-market" sales agreements with RBC Capital Markets, LLC and Cantor Fitzgerald & Co. The common stock that may be offered, issued and sold by us under the "at-the-market" sales agreements is included in the $150.0 million of common stock that may be offered, issued and sold by us under the shelf registration statement. As of December 31, 2015, $48.1 million remained available for issuance under these "at-the-market" sales agreements.

For the year ended December 31, 2015, we issued and sold 1,754,556 shares of our common stock under the "at-the-market" sales agreements and received net proceeds of $50.5 million, after deducting commissions at a rate of up to 3% of the gross sales price per share sold and other fees and expenses. There were no sales of securities registered pursuant to the shelf registration statement for the year ended December 31, 2014.

As of December 31, 2015, our principal sources of liquidity were our cash and cash equivalents and investments, which totaled approximately $150.4 million.

We believe that our cash and cash equivalents and investments as of December 31, 2015 and any future sales under our current "at-the-market" sales agreements will provide sufficient resources to complete all currently known non-clinical and clinical requirements for our development programs advancing Rhopressa™ and Roclatan™, approval by the FDA and product commercialization, pending successful outcome of the trials. Our ability to continue as a going concern will depend, in large part, on our ability to successfully commercialize our product candidates and generate positive cash flow from operations, neither of which is certain.

Table of Contents

The following table summarizes our sources and uses of cash:

(in thousands)	YEAR ENDED DECEMBER 31, 2015	2014	2013
Net cash (used in) provided by:	(in thousands)		
Operating activities	$(55,746)	$(33,726)	$(16,448)
Investing activities	9,382	(73,318)	(63)
Financing activities	51,838	122,981	83,235
Net increase in cash and cash equivalents	$5,474	$15,937	$66,724

During the years ended December 31, 2015, 2014 and 2013, our operating activities used net cash of $55.7 million, $33.7 million and $16.4 million, respectively. The use of net cash in each of these periods primarily resulted from our net losses, adjusted for certain non-cash items. The increase in net loss from operations for the year ended December 31, 2015 as compared to the year ended December 31, 2014 and for the year ended December 31, 2014 as compared to the year ended December 31, 2013 was due primarily to increases in research and development expenses and general and administrative expenses as previously described, see “Results of Operations.” For the years ended December 31, 2015, 2014 and 2013, we received $2.9 million, $2.3 million and $1.3 million, respectively, of cash proceeds from the sale of deferred state tax benefits to unrelated third parties, which decreased net cash used in operating activities.

During the year ended December 31, 2015, our investing activities provided net cash of $9.4 million primarily related to maturities and sales of available-for-sale investments of $59.5 million, which was partially offset by purchases of available-for-sale investments of $46.9 million. Additionally, we purchased $3.3 million of software and equipment to support the growth of our operations and facilitate our increased research and development activities. During the year ended December 31, 2014, our investing activities used net cash of $73.3 million primarily related to purchases of available-for-sale investments of $95.4 million, which was partially offset by maturities and sales of available-for-sale investments of $22.2 million. During the year ended December 31, 2013 our investing activities primarily related to purchases of office furnishings and equipment.

During the years ended December 31, 2015, 2014 and 2013, our financing activities provided net cash of $51.8 million, $123.0 million and $83.2 million, respectively. The net cash provided by financing activities during the year ended December 31, 2015 was primarily related to the issuance and sale of common stock under our “at-the-market” sales agreements pursuant to our shelf registration statement. During 2015, we issued and sold 1,754,556 shares of our common stock under the “at-the-market” sales agreements and received net proceeds of $50.5 million, after deducting commissions at a rate of up to 3% of the gross sales price per share sold and other fees and expenses. The net cash provided by financing activities during the year ended December 31, 2014 was primarily related to net proceeds of $122.9 million from the issuance of the 2014 Convertible Notes, after deducting discounts and issuance costs. The net cash provided by financing activities during the year ended December 31, 2013 was related to net proceeds of $68.3 million from our IPO and $15.0 million from the sale of the 2012 Convertible Notes.

Operating Capital Requirements

We expect to incur increasing operating losses for at least the next several years as we continue to conduct and complete Phase 3 clinical trials for Rhopressa™, initiate, conduct and complete Phase 3 clinical trials for Roclatan™ and prepare for commercialization. We currently expect that our existing cash and cash equivalents and investments and availability under our current “at-the-market” sales agreements will provide sufficient resources to complete all currently known non-clinical and clinical requirements for our development programs advancing Rhopressa™ and Roclatan™, approval by the FDA and product commercialization, pending successful outcome of the trials.

We also expect to continue to incur increasing costs associated with the growth of our operations, including but not limited to, increased costs and expenses for personnel associated with the expansion of our employee base, increased business development activities, increased audit and legal fees, investor relations fees, expenses for compliance

programs and various other costs.

Due to the numerous risks and uncertainties associated with research, development and commercialization of pharmaceutical products, we are unable to estimate the exact amount of our operating capital requirements. We based our projections on assumptions that may prove to be incorrect or unreliable or may change due to circumstances beyond our control, and as a result we may consume our available capital resources earlier than we originally projected. Our future funding requirements will depend on many factors, including, but not limited to the following:

Table of Contents

- timing and costs of our future preclinical studies and clinical trials for our product candidates;
- costs of any follow-on development or products;
- timing and cost of the ongoing supportive preclinical and clinical studies and activities for our product candidates;
- outcome, timing and costs of seeking regulatory approval;
- costs of commercialization activities for our product candidates, if we receive regulatory approval, including the costs and timing of establishing product sales, marketing, manufacturing and distribution capabilities;
- costs of operating as a public company, including legal, compliance, accounting and investor relations expenses;
- terms and timing of any current or future collaborations, licensing, consulting or other arrangements; and
- filing and prosecuting patent applications, maintaining and protecting our intellectual property rights and defending against intellectual property related claims.

We may need to obtain additional financing to fund our future operations, including supporting our international operations and sales and marketing activities, as well as funding the ongoing development of any additional product candidates or technologies that we might license, acquire or develop internally. To the extent that we raise additional capital through the sale of common stock, convertible securities or other equity securities, the ownership interests of our existing stockholders may be materially diluted and the terms of these securities could include liquidation or other preferences that could adversely affect the rights of our existing stockholders.

If we are unable to raise capital when needed or on acceptable terms, we could be forced to delay, reduce or discontinue our research and development programs or commercialization efforts.

Contractual Obligations and Commitments

The following table summarizes our contractual obligations at December 31, 2015:

	TOTAL	LESS THAN 1 YEAR	1 TO 3 YEARS	3 TO 5 YEARS	MORE THAN 5 YEARS
	(in thousands)				
Operating lease and other obligations[1]	$8,428	$1,933	$3,199	$2,685	$611
Convertible Notes[2]	125,000	—	—	—	125,000
	133,428	1,933	3,199	2,685	125,611

(1) Our operating lease and other obligations are primarily related to our principal executive office in Irvine, California, corporate office in Bedminster, New Jersey and research facility in Durham, North Carolina.

(2) On September 30, 2014, we issued the 2014 Convertible Notes to Deerfield Partners, L.P., Deerfield International Master Fund, L.P., Deerfield Private Design Fund III, L.P., Deerfield Special Situations Fund, L.P. and Deerfield Special Situations International Master Fund, L.P. On January 1, 2015, Deerfield Special Situations International Master Fund, L.P. transferred all of its rights under the 2014 Convertible Notes to Deerfield Special Situations Fund, L.P. The 2014 Convertible Notes mature on the seventh anniversary from the date of issuance, unless earlier converted. Refer to Note 8 to our audited consolidated financial statements appearing elsewhere in this report for further information.

We have no other contractual obligations or commitments that are not subject to our existing financial statement accrual processes.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements as defined under SEC rules.

Table of Contents

Net Operating Loss Carry-Forwards

We have incurred significant net operating losses since our inception in June 2005. We expect to continue to incur net operating losses for the foreseeable future as we continue to develop our product portfolio, seek regulatory approval, and, if such approval is obtained, prepare to commercialize our products.

In March 2015, we revised our corporate structure to align with our business strategy outside of North America and consummated the IP Assignment. Largely as a result of the IP Assignment, we reversed approximately $29.5 million of our valuation allowance on certain deferred tax assets, primarily federal and state net operating losses, as of December 31, 2015.

As of December 31, 2015, we had approximately $61.1 million of net operating loss carry-forwards which will begin to expire at various dates beginning in 2024, if not utilized.

Net operating loss and tax credit carry-forwards are subject to review and possible adjustment by the Internal Revenue Service and state tax authorities and may become subject to an annual limitation in the event of certain cumulative changes in the ownership interest of significant stockholders over a three-year period in excess of 50%, as defined under Sections 382 and 383 of the Internal Revenue Code of 1986, as amended, as well as similar state provisions. This could limit the amount of tax attributes that can be utilized annually to offset future taxable income or tax liabilities. The amount of the annual limitation is determined based on the value of our company immediately prior to the ownership change. Subsequent ownership changes may further affect the limitation in future years.

Certain transactions occurred in 2015 and prior years that resulted in ownership changes as defined under Section 382 and similar state provisions which will limit the future use of certain federal and state net operating loss carry-forwards. Those federal and state net operating losses that are not limited are included as deferred tax assets and have been fully offset by a valuation allowance as of December 31, 2015, as we believe, based on our history of operating losses, it is more likely than not that the tax benefits will not be realized.

Jumpstart Our Business Startups Act of 2012

The Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”) provides that an emerging growth company can take advantage of certain exemptions from various reporting and other requirements that are applicable to public companies that are not emerging growth companies. We currently take advantage of some, but not all, of the reduced regulatory and reporting requirements that are available to us for as long as we qualify as an emerging growth company. We have irrevocably elected under Section 107 of the JOBS Act not to take advantage of the extension of time to comply with new or revised financial accounting standards available under Section 102(b) of the JOBS Act and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. Our independent registered public accounting firm will not be required to provide an attestation report on the effectiveness of our internal control over financial reporting for as long as we qualify as an emerging growth company.

Recent Accounting Pronouncements

In November 2015, the Financial Accounting Standards Board (the “FASB”) issued ASU 2015-17, which requires that all deferred tax assets and liabilities, along with any related valuation allowance, be classified as noncurrent on the balance sheet. The guidance is effective for annual periods beginning after December 15, 2016, and all annual and interim periods thereafter, with early adoption permitted. We early adopted this guidance for the year ended December 31, 2015. The adoption of this guidance, which was applied retrospectively did not have a material impact on our consolidated financial statements.

In April 2015, the FASB issued ASU 2015-03, which requires debt issuance costs to be presented in the balance sheet as a direct deduction from the carrying value of the associated debt, consistent with the presentation of a debt discount. The guidance is effective for annual periods beginning after December 15, 2015, and all annual and interim periods thereafter. As permitted, we early adopted this guidance for the year ended December 31, 2015. The adoption of this guidance, which was applied retrospectively and impacted consolidated balance sheet presentation only, resulted in a reclassification of $1.3 million from Other assets, net to a direct deduction from the carrying amount of the 2014 Convertible Notes on the consolidated balance sheet as of December 31, 2014.

In August 2014, the FASB issued ASU 2014-15, which provides guidance about management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related footnote disclosures. The new standard is effective for us for the annual period ending after December 15, 2016 and for annual and interim periods thereafter, with early adoption permitted. We are currently evaluating the impact of this accounting standard update on our financial statements.

Table of Contents

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Our primary exposure to market risk is interest income sensitivity, which is affected by changes in the general level of U.S. interest rates. Our cash and cash equivalents as of December 31, 2015, totaled $91.1 million and consisted primarily of cash and money market funds with original maturities of three months or less from the date of purchase. Our investments totaled $59.3 million as of December 31, 2015 and consisted of certificates of deposit, commercial paper corporate bonds and government agency securities. We had cash and cash equivalents and investments of $158.2 million as of December 31, 2014. Given the short-term nature of our cash equivalents and investments and our investment policy, a sudden change in market interest rates would not be expected to have a material impact on our financial condition or results of operations. We do not engage in any hedging activities against changes in interest rates. The 2014 Convertible Notes carry a fixed interest rate and, as such, are not subject to interest rate risk. We do not have any material foreign currency or other derivative financial instruments.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The financial statements required by this item are set forth beginning at page F-1 of this report and are incorporated herein by reference.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of disclosure controls and procedures.

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15(d)-15(e)), as of the end of the period covered by this report. Based upon the evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of the end of such period, the disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed in the reports we file and submit under the Exchange Act, is (i) recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and (ii) accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure. In designing and evaluating our 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 their objectives, and management necessarily applies its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Management's 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 our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
-

provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our consolidated financial statements.

Table of Contents

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.

Under the supervision of and with the participation of our principal executive officer and principal financial officer, our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2015 based on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in 2013 in Internal Control-Integrated Framework (2013). Based on this assessment, management concluded that our internal control over financial reporting was effective as of December 31, 2015.

This annual report on Form 10-K does not include an attestation report of our independent registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by our independent registered public accounting firm pursuant to an exemption under Section 989G of the Dodd-Frank Wall Street Reform and Consumer Protection Act made available to us under the Jumpstart Our Business Startups Act of 2012.

Changes in Internal Control Over Financial Reporting

During the fourth quarter of 2015, we implemented an enterprise resource planning (ERP) system on a world-wide basis to support our future growth and to integrate significant processes. In connection with the implementation of the ERP system, we updated the processes that constitute our internal control over financial reporting, as necessary, to accommodate related changes to our business processes and accounting procedures. This implementation involved various testing, review procedures and extensive organizational training.

Except as otherwise described above, there have been no significant changes in our internal control over financial reporting during our most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

On February 25, 2016, the Company's Board of Directors established June 8, 2016 as the date of the next Annual Meeting of Stockholders of Aerie Pharmaceuticals, Inc. (the "2016 Annual Meeting"). Because the date of the 2016 Annual Meeting has been changed by more than 30 days from the date of the previous year's meeting, a different deadline applies for stockholders who wish to submit a proposal to be considered for inclusion in our proxy materials for the 2016 Annual Meeting. Stockholders who wish to have a proposal considered for inclusion in our proxy materials for the 2016 Annual Meeting pursuant to Rule 14a-8 under the Exchange Act, must ensure that such proposal is received by our Secretary at 2030 Main Street, Suite 1500, Irvine, CA 92614 on or before the close of business on April 19, 2016, which we have determined to be a reasonable time before we expect to begin to print and send our proxy materials for the 2016 Annual Meeting. Nothing in this paragraph shall be deemed to require us to include in our proxy materials for such meeting any stockholder proposal which does not meet the requirements of the SEC in effect at the time. Any such proposal will be subject to Rule 14a-8 of the Exchange Act.

Table of Contents

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item is incorporated by reference to the information set forth in the sections titled "Nominees for election as Directors," "Information About Our Executive Officers," "Directors Continuing in Office," "Section 16(a) Beneficial Ownership Reporting Compliance," "Code of Business Conduct and Ethics" and "Audit Committee" in our Proxy Statement.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated by reference to the information set forth in the sections titled "Executive Compensation," "Director Compensation" and "Compensation Committee Interlocks and Insider Participation" in our Proxy Statement.

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

The information required by this item is incorporated by reference to the information set forth in the sections titled "Securities Authorized for Issuance under Equity Compensation Plans" and "Security Ownership of Certain Beneficial Owners and Management" in our Proxy Statement.

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

The information required by this item is incorporated by reference to the information set forth in the sections titled "Board of Directors Independence" and "Transactions with Related Persons" in our Proxy Statement.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item is incorporated by reference to the information set forth in the section titled "Independent Registered Public Accounting Firm Fees and Services" in our Proxy Statement.

Table of Contents

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

The financial statement schedules and exhibits filed as part of this annual report on Form 10-K are as follows:

(a)(1) Financial Statements

Reference is made to the audited financial statements included in Item 8 of Part II of this report.

(a)(2) Financial Statement Schedules

Financial statement schedules have been omitted because the required information is not present, or not present in amounts sufficient to require submission of the schedules, or because the required information is provided in the financial statements or notes thereto.

(a)(3) Exhibits

The exhibits required to be filed as part of this report are listed in the Exhibit Index attached hereto and are incorporated herein by reference.

Table of Contents

SIGNATURES

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

AERIE PHARMACEUTICALS, INC.

Date: March 2, 2016

By: /S/ VICENTE ANIDO, JR., PHD
Vicente Anido, Jr., PhD
Chief Executive Officer, Chairman of the Board

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

SIGNATURE	TITLE	DATE
/S/ VICENTE ANIDO, JR., PHD Vicente Anido, Jr., PhD	Chief Executive Officer, Chairman of the Board (Principal Executive Officer)	March 2, 2016
/S/ RICHARD J. RUBINO Richard J. Rubino	Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 2, 2016
/S/ GERALD D. CAGLE, PHD Gerald D. Cagle, PhD	Director	March 2, 2016
/S/ RICHARD CROARKIN Richard Croarkin	Director	March 2, 2016
/S/ MICHAEL M. DU TOIT Michael M. du Toit	Director	March 2, 2016
/S/ GEOFFREY DUYK, MD, PHD Geoffrey Duyk, MD, PhD	Director	March 2, 2016
/S/ MURRAY A. GOLDBERG Murray A. Goldberg	Director	March 2, 2016
/S/ BENJAMIN F. MCGRAW III, PHARM. D. Benjamin F. McGraw III, Pharm. D.	Director	March 2, 2016

/S/ JULIE MCHUGH Julie McHugh	Director	March 2, 2016

Table of Contents

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

AERIE PHARMACEUTICALS, INC.

Table of Contents

Report of Independent Registered Public Accounting Firm
To the Board of Directors and Stockholders of
Aerie Pharmaceuticals, Inc.

In our opinion, the accompanying Consolidated Balance Sheets and the related Consolidated Statements of Operations and Comprehensive Loss, of Stockholders' Equity (Deficit), and of Cash Flows present fairly, in all material respects, the financial position of Aerie Pharmaceuticals, Inc. and its subsidiaries 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
Florham Park, New Jersey
March 2, 2016

Table of Contents

AERIE PHARMACEUTICALS, INC.
Consolidated Balance Sheets
(in thousands, except share and per share data)

	DECEMBER 31,	
	2015	2014
Assets		
Current assets		
Cash and cash equivalents	$91,060	$85,586
Short-term investments	45,502	54,339
Prepaid expenses and other current assets	1,865	1,122
Total current assets	138,427	141,047
Long-term investments	13,808	18,275
Furniture, fixtures and equipment, net	3,816	240
Other assets, net	3,076	273
Total assets	$159,127	$159,835
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable and other current liabilities	$16,565	$8,336
Interest payable	551	551
Total current liabilities	17,116	8,887
Convertible notes, net of discounts and debt issuance costs	123,236	122,906
Total liabilities	140,352	131,793
Commitments and contingencies (Note 14)		
Stockholders' equity		
Preferred stock, $0.001 par value; 15,000,000 shares authorized as of December 31, 2015 and December 31, 2014; None issued and outstanding	—	—
Common stock, $0.001 par value; 150,000,000 shares authorized as of December 31, 2015 and December 31, 2014; 26,458,495 and 24,018,577 shares issued and outstanding as of December 31, 2015 and December 31, 2014, respectively	26	24
Additional paid-in capital	236,492	171,326
Accumulated other comprehensive loss	(179)	(107)
Accumulated deficit	(217,564)	(143,201)
Total stockholders' equity	18,775	28,042
Total liabilities and stockholders' equity	$159,127	$159,835

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

Table of Contents

AERIE PHARMACEUTICALS, INC.
Consolidated Statements of Operations and Comprehensive Loss
(in thousands, except share and per share data)

	YEAR ENDED DECEMBER 31,		
	2015	2014	2013
Operating expenses			
General and administrative	$(30,635)	$(20,103)	$(10,287)
Research and development	(44,451)	(29,869)	(11,883)
Loss from operations	(75,086)	(49,972)	(22,170)
Other income (expense), net	862	1,839	(8,978)
Net loss before income taxes	$(74,224)	$(48,133)	$(31,148)
Income tax expense	(139)	—	—
Net loss	$(74,363)	$(48,133)	$(31,148)
Net loss attributable to common stockholders—basic and diluted	$(74,363)	$(48,133)	$(31,598)
Net loss per share attributable to common stockholders—basic and diluted	$(2.88)	$(2.00)	$(6.38)
Weighted average number of common shares outstanding—basic and diluted	25,781,230	24,086,651	4,955,760
Net loss	$(74,363)	$(48,133)	$(31,148)
Unrealized loss on available-for-sale investments	(72)	(107)	—
Comprehensive loss	$(74,435)	$(48,240)	$(31,148)

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

Table of Contents

AERIE PHARMACEUTICALS, INC.
Consolidated Statements of Stockholders' Equity (Deficit)
(in thousands, except share and per share data)

	CONVERTIBLE PREFERRED STOCK		COMMON STOCK		ADDITIONAL PAID-IN CAPITAL	ACCUMULATED OTHER COMPREHENSIVE LOSS	ACCUMULATED DEFICIT	TOTAL
	SHARES	AMOUNT	SHARES	AMOUNT				
Balances at December 31, 2012	12,120,531	$ 60,898	964,880	$ 1	$ —	$ —	$ (63,920)	$(63,919)
Exercise of stock options	—	—	3,195	—	1	—	—	1
Vesting of restricted stock	—	—	124,966	—	—	—	—	—
Stock-based compensation	—	—	—	—	2,858	—	—	2,858
Accretion from conversion of note payable to related parties	—	240	—	—	(240)	—	—	(240)
Accretion of stock issuance costs	—	210	—	—	(210)	—	—	(210)
Conversion of convertible preferred stock to common stock	(12,120,531)	(61,348)	12,120,531	12	61,336	—	—	61,348
Conversion of convertible notes payable and accrued interest to common stock	—	—	1,860,363	2	18,602	—	—	18,604
Proceeds from issuance of common stock in initial public offering, net of underwriting discounts and commissions of $5,410 and offering costs of $3,644	—	—	7,728,000	8	68,218	—	—	68,226
Issuance of common stock upon net exercise of warrants	—	—	483,614	—	4,896	—	—	4,896
	—	—	—	—	6,560	—	—	6,560

Reclassification of warrants from liabilities to equity	—	—	—	—	—	—		—
Net loss	—	—	—	—	—	—	(31,148)	(31,148)
Balances at December 31, 2013	—	—	23,285,549	23	162,021	—	(95,068)	66,976
Issuance of common stock upon exercise of stock purchase rights	—	—	10,941	—	119	—	—	119
Exercise of stock options	—	—	579,083	1	8	—	—	9
Vesting of restricted stock	—	—	143,004	—	—	—	—	—
Stock-based compensation	—	—	—	—	9,178	—	—	9,178
Unrealized loss on available-for-sale investments	—	—	—	—	—	(107)	—	(107)
Net loss	—	—	—	—	—	—	(48,133)	(48,133)
Balances at December 31, 2014	—	—	24,018,577	24	171,326	(107)	(143,201)	28,042
Proceeds from issuance of common stock, net of commissions and expenses of $1,496	—	—	1,754,556	2	50,371	—	—	50,373
Issuance of common stock upon exercise of stock purchase rights	—	—	5,029	—	96	—	—	96
Exercise of stock options	—	—	296,716	—	1,282	—	—	1,282
Issuance of common stock upon exercise of warrants	—	—	314,368	—	9	—	—	9
Vesting of restricted stock	—	—	69,249	—	—	—	—	—
Stock-based compensation	—	—	—	—	12,945	—	—	12,945
Excess tax benefit	—	—	—	—	463	—	—	463
Unrealized Gain/(Loss)	—	—	—	—	—	(72)	—	(72)
Net loss	—	—	—	—	—	—	(74,363)	(74,363)
	—	$—	26,458,495	$26	$236,492	$(179)	$(217,564)	$18,775

Balances at
December 31,
2015

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

Table of Contents

AERIE PHARMACEUTICALS, INC.
Consolidated Statements of Cash Flows
(in thousands, except share and per share data)

	YEAR ENDED DECEMBER 31,		
	2015	2014	2013
Cash flows from operating activities			
Net loss	$(74,363)	$(48,133)	$(31,148)
Adjustments to reconcile net loss to net cash used in operating activities			
Depreciation	252	73	64
Amortization and accretion costs related to notes payable—related parties	—	—	3,207
Amortization of deferred financing costs and debt discount	305	77	—
Amortization and accretion of premium or discount on available-for-sale investments, net	570	416	—
Interest payable—related parties	—	—	588
Loss (gain) on conversion of notes payable	—	—	2,737
Stock-based compensation	12,945	9,178	2,858
Change in fair value measurements	—	—	3,717
Changes in operating assets and liabilities			
Prepaid, current and other assets	(840)	(717)	(516)
Accounts payable and other current liabilities	5,385	4,829	2,045
Interest payable	—	551	—
Net cash used in operating activities	(55,746)	(33,726)	(16,448)
Cash flows from investing activities			
Purchase of available-for-sale investments	(46,872)	(95,376)	—
Maturity of available-for-sale investments	55,785	20,739	—
Sale of available-for-sale investments	3,749	1,500	—
Purchase of furniture, fixtures and equipment	(3,280)	(181)	(63)
Net cash provided by (used in) investing activities	9,382	(73,318)	(63)
Cash flows from financing activities			
Proceeds from sale of common stock, net of commissions	50,451	—	—
Proceeds from exercise of stock options	1,282	9	1
Proceeds from exercise of stock purchase rights	96	119	—
Proceeds from exercise of warrants	9	—	8
Proceeds from issuance of convertible notes, net of discounts and issuance costs	—	122,853	—
Proceeds from issuance of common stock in initial public offering, net of underwriting discounts	—	—	71,870
Payments of initial public offering costs	—	—	(3,644)
Proceeds from notes payable to related parties	—	—	15,000
Net cash provided by financing activities	51,838	122,981	83,235
Net change in cash and cash equivalents	5,474	15,937	66,724
Cash and cash equivalents			
Beginning of period	85,586	69,649	2,925
End of period	$91,060	$85,586	$69,649
Supplemental disclosures			
Interest paid	$2,186	$—	$—

Income taxes paid	600	—	—
Non-cash financing activities			
Conversion of preferred stock to common stock	$—	$—	$61,348
Conversion of convertible notes payable and accrued interest to common stock	—	—	18,604
Issuance of common stock upon net exercise of warrants	—	—	4,888
Reclassification of warrants from liabilities to equity	—	—	6,560
Accretion from conversion of note payable to related parties	—	—	240
Accretion of stock issuance costs	—	—	210
Deferred costs from issuance of convertible notes	—	25	—

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

Table of Contents

AERIE PHARMACEUTICALS, INC.
Notes to the Consolidated Financial Statements

1. The Company

Aerie Pharmaceuticals, Inc. (“Aerie”), with its wholly-owned subsidiaries Aerie Pharmaceuticals Limited and Aerie Pharmaceuticals Ireland Limited (“Aerie Limited” and “Aerie Ireland Limited”, respectively, together with Aerie, the “Company”), is a clinical-stage pharmaceutical company focused on the discovery, development and commercialization of small molecule products to treat patients with glaucoma and other diseases of the eye. The Company has its principal executive offices in Irvine, California and operates as one business segment.

The Company has not yet commenced commercial operations and therefore has not generated product revenue. The Company’s activities since inception have primarily consisted of developing product candidates, raising capital and performing research and development activities. The Company does not expect to generate revenue until and unless it receives regulatory approval of and successfully commercializes its product candidates. The Company has incurred losses and experienced negative operating cash flows since inception.

The Company has funded its operations primarily through the sale of equity securities and issuance of convertible notes. In October 2013, the Company completed its initial public offering (“IPO”) and issued 7,728,000 shares of its common stock at an IPO price of $10.00 per share, including 1,008,000 shares of common stock issued upon the exercise in full by the underwriters of their option to purchase additional shares to cover over-allotments. The Company received net proceeds from the IPO of approximately $68.3 million, after deducting underwriting discounts and commissions of $5.4 million and expenses of $3.6 million. On September 30, 2014, the Company issued $125.0 million aggregate principal amount of senior secured convertible notes (the “2014 Convertible Notes”). The Company received net proceeds from the issuance of the 2014 Convertible Notes of approximately $122.9 million, after deducting discounts and issuance costs of $2.1 million. Refer to Note 8 for further information regarding the 2014 Convertible Notes.

On November 3, 2014, the Company filed a shelf registration statement on Form S-3 that permits: (i) the offering, issuance and sale by the Company of up to a maximum aggregate offering price of $150.0 million of the Company’s common stock; (ii) sales of common stock by certain selling stockholders; and (iii) the offering, issuance and sale by the Company of up to a maximum aggregate offering price of $50.0 million of the Company’s common stock that may be issued and sold under an “at-the-market” sales agreement with Cantor Fitzgerald & Co. The common stock that was offered, issued and sold by the Company under this “at-the-market” sales agreement was included in the $150.0 million of common stock that may be offered, issued and sold by the Company under the shelf registration statement. As of December 31, 2015, the Company had no availability to issue shares under this “at-the-market” sales agreement.

On November 6, 2015, the Company filed a prospectus supplement to the base prospectus dated November 10, 2014. The prospectus supplement permits the offering, issuance and sale by the Company of up to a maximum aggregate offering price of $50.0 million of the Company’s common stock that may be issued and sold by the Company under separate “at-the-market” sales agreements with RBC Capital Markets, LLC and Cantor Fitzgerald & Co. The common stock that may be offered, issued and sold by the Company under these “at-the-market” sales agreements is included in the $150.0 million of common stock that may be offered, issued and sold by the Company under the shelf registration statement. As of December 31, 2015, $48.1 million remained available for issuance under these “at-the-market” sales agreements.

For the year ended December 31, 2015, the Company issued and sold 1,754,556 shares of common stock under the “at-the-market” sales agreements and received net proceeds of $50.5 million, after deducting commissions at a rate of up to 3% of the gross sales price per share sold and other fees and expenses. There were no sales of securities registered pursuant to the shelf registration statement for the year ended December 31, 2014.

In March 2015, the Company revised its corporate structure to align with its business strategy outside of North America by establishing Aerie Limited, a wholly-owned subsidiary organized under the laws of the Cayman Islands. In addition, Aerie assigned the beneficial rights to its non-U.S. and non-Canadian intellectual property to Aerie Limited (the “IP Assignment”). As part of the IP Assignment, Aerie and Aerie Limited entered into a research and

development agreement and cost sharing agreement pursuant to which Aerie and Aerie Limited will share the costs of the development of intellectual property. Refer to Note 9 for a description of the tax impact of the IP Assignment. Additionally, in April 2015, the Company continued to prepare for foreign-based activities and established Aerie Ireland Limited as a wholly-owned subsidiary of Aerie Limited to develop and commercialize the beneficial rights of the intellectual property assigned as part of the IP Assignment pursuant to a license arrangement to be entered into between Aerie Limited and Aerie Ireland Limited. The Company is currently evaluating the possibility of constructing an Aerie manufacturing plant in Ireland.

Table of Contents

If the Company does not successfully commercialize any of its product candidates, it may be unable to generate product revenue or achieve profitability. Accordingly, the Company may be required to obtain further funding through other public or private offerings, debt financing, collaboration and licensing arrangements or other sources. Adequate additional funding may not be available to the Company on acceptable terms, or at all. If the Company is unable to raise capital when needed or on attractive terms, it would be forced to delay, reduce or eliminate its research and development programs or commercialization efforts.

2. Significant Accounting Policies

Basis of Presentation

The Company's consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP").

Principles of Consolidation

The consolidated financial statements include the accounts of Aerie and its wholly-owned subsidiaries. All intercompany accounts, transactions and profits have been eliminated in consolidation.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and reported amounts of income and expenses during the reporting periods. Significant items subject to such estimates and assumptions include the valuation of stock options and operating expense accruals. Actual results could differ from the Company's estimates.

Segment Information

Operating segments are defined as components of an enterprise about which separate discrete information is available for evaluation by the chief operating decision maker, or decision-making group, in deciding how to allocate resources and in assessing performance. The Company views its operations and manages its business in one operating segment.

Reverse Stock Split

The Company effected a 1-for-5 reverse stock split on October 8, 2013. Accordingly, all share and per share amounts for all preceding periods presented in these consolidated financial statements and notes hereto, have been adjusted retroactively to reflect this reverse stock split, including reclassifying an amount equal to the reduction in par value to additional paid-in capital.

Cash Equivalents

Cash equivalents consist of short-term, highly liquid investments with an original term of three months or less at the date of purchase. Cash deposits are held by six financial institutions in the United States and two financial institutions in Europe.

Concentration of Credit Risk

The Company's cash and cash equivalent balances with financial institutions exceed the $250,000 amount insured by the Federal Deposit Insurance Corporation.

Debt Issuance Costs

Debt issuance costs consist of financing costs incurred by the Company in connection with the closing of the 2014 Convertible Notes are included as a direct deduction from the carrying amount of the 2014 Convertible Notes on the Company's consolidated balance sheets. In connection with the Company's adoption of ASU 2015-03 in the fourth quarter of 2015, the Company reclassified $1.3 million from Other assets, net to a direct deduction from the carrying amount of the 2014 Convertible Notes on the consolidated balance sheet as of December 31, 2014. Refer to "Recent Accounting Pronouncements" for further information regarding the reclassification. The Company amortizes debt issuance costs through the earlier of maturity or the conversion of the 2014 Convertible Notes using the effective interest method. Refer to Note 8 for further information regarding the 2014 Convertible Notes.

Debt Discounts

Debt discounts consist of fees and expenses incurred by the Company in connection with the closing of the Company's 2014 Convertible Notes that were paid directly to the note holders. The Company amortizes debt discounts through the earlier of maturity or the conversion of the 2014 Convertible Notes using the effective interest method. Refer to

Note 8 for further information regarding the 2014 Convertible Notes.

Table of Contents

Furniture, Fixtures and Equipment, Net

Furniture, fixtures and equipment is recorded at historical cost. Depreciation is calculated using the straight-line method over the estimated useful lives of the related assets. Repairs and maintenance are expensed when incurred. Upon retirement or sale, the cost of the assets disposed of and the related accumulated depreciation are removed from the accounts, and any resulting gain or loss is included in the determination of net income.

Software Capitalization

The Company capitalizes certain costs incurred in connection with obtaining or developing internal-use software including external direct costs of materials and services involved with the software development. Capitalized software costs are included in Furniture, fixtures, and equipment and are amortized over a period of three years beginning when the software project is substantially complete and the asset is ready for its intended use. Costs incurred during the preliminary project stage and post-implementation stage, as well as maintenance and training costs, are expensed as incurred.

Research and Development Costs

Research and development costs are charged to expense as incurred and include, but are not limited to:

- Employee-related expenses including salaries, benefits, travel and stock-based compensation expense for research and development personnel;
- expenses incurred under agreements with contract research organizations (“CROs”), contract manufacturing organizations and service providers that assist in conducting clinical and preclinical studies;
- costs associated with preclinical activities and development activities;
- costs associated with regulatory operations; and
- depreciation expense for assets used in research and development activities.

Costs for certain development activities, such as clinical studies, are recognized based on an evaluation of the progress to completion of specific tasks using data such as patient enrollment, clinical site activations, or information provided to the Company by its vendors on their actual costs incurred. Payments for these activities are based on the terms of the individual arrangements, which may differ from the patterns of costs incurred, and are reflected in the consolidated financial statements as prepaid expenses or accrued expenses as deemed appropriate. No material adjustments to these estimates have been recorded in these consolidated financial statements.

Stock-Based Compensation

Compensation cost of stock-based awards granted to employees is measured at grant date, based on the estimated fair value of the award. The Company estimates the fair value of stock options using a Black-Scholes option pricing model. Compensation cost for options granted to non-employees is determined as the fair value of consideration received or the fair value of the equity instruments issued, whichever is more reliably measured. The fair value of restricted stock awards (“RSAs”) is determined based on the fair value of the Company’s common stock on the date of grant. Stock-based compensation costs are expensed on a straight-line basis (net of estimated forfeitures) over the relevant vesting period. The fair value of unvested awards granted to non-employees is re-measured each period until the related service is complete. Compensation expense for employee stock purchase plan rights (“stock purchase rights”) is measured and recognized on the date that the Company becomes obligated to issue shares of common stock and is based on the difference between the fair value of the Company’s common stock and the purchase price on such date. All stock-based compensation expense is recorded between general and administrative and research and development costs in the consolidated statements of operations based upon the underlying employees roles within the Company. As a result of the taxable gain recognized in connection with the IP Assignment, the Company utilized certain net operating losses, including $462,978 in excess tax benefits related to stock-based compensation, to offset taxable income. In accordance with ASC 718, this excess tax benefit was recorded in additional paid-in capital for the year ended December 31, 2015. No excess tax benefits related to stock-based compensation were recognized for the years ended December 31, 2014 or 2013.

Investments

The Company determines the appropriate classification of its investments in debt and equity securities at the time of purchase. The Company's investments are comprised of certificates of deposit, commercial paper, corporate bonds and government agency securities that are classified as available-for-sale in accordance with ASC 320, Investments—Debt and Equity Securities. The Company classifies investments available to fund current operations as current assets on its consolidated balance sheets. Investments are classified as long-term assets on the consolidated balance sheets if (i) the Company has the intent and ability to hold the investments for a period of at least one year and (ii) the contractual maturity date of the investments is greater than one year.

Table of Contents

Available-for-sale investments are recorded at fair value, with unrealized gains or losses included in Accumulated other comprehensive gain (loss) on the Company's consolidated balance sheets. Realized gains and losses are determined using the specific identification method and are included as a component of Other income (expense), net (Note 3). There were no realized gains or losses recognized for the years ended December 31, 2015, 2014 or 2013. The Company reviews investments for other-than-temporary impairment whenever the fair value of an investment is less than the amortized cost and evidence indicates that an investment's carrying amount is not recoverable within a reasonable period of time. To determine whether an impairment is other-than-temporary, the Company considers its intent to sell, or whether it is more likely than not that the Company will be required to sell the investment before recovery of the investment's amortized cost basis. Evidence considered in this assessment includes reasons for the impairment, the severity and the duration of the impairment and changes in value subsequent to period end. As of December 31, 2015, there were no investments with a fair value that was significantly lower than the amortized cost basis or any investments that had been in an unrealized loss position for a significant period.

Fair Value Measurements

The Company records certain financial assets and liabilities at fair value based on the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. The fair value of the Company's financial instruments, including cash and cash equivalents, short-term investments, other current assets, accounts payable and accrued expenses approximate their respective carrying values due to the short-term nature of these instruments. The carrying amounts of long-term investments represent their estimated fair values. The estimated fair value of the 2014 Convertible Notes was $140.1 million and $163.8 million as of December 31, 2015 and 2014, respectively (Note 5). As of December 31, 2015 and 2014, all outstanding warrants are classified as equity and are recorded within additional paid-in capital on the consolidated balance sheets (Note 12).

Stock Purchase Warrants

The Company accounts for its stock purchase warrants as either equity or liabilities based upon the characteristics and provisions of the underlying instruments. Warrants classified as equity are recorded at their fair value on the date of issuance as additional paid-in capital on the consolidated balance sheets and no further adjustments are made to their valuation. Warrants classified as liabilities are recorded at their fair value on the date of issuance and are re-measured on each subsequent balance sheet date until the earlier of the exercise or expiration of the applicable warrants or until such time that the warrants are no longer determined to be derivative instruments. The fair value changes are recognized as income (decreases in fair value) or expense (increases in fair value) in Other income (expense), net in the consolidated statements of operations and comprehensive loss. The fair value of these liabilities is estimated using the Black-Scholes method, which, under the Company's facts and circumstances, approximates, in all material respects, the values determined when using a Monte Carlo simulation.

Comprehensive Loss

Comprehensive loss is comprised of net loss and other comprehensive loss. Other comprehensive loss includes changes in stockholders' equity that are excluded from net income (loss), specifically changes in unrealized gains and losses on the Company's available-for-sale securities.

Income Taxes

Deferred tax assets or liabilities are recorded for temporary differences between financial statement and tax basis of assets and liabilities, using enacted rates in effect for the year in which the differences are expected to reverse. The Company recognizes the impact of an uncertain tax position in the consolidated financial statements only if it is more likely than not that the tax position will be sustained upon examination by the taxing authorities. The Company's policy is to record interest and penalties on uncertain tax positions as income tax expense. The Company did not recognize interest or penalties on uncertain tax positions for the years ended December 31, 2015, 2014 or 2013. As of December 31, 2015 and 2014, the Company had no uncertain tax positions and no interest or penalties were accrued for any uncertain tax positions.

Tax Valuation Allowance

A valuation allowance is recorded if it is more likely than not that a deferred tax asset will not be realized. The Company has provided a full valuation allowance on its deferred tax assets that consist of federal and state net operating losses, stock based compensation and tax credits. Due to the Company's three year cumulative loss position, history of operating losses and lack of available evidence supporting future taxable income, the Company believes that a valuation allowance on its deferred tax assets as of December 31, 2015 remains appropriate.

Table of Contents

Recent Accounting Pronouncements

In November 2015, the Financial Accounting Standards Board (the "FASB") issued ASU 2015-17, which requires that all deferred tax assets and liabilities, along with any related valuation allowance, be classified as noncurrent on the balance sheet. The guidance is effective for annual periods beginning after December 15, 2016, and all annual and interim periods thereafter, with early adoption permitted. The Company early adopted this guidance for the year ended December 31, 2015. The adoption of this guidance, which was applied retrospectively did not have a material impact on the Company's consolidated financial statements.

In April 2015, the FASB issued ASU 2015-03, which requires debt issuance costs to be presented in the balance sheet as a direct deduction from the carrying value of the associated debt, consistent with the presentation of a debt discount. The guidance is effective for annual periods beginning after December 15, 2015, and all annual and interim periods thereafter. As permitted, the Company early adopted this guidance for the year ended December 31, 2015. The adoption of this guidance, which was applied retrospectively and impacted consolidated balance sheet presentation only, resulted in a reclassification of $1.3 million from Other assets, net to a direct deduction from the carrying amount of the 2014 Convertible Notes on the consolidated balance sheet as of December 31, 2014.

In August 2014, the FASB issued ASU 2014-15, which provides guidance about management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related footnote disclosures. The new standard is effective for the Company for the annual period ending after December 15, 2016 and for annual and interim periods thereafter, with early adoption permitted. The Company is currently evaluating the impact of this accounting standard update on the Company's consolidated financial statements.

Net Loss per Share Attributable to Common Stock

Basic net loss per share attributable to common stock ("Basic EPS") is calculated by dividing the net loss attributable to common stockholders by the weighted average number of shares of common stock outstanding for the period, without consideration for potentially dilutive securities with the exception of warrants for common stock with a $0.05 exercise price, which are exercisable for nominal consideration, and shares that are unequivocally issuable under the Company's employee stock purchase plan and are therefore included in the calculation of the weighted-average number of shares of common stock as common stock equivalents. Net loss attributable to common stockholders for the year ended December 31, 2013 is calculated by adjusting the Company's net loss for accretion on convertible preferred stock. Diluted net loss per share attributable to common stock ("Diluted EPS") gives effect to all dilutive potential shares of common stock outstanding during this period. For Diluted EPS, net loss attributable to common stockholders used in calculating Basic EPS is adjusted for certain items related to the dilutive securities.

For all periods presented, the Company's potential common stock equivalents have been excluded from the computation of Diluted EPS as their inclusion would have the effect of reducing the net loss per share of common stock. Therefore, the denominator used to calculate Basic EPS and Diluted EPS is the same in all periods presented. The Company's potential common stock equivalents that have been excluded from the computation of Diluted EPS for all periods presented consist of the following:

	DECEMBER 31,		
	2015	2014	2013
2014 Convertible Notes[(1)]	5,040,323	5,040,323	—
Outstanding stock options	4,583,586	3,826,459	3,189,660
Stock purchase warrants	157,500	309,506	309,506
Restricted common stock awards	119,993	103,064	246,068

(1) Conversion is limited to a 9.985% ownership cap in shares of common stock by the holder. In addition to the common stock equivalents presented above, the 2014 Convertible Notes provide for an increase in the conversion rate if conversion is elected in connection with a significant corporate transaction. Refer to Note 8 for further information regarding the 2014 Convertible Notes.

F-11

Table of Contents

3. Other Income (Expense), Net

Other income (expense), net consists of the following:

	YEAR ENDED DECEMBER 31,		
(in thousands)	2015	2014	2013
Interest and amortization expense	$(2,493)	$(628)	$(3,795)
Sale of New Jersey state tax benefit	2,898	2,288	1,268
Investment and other income, net	457	179	3
Expense due to change in fair value measurements[(1)]	—	—	(3,717)
Loss on conversion of notes payable to related parties	—	—	(2,737)
	$862	$1,839	$(8,978)

[(1)] Includes change in fair value of warrant liabilities and change in fair value of a certain conversion feature related to the 2012 Notes (as defined herein) that was determined to be an embedded derivative requiring bifurcation and separate accounting. See Note 12 and Note 8, respectively.

4. Investments

Cash, cash equivalents and investments as of December 31, 2015 included the following:

(in thousands)	AMORTIZED COST	GROSS UNREALIZED GAINS	GROSS UNREALIZED LOSSES	FAIR VALUE
Cash and cash equivalents:				
Cash and money market accounts	$91,060	$ —	$ —	$91,060
Total cash and cash equivalents	$91,060	$ —	$ —	$91,060
Investments:				
Certificates of deposit (due within 1 year)	$13,611	$ 1	$ (7)	$13,605
Certificates of deposit (due within 2 years)	4,760	—	(10)	4,750
Commercial paper (due within 1 year)	5,977	—	(11)	5,966
Corporate bonds (due within 1 year)	24,002	—	(65)	23,937
Corporate bonds (due within 2 years)	9,142	—	(84)	9,058
Government agencies (due within 1 year)	1,997	—	(3)	1,994
Total investments	$59,489	$ 1	$ (180)	$59,310
Total cash, cash equivalents, and investments	$150,549	$ 1	$ (180)	$150,370

Table of Contents

Cash, cash equivalents and investments as of December 31, 2014 included the following:

(in thousands)	AMORTIZED COST	GROSS UNREALIZED GAINS	GROSS UNREALIZED LOSSES	FAIR VALUE
Cash and cash equivalents:				
Cash and money market accounts	$84,613	$ —	$ —	$84,613
Certificates of deposit	472	—	—	472
Corporate bonds	501	—	—	501
Total cash and cash equivalents	$85,586	$ —	$ —	$85,586
Investments:				
Certificates of deposit (due within 1 year)	$25,823	$ —	$ (9)	$25,814
Certificates of deposit (due within 2 years)	4,429	1	(3)	4,427
Commercial paper (due within 1 year)	5,988	1	(3)	5,986
Corporate bonds (due within 1 year)	16,487	—	(24)	16,463
Corporate bonds (due within 2 years)	13,912	—	(64)	13,848
Government agencies (due within 1 year)	6,082	—	(6)	6,076
Total investments	$72,721	$ 2	$ (109)	$72,614
Total cash, cash equivalents, and investments	$158,307	$ 2	$ (109)	$158,200

5. Fair Value Measurements

The Company records certain financial assets and liabilities at fair value in accordance with the provisions of ASC Topic 820 on fair value measurements. As defined in the guidance, fair value, defined as an exit price, represents the amount that would be received to sell an asset or pay to transfer a liability in an orderly transaction between market participants. As a result, fair value is a market-based approach that should be determined based on assumptions that market participants would use in pricing an asset or a liability. As a basis for considering these assumptions, the guidance defines a three-tier value hierarchy that prioritizes the inputs used in the valuation methodologies in measuring fair value.

- Level 1—Unadjusted quoted prices in active, accessible markets for identical assets or liabilities.
- Level 2—Other inputs that are directly or indirectly observable in the marketplace.
- Level 3—Unobservable inputs that are supported by little or no market activity.

The fair value hierarchy also requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value.

Table of Contents

The following tables summarize the fair value of financial assets and liabilities that are measured at fair value and the classification by level of input within the fair value hierarchy:

	FAIR VALUE MEASUREMENTS AS OF DECEMEBER 31, 2015			
(in thousands)	LEVEL 1	LEVEL 2	LEVEL 3	TOTAL
Cash and cash equivalents:				
Cash and money market accounts	$91,060	$—	$—	$91,060
Total cash and cash equivalents:	$91,060	$—	$—	$91,060
Investments:				
Certificates of deposit	$—	$18,355	$—	$18,355
Commercial paper	—	5,966	—	5,966
Corporate bonds	—	32,995	—	32,995
Government agencies	—	1,994	—	1,994
Total investments	$—	$59,310	$—	$59,310
Total cash, cash equivalents, and investments:	$91,060	$59,310	$—	$150,370

	FAIR VALUE MEASUREMENTS AS OF DECEMEBER 31, 2014			
(in thousands)	LEVEL 1	LEVEL 2	LEVEL 3	TOTAL
Cash and cash equivalents:				
Cash and money market accounts	$84,613	$—	$—	$84,613
Certificates of deposit	—	472	—	472
Corporate bonds	—	501	—	501
Total cash and cash equivalents:	$84,613	$973	$—	$85,586
Investments:				
Certificates of deposit	$—	$30,241	$—	$30,241
Commercial paper	—	5,986	—	5,986
Corporate bonds	—	30,311	—	30,311
Government agencies	—	6,076	—	6,076
Total investments	$—	$72,614	$—	$72,614
Total cash, cash equivalents, and investments:	$84,613	$73,587	$—	$158,200

As of December 31, 2015 and 2014, the estimated fair value of the 2014 Convertible Notes was $140.1 million and $163.8 million, respectively. The estimated fair value of the 2014 Convertible Notes was determined using a scenario analysis and Monte Carlo simulation model to capture the various features of the 2014 Convertible Notes. The scenario analysis and Monte Carlo simulation require the use of Level 3 unobservable inputs and subjective assumptions, including but not limited to the probability of conversion, stock price volatility, the risk free interest rate and credit spread. The decrease in the estimated fair value of the 2014 Convertible Notes was primarily attributable to the change in the closing price of Aerie’s common stock on December 31, 2015 as compared to December 31, 2014. The estimates presented are not necessarily indicative of amounts that could be realized in a current market exchange. The use of alternative market assumptions and estimation methodologies could have a material effect on these estimates of fair value.

Table of Contents

6. Furniture, Fixtures and Equipment, Net

Furniture, fixtures and equipment, net consists of the following:

(in thousands)	ESTIMATED USEFUL LIVES (YEARS)	DECEMBER 31, 2015	2014
Manufacturing equipment	10	$988	$—
Laboratory equipment	7	1,619	830
Software and computer equipment	3	1,695	195
Furniture and fixtures	5	491	238
Leasehold improvements	Term of lease	298	—
		$5,091	$1,263
Less: Accumulated depreciation		(1,275)	(1,023)
		$3,816	$240

Depreciation expense was $252,000, $73,000 and $64,000 for the years ended December 31, 2015, 2014 and 2013, respectively.

7. Accounts Payable & Other Current Liabilities

Accounts payable and other current liabilities consist of the following:

(in thousands)	DECEMBER 31, 2015	2014
Accounts payable	$1,629	$2,068
Accrued expenses and other liabilities:		
Employee benefits and compensation related accruals[1]	3,085	2,257
General and administrative related accruals[2]	2,389	731
Research and development related accruals[3]	7,741	3,280
Accrued income taxes[4]	1,721	—
	$16,565	$8,336

(1) Comprised of accrued bonus, accrued vacation, accrued severance liabilities and liabilities under the Company's employee stock purchase plan.

(2) Comprised of accruals such as outside professional fees and other business related expenses.

(3) Comprised of accruals such as fees for investigative sites, CROs, contract manufacturing organizations and other service providers that assist in conducting preclinical and clinical trials.

(4) Accrued income taxes are the result of the taxable gain from the IP Assignment. Refer to Note 9 for a description of the tax impact of the IP Assignment.

8. Convertible Notes

On September 30, 2014, Aerie issued the 2014 Convertible Notes to Deerfield Partners, L.P., Deerfield International Master Fund, L.P., Deerfield Private Design Fund III, L.P., Deerfield Special Situations Fund, L.P. and Deerfield Special Situations International Master Fund, L.P. (collectively, "Deerfield"). On January 1, 2015, Deerfield Special Situations International Master Fund, L.P. transferred all of its rights under the 2014 Convertible Notes to Deerfield Special Situations Fund, L.P.

The 2014 Convertible Notes bear interest at a rate of 1.75% per annum payable quarterly in arrears on the first business day of each January, April, July and October. The 2014 Convertible Notes mature on the seventh anniversary from the date of issuance, unless earlier converted.

The 2014 Convertible Notes constitute a senior secured obligation of Aerie, collateralized by a first priority security interest in substantially all of the assets of Aerie. The 2014 Convertible Notes provide that, upon the request of Aerie,

Deerfield will release all of the liens on the collateral if both of the following occur: (i) beginning one month after FDA approval of either Rhopressa™ or Roclatan™, shares of Aerie's common stock have traded at a price above $30 per share (subject to adjustment for any subdivision or combination of outstanding common stock) for 30 consecutive trading days, and (ii) Aerie is prepared to

Table of Contents

close a financing that will be secured by a lien on Aerie's assets, subject only to the release of the lien on Aerie's assets held by Deerfield.

In connection with the IP Assignment, Aerie granted Deerfield a security interest in an intercompany promissory note and pledged 65% of the voting stock of Aerie Limited. Upon the request of Aerie, Deerfield will release the lien on the intercompany promissory note under certain circumstances.

At closing, Aerie paid Deerfield a one-time transaction fee of $625,000. In addition, Aerie reimbursed Deerfield in the amount of $250,000 for certain expenses incurred by Deerfield in connection with the transaction. Aerie also incurred $1.3 million of legal and advisory fees in connection with the transaction.

The 2014 Convertible Notes are convertible at any time at the option of Deerfield, in whole or in part, into shares of common stock, including upon the repayment of the 2014 Convertible Notes at maturity (the "Conversion Option"). However, upon conversion, Deerfield (together with their affiliates) is limited to a 9.985% ownership cap in shares of common stock (the "9.985% Cap"). The 9.985% Cap would remain in place upon any assignment of the 2014 Convertible Notes by Deerfield.

The initial conversion price is $24.80 per share of common stock (equivalent to an initial conversion rate of 40.32 shares of common stock per $1,000 principal amount of 2014 Convertible Notes), representing a 30% premium over the closing price of the common stock on September 8, 2014. The conversion rate and the corresponding conversion price are subject to adjustment for stock dividends (other than a dividend for which Deerfield would be entitled to participate on an as-converted basis), stock splits, reverse stock splits and reclassifications. In addition, in connection with certain significant corporate transactions, Deerfield, at its option, may (i) require Aerie to prepay all or a portion of the principal amount of the 2014 Convertible Notes, plus accrued and unpaid interest, or (ii) convert all or a portion of the principal amount of the 2014 Convertible Notes into, depending upon the type of transaction, shares of common stock or the right to receive upon consummation of the transaction the consideration Deerfield would have received had Deerfield converted the 2014 Convertible Notes immediately prior to the consummation of the transaction. The 2014 Convertible Notes provide for an increase in the conversion rate if Deerfield elects to convert their 2014 Convertible Notes in connection with a significant corporate transaction. The current maximum increase to the initial conversion rate, in connection with a significant corporate transaction, is 12.07 shares of common stock per $1,000 principal amount of 2014 Conversion Notes, which decreases over time and is determined by reference to the price of the common stock prior to the consummation of the significant corporate transaction or the value of the significant corporate transaction.

The agreement governing the 2014 Convertible Notes contains various representations and warranties, and affirmative and negative covenants, customary for financings of this type, including restrictions on the incurrence of additional debt and liens on Aerie's assets. As of December 31, 2015, Aerie was in compliance with the covenants. The agreement governing the 2014 Convertible Notes also provides for certain events of default, including the failure to pay principal and interest when due; inaccuracies in Aerie's representations and warranties to Deerfield; failure to comply with any of the covenants; Aerie's insolvency or the occurrence of certain bankruptcy-related events; certain judgments against Aerie; the suspension, cancellation or revocation of governmental authorizations that are reasonably expected to have a material adverse effect on Aerie's business; the acceleration of a specified amount of indebtedness; and the failure to deliver shares of common stock upon conversion of the 2014 Convertible Notes. If any event of default were to occur, and continue beyond any applicable cure period, the holders of more than 50% of the aggregate principal amount of the then outstanding 2014 Convertible Notes would be permitted to declare the principal and accrued and unpaid interest to be immediately due and payable.

The Company recorded the 2014 Convertible Notes as long-term debt at face value less debt discounts relating to fees and certain expenses paid to Deerfield in connection with the transaction. The Conversion Option is a derivative that qualifies for an exemption from bifurcation and liability accounting as provided for in ASC Topic 815, Derivatives and Hedging – Contracts in Entity's Own Equity ("ASC 815"). Since the Conversion Option is not bifurcated as a derivative pursuant to ASC 815, the Company further evaluated the Conversion Option to determine whether it is considered a beneficial conversion feature ("BCF"). The Company determined that the initial accounting conversion price was greater than the fair value of the common stock at the close of trading on the date of issuance, therefore no

BCF existed at inception. However, if Deerfield elects to convert their 2014 Convertible Notes in connection with a significant corporate transaction, the increase to the initial conversion rate may cause a contingent BCF to exist at the time of conversion. The contingent BCF, if any, will be recognized in earnings when the contingency is resolved and will be measured using the fair value of the common stock at the close of trading on the date of issuance and the accounting conversion price as adjusted for such an increase to the initial conversion rate.

As of December 31, 2015, the Company recognized unamortized debt discounts and debt issuance costs of $1.8 million. Debt discounts and debt issuance costs are amortized using the effective interest method through the earlier of maturity or the conversion of the 2014 Convertible Notes.

Table of Contents

The table below summarizes the carrying value of the 2014 Convertible Notes as of December 31, 2015:

(in thousands)	DECEMBER 31, 2015
Gross proceeds	$125,000
Initial value of issuance costs recorded as debt discount	(2,146)
Amortization of debt discount and issuance costs	382
Carrying value	$123,236

For the years ended December 31, 2015 and 2014, interest expense related to the 2014 Convertible Notes was $2.2 million and $551,000, respectively.

On December 7, 2012, the Company authorized the sale of convertible notes (the “2012 Notes”) to related parties in the aggregate principal amount of $15.0 million. The 2012 Notes accrued interest at a rate of 8% per annum, with principal plus accrued interest thereon due upon maturity at September 30, 2013. The initial closing comprised of five individual convertible notes with an aggregate principal balance of $3.0 million. As of December 31, 2012, $12.0 million of 2012 Notes were authorized and available for sale. On March 28, 2013, May 23, 2013 and August 9, 2013, the Company completed the second, third and fourth closing of the 2012 Notes, respectively. The closings each comprised of five individual convertible notes with aggregate principal balances of $3.0 million, $4.5 million, and $4.5 million, respectively. On August 9, 2013, the Company amended the agreements relating to the 2012 Notes. The amendment authorized the sale of an additional $3.0 million of the 2012 Notes, resulting in an aggregate principal amount of $18.0 million being authorized. In addition, the amendment extended the maturity date of the 2012 Notes from September 30, 2013 to December 31, 2013 and the issuance period through November 30, 2013. No other terms and conditions of the agreements were changed as part of the amendment. In accordance with ASC 470 Debt, the amendment met the criteria of a troubled debt restructuring and the amortization of the debt discount was revised to align with a new effective interest rate determined as of the amendment date. No gain was recorded as part of the restructuring. On September 30, 2013, the Company completed the fifth closing of the 2012 Notes. Aggregate proceeds to the Company were $3.0 million.

On October 30, 2013, upon closing of the IPO, the principal and accrued interest outstanding under the 2012 Notes were converted into 1,860,363 shares of common stock at a conversion price equal to the IPO price of $10.00 per share. The Company accounted for the conversion as an extinguishment of debt.

In connection with the issuance of the 2012 Notes, the Company determined that a certain conversion feature was an embedded derivative requiring bifurcation and separate accounting. To estimate the fair value, the Company compared the net present value of expected cash flows of the issued 2012 Notes with and without the conversion feature comprising the embedded derivative. The Company determined that the fair value of the embedded derivative was immaterial as of August 9, 2013, May 23, 2013, March 28, 2013 and December 7, 2012, representing the fourth, third, second and initial closing dates, and as of December 31, 2012. As of September 30, 2013, the fair value of the embedded derivative was $96,000 . The Company determined that upon the closing of the IPO on October 30, 2013, at which time the 2012 Notes were converted into common stock, no embedded derivative existed. The Company recorded the change in fair value as a component of Other income (expense), net.

Table of Contents

9. Income Taxes

The provision for income taxes is based on net loss before income taxes as follows:

	DECEMBER 31,		
(in thousands)	2015	2014	2013
Net loss before income taxes:			
United States	$(59,211)	$(48,133)	$(31,148)
Other	(15,013)	—	—
Net loss before income taxes	$(74,224)	$(48,133)	$(31,148)

The components of the provision for income taxes are as follows:

	DECEMBER 31,		
(dollars in thousands)	2015	2014	2013
Provision for income taxes:			
Current:			
United States	$139	$—	$—
Other	—	—	—
Total	$139	$—	$—
Deferred:			
United States	$—	$—	$—
Other	—	—	—
Total	—	—	—
Provision for income taxes	$139	$—	$—
Effective tax rate	(0.19)%	— %	— %

Significant components of the Company's net deferred income tax assets as of December 31, 2015 and 2014 consist of the following:

	DECEMBER 31,	
(in thousands)	2015	2014
Net deferred tax assets:		
Net operating loss carry-forwards	$6,335	$42,863
Share based compensation	7,231	3,249
U.S. tax credit carry-forwards	3,823	631
Other assets	1,488	1,633
Other liabilities	(696)	(693)
Valuation allowance	(18,181)	(47,683)
Total net deferred income taxes	$—	$—

Table of Contents

A reconciliation of the statutory tax rates and the effective tax rates for the years ended December 31, 2015, 2014 and 2013 is as follows:

	DECEMBER 31,		
	2015	2014	2013
U.S. federal tax rate	35.00 %	35.00 %	35.00 %
State income taxes, net of federal benefit	(0.90)%	6.13 %	5.36 %
Taxable gain resulting from IP Assignment	(75.31)%	— %	— %
Non-taxable foreign loss	(6.98)%	— %	— %
Tax deferral from IP Assignment	3.56 %	— %	— %
Other	0.02 %	(0.04)%	(0.03)%
Valuation allowance	44.42 %	(41.09)%	(40.33)%
Effective tax rate	(0.19)%	— %	— %

In January 2015, the Company participated in the New Jersey Economic Development Authority's Sponsored Technology Business Tax Certificate Transfer Program to transfer $3.1 million in state tax benefits to unrelated profitable businesses with operations in the state of New Jersey. The Company received net proceeds of $2.9 million from the transfer.

The IP Assignment resulted in the recognition of a taxable gain for U.S. federal and state income tax purposes. As of December 31, 2015, the estimated income tax liability was $1.7 million after utilization of net operating loss carry-forwards, current year losses generated through December 31, 2015 and quarterly estimated payments made through December 31, 2015. Under ASC 810, Consolidation, the income tax expense of $2.8 million for the year ended December 31, 2015 was recorded as a prepaid asset. In accordance with ASC 810, Consolidation, the estimated prepaid asset will be amortized into income tax expense over the estimated remaining patent life of the intellectual property subject to the IP Assignment, through approximately 2030. For the year ended December 31, 2015, the Company recognized $139,000 of income tax expense related to the amortization of the prepaid asset.

Largely as a result of the IP Assignment, the Company reversed approximately $29.5 million of its valuation allowance on certain deferred tax assets, primarily federal and state net operating losses, as of December 31, 2015. Realization of the future tax benefits is dependent on the Company's ability to generate sufficient taxable income within the carry-forward period. Due to the Company's history of operating losses and lack of available evidence supporting future taxable income, the Company believes that a valuation allowance on its remaining deferred tax assets as of December 31, 2015 remains appropriate.

In addition, the IP Assignment is subject to complex tax and transfer pricing regulations administered by taxing authorities in various jurisdictions. The relevant taxing authorities may disagree with the Company's determinations as to the income and expenses attributable to specific jurisdictions. If such a disagreement were to occur, and the Company's position were not sustained, the Company could be required to pay additional taxes, interest and penalties, which could result in one-time tax charges, higher effective tax rates and reduced cash flows than otherwise would be expected.

It is Aerie's intention to reinvest the earnings of Aerie Limited and Aerie Ireland Limited in those operations. Generally, such amounts become subject to U.S. taxation upon the remittance of dividends and under certain other circumstances. Aerie Limited and Aerie Ireland Limited have incurred losses and experienced negative operating cash flows since inception, and as such, Aerie has not recognized a deferred tax liability related to its investment in either subsidiary as of December 31, 2015.

As of December 31, 2015, the Company had federal and state net operating loss carry-forwards of approximately $61.1 million, which expire from 2024 through 2034. Included in the net operating loss carry-forwards are approximately $4.0 million of net operating loss carry-forwards related to exercises of stock-based awards, the tax benefit from which, if realized, will be credited to additional paid-in capital. Net operating loss and tax credit carry-forwards are subject to review and possible adjustment by the Internal Revenue Service and state tax authorities and may become subject to an annual limitation in the event of certain cumulative changes in the ownership interest of significant stockholders over a three-year period in excess of 50%, as defined under Sections 382 and 383 of the

Internal Revenue Code of 1986, as amended, as well as similar state provisions. This could limit the amount of tax attributes that can be utilized annually to offset future taxable income or tax liabilities.

Certain transactions occurred in 2015 and prior years that resulted in ownership changes which will limit the future use of certain federal and state net operating loss and credit carry-forwards. Those federal and state net operating losses and credits that are not limited are included as deferred tax assets and have been fully offset by a valuation allowance as of December 31, 2015, as the Company believes, based on our history of operating losses, it is more likely than not that the tax benefits will not be realized.

Table of Contents

10. Convertible Preferred Stock

On October 30, 2013, immediately prior to the closing of the Company's IPO, all outstanding shares of convertible preferred stock automatically were converted into an aggregate of 12,120,531 shares of common stock. As of December 31, 2015 and December 31, 2014, no convertible preferred stock was authorized, issued or outstanding.

Carrying Value

On February 23, 2011, the Company received $23.8 million in proceeds from the issuance of its Series B Convertible Preferred Stock, net of $1.2 million of transaction costs. The convertible preferred stock was originally recorded at the net proceeds received by the Company at issuance. The difference between the net proceeds and the total redemption price was being accreted on a straight-line basis over the period from issuance until the earliest redemption date and was accreted to the convertible preferred stock capital account through the completion of the IPO. Accretion amounted to $210,000 for the year ended December 31, 2013.

On February 23, 2011, the Company issued the Series A-4 Convertible Preferred Stock in connection with the conversion of a series of convertible notes. The issuance was recorded at fair value. The difference between stated and fair value of $1.3 million was being accreted on a straight-line basis of the period from February 23, 2011 until the earliest redemption date and was accreted to the Series A-4 Convertible Preferred Stock capital account through the completion of the IPO. Accretion amounted to $240,000 for the year ended December 31, 2013. The Company determined that the straight-line method approximated the effective interest method.

11. Stockholders' Equity (Deficit)

On October 30, 2013, the Company completed its IPO and issued 7,728,000 shares of its common stock at an IPO price of $10.00 per share, including 1,008,000 shares of common stock issued upon the exercise in full by the underwriters of their option to purchase additional shares to cover over-allotments. The shares began trading on the NASDAQ Global Market on October 25, 2013. The Company received net proceeds from the IPO of approximately $68.3 million, after deducting underwriting discounts and commissions of $5.4 million and expenses of $3.6 million. In connection with the IPO, the following events occurred:

- On October 24, 2013, 297,366 warrants to purchase convertible preferred stock were net exercised and were subsequently automatically converted into 297,366 shares of common stock on October 30, 2013 (Note 12);
- On October 30, 2013, 186,248 warrants to purchase convertible preferred stock were net exercised and were subsequently automatically converted into 186,248 shares of common stock on October 30, 2013 (Note 12);
- On October 30, 2013, the outstanding shares of convertible preferred stock were automatically converted into an aggregate 12,120,531 shares of common stock (Note 10);
- On October 30, 2013, 717,801 warrants to purchase convertible preferred stock were automatically converted into 717,801 warrants to purchase common stock, at which time the liabilities were re-measured and reclassified to equity (Note 12);
- On October 30, 2013, the principal and interest outstanding under the 2012 Notes were converted into 1,860,363 shares of common stock at a conversion price equal to the IPO price of $10.00 per share (Note 8);
- On October 30, 2013, the 2013 Omnibus Incentive Plan became effective under which 3,229,068 equity awards for common stock of the Company may be distributed (Note 13); and
- On October 30, 2013, the 2013 Employee Stock Purchase Plan became effective under which a maximum of 645,814 shares of common stock of the Company may be issued (Note 16).

Additionally, on October 30, 2013, the Company's certificate of incorporation was amended to increase the number of authorized shares of common stock to 150,000,000 with a par value of $0.001 per share and decrease the number of authorized preferred stock to 15,000,000 with a par value of $0.001 per share.

On November 3, 2014, the Company filed a shelf registration statement on Form S-3 that permits: (i) the offering, issuance and sale by the Company of up to a maximum aggregate offering price of $150.0 million of the Company's common stock; (ii) sales of common stock by certain selling stockholders; and (iii) the offering, issuance and sale by the Company of up to a maximum aggregate offering price of $50.0 million of the Company's common stock that may be issued and sold under an "at-the-market" sales agreement with Cantor Fitzgerald & Co. The common stock that was

offered, issued and sold by the Company under the “at-the-market” sales agreement was included in the $150.0 million of common stock that may be offered,

Table of Contents

issued and sold by the Company under the shelf registration statement. As of December 31, 2015, the Company had no availability to issue shares under this “at-the-market” sales agreement.

On November 6, 2015, the Company filed a prospectus supplement to the base prospectus dated November 10, 2014. The prospectus supplement permits the offering, issuance and sale by the Company of up to a maximum aggregate offering price of $50.0 million of the Company’s common stock that may be issued and sold by the Company under separate “at-the-market” sales agreements with RBC Capital Markets, LLC and Cantor Fitzgerald & Co. The common stock that may be offered, issued and sold by the Company under these “at-the-market” sales agreements is included in the $150.0 million of common stock that may be offered, issued and sold by the Company under the shelf registration statement. As of December 31, 2015, $48.1 million remained available for issuance under these “at-the-market” sales agreements.

For the year ended December 31, 2015, the Company issued and sold 1,754,556 shares of common stock under the “at-the-market” sales agreements and received net proceeds of $50.5 million, after deducting commissions at a rate of up to 3% of the gross sales price per share sold and other fees and expenses. There were no sales of securities registered pursuant to the shelf registration statement for the year ended December 31, 2014.

Holders of common stock are entitled to dividends when and if declared by the Company’s Board of Directors subject to prior rights of the holders of any preferred stock. The holder of each share of common stock is entitled to one vote.

12. Stock Purchase Warrants

As of December 31, 2015, the following equity classified warrants were outstanding:

NUMBER OF UNDERLYING SHARES	EXERCISE PRICE PER SHARE	WARRANT EXPIRATION DATE	TYPE OF EQUITY SECURITY
75,000	$5.00	February 2019	Common Stock
75,000	$5.00	November 2019	Common Stock
7,500	$5.00	August 2020	Common Stock
223,482	$0.05	December 2019	Common Stock

The warrants outstanding at December 31, 2015 are all currently exercisable with weighted-average remaining lives of 3.8 years.

Prior to the IPO, the Company recognized all of its outstanding warrants as liabilities on its consolidated balance sheet as they were subject to price protection provisions. The warrant liability was revalued at each reporting period and changes in fair value were included as a component of Other income (expense), net. For the year ended December 31, 2013, the Company recognized $3.7 million of expense related to changes in the fair value of the warrant liability. The initial recognition and subsequent changes in fair value of the warrant liability had no effect on the Company’s consolidated statement of cash flows.

The Company estimated the fair value of the warrants using the Black-Scholes option-pricing model utilizing the fair value of underlying preferred and common stock. Black-Scholes has inherent limitations for use in the case of a warrant with a price protection provision, since the model is designed to be used when the inputs to the model are static throughout the life of a security. Management concluded, under the Company’s facts and circumstances, that the estimated fair values of the warrants using the Black-Scholes option-pricing model approximates, in all material respects, the values determined using a Monte Carlo valuation model. The estimates in the Black-Scholes option-pricing model and the Monte Carlo valuation model are based, in part, on assumptions, including but not limited to stock price volatility, the expected life of the warrants, the risk free rate and the fair value of the equity stock underlying the warrants.

Key assumptions utilized in the fair value calculation as of October 30, 2013, the IPO closing date, appear in the table below.

	OCTOBER 30, 2013
Expected term (years)	5.32-6.84

Volatility	65.00	%
Risk-free interest rate	1.51%-2.00%	
Dividend yield	—	%

Table of Contents

13. Stock-based Compensation

Stock-based compensation expense for options granted, RSAs, and stock purchase rights are reflected in the statement of operations as follows:

	YEAR ENDED DECEMBER 31,		
(in thousands)	2015	2014	2013
Research and development	$2,500	$1,339	$222
General and administrative	10,445	7,839	2,636
Total	$12,945	$9,178	$2,858

The estimated fair value of options granted is determined on the date of grant using the Black-Scholes option pricing model. Options granted to non-employees are revalued at each financial reporting period until required service is performed. Compensation expense related to RSAs is based on the market value of the Company's common stock on the date of grant and is expensed on a straight-line basis over the vesting period. Compensation expense for stock purchase rights under the Company's employee stock purchase plan is measured and recognized on the date that the Company becomes obligated to issue shares of common stock and is based on the difference between the fair value of the Company's common stock and the purchase price on such date.

As of December 31, 2015, the Company had $28.2 million of unrecognized compensation expense related to options granted under its equity plans. This cost is expected to be recognized over a weighted average period of 2.6 years as of December 31, 2015. The weighted average remaining contractual life on all outstanding options as of December 31, 2015 was 8.0 years.

As of December 31, 2015, the Company had $1.7 million of unrecognized compensation expense, related to unvested RSAs. This cost is expected to be recognized over a weighted average period of 2.9 years as of December 31, 2015. The weighted average remaining contractual term for restricted stock awards as of December 31, 2015 was 2.9 years.

Key weighted average assumptions utilized in the fair value calculation for the underlying common stock as of December 31, 2015, 2014 and 2013 appear on the table below.

	YEAR ENDED DECEMBER 31,					
	2015		2014		2013	
Expected term (years)	6.07		6.25		6.25	
Expected stock price volatility	74.11	%	80.44	%	79.20	%
Risk-free interest rate	1.63	%	1.90	%	1.78	%
Dividend yield	—	%	—	%	—	%

Based on the Company's historical experience of employee turnover, an annualized forfeiture rate was assumed for options and RSAs. Under the true-up provisions of the stock compensation guidance, additional expense is recognized as the awards vest if the actual forfeiture rate is lower than estimated, and a recovery of prior expense if the actual forfeiture is higher than estimated.

The Company utilized the guidance set forth in the SEC Staff Accounting Bulletin 107, Share-Based Payment ("SAB 107"), to determine the expected term of options, as it does not have sufficient historical exercise and post vesting termination data to provide a reasonable basis upon which to estimate the expected term of stock options granted to employees. The simplified method is based on the vesting period and the contractual term for each grant, or for each vesting-tranche for awards with graded vesting. The midpoint between the vesting date and the maximum contractual expiration date is used as the expected term under this method.

The risk-free interest rate is based on the yields of U.S. Treasury securities with maturities similar to the expected time to liquidity.

Volatility is based on the historical volatility of the Company as well as several public entities that are similar to the Company. This peer group of companies utilized in 2015 remained consistent with that of 2014.

Table of Contents

Equity Plans

The Company maintains two equity compensation plans, the 2005 Aerie Pharmaceutical Stock Plan (the "2005 Plan") and the 2013 Omnibus Incentive Plan (the "2013 Equity Plan"), which was amended and restated as the Aerie Pharmaceuticals, Inc. Amended and Restated Omnibus Incentive Plan (the "Amended and Restated Equity Plan"). The 2005 Plan and the Amended and Restated Equity Plan are referred to collectively as the "Plans."

On October 30, 2013, the effective date of the 2013 Equity Plan, the 2005 Plan was frozen and no additional awards have been or will be made under the 2005 Plan. Any shares remaining available for future grant under the 2005 Plan were allocated to the 2013 Equity Plan.

At the 2015 Annual Meeting of Stockholders held on April 10, 2015, the Company's stockholders approved the adoption of the Amended and Restated Equity Plan and no additional awards have been or will be made under the 2013 Equity Plan. Any remaining shares available under the 2013 Equity Plan were allocated to the Amended and Restated Equity Plan.

The Amended and Restated Equity Plan provides for the granting of up to 5,729,068 equity awards in respect of common stock of the Company, including equity awards that were available for issuance under the 2013 Equity Plan.

The following table summarizes the stock option activity under the Plans:

	NUMBER OF SHARES	WEIGHTED AVERAGE EXERCISE PRICE	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE (YEARS)	AGGREGATE INTRINSIC VALUE (000's)
Options outstanding at December 31, 2014	3,826,459	$ 8.39		
Granted	1,328,400	24.83		
Exercised	(297,763)	4.38		
Canceled	(273,510)	17.00		
Options outstanding at December 31, 2015	4,583,586	$ 12.86	8.0	$ 55,918
Options vested and expected to vest at December 31, 2015	4,511,052	$ 12.75	8.0	$ 55,478
Options exercisable at December 31, 2015	2,237,663	$ 7.92	7.3	$ 37,308

The weighted-average fair values of all stock options granted for the years ended December 31, 2015, 2014 and 2013 was $24.83, $20.83 and $3.11, respectively. The aggregate intrinsic value of options exercised for the years ended December 31, 2015, 2014 and 2013 was $4.3 million, $10.5 million and $9,000, respectively. The intrinsic value is calculated as the difference between the fair market value and the exercise price per share of the stock options. The fair market value per share of common stock as of December 31, 2015 was $24.35.

The following table provides additional information about the Company's stock options that are outstanding and exercisable at December 31, 2015:

EXERCISE PRICE	OPTIONS OUTSTANDING	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE (YEARS)	OPTIONS EXERCISABLE
$0.20 - $3.15	2,251,290	7.1	1,606,555
$10.44 - $15.97	148,770	9.6	4,737
$16.21 - $21.08	1,239,250	8.5	477,675
$22.31 - $26.76	336,701	9.2	54,138
$27.44 - $32.30	607,575	9.1	94,558
	4,583,586		2,237,663

Table of Contents

The following table summarizes the RSA activity under the Plans:

	NUMBER OF SHARES	WEIGHTED AVERAGE FAIR VALUE PER SHARE
RSAs outstanding at December 31, 2014	103,064	$2.47
Granted	99,027	28.00
Vested	(69,697)	3.35
Canceled	(12,401)	28.74
RSAs outstanding at December 31, 2015	119,993	$20.31

The vesting of the RSAs is time and service based with terms of one to four years.

14. Commitments and Contingencies

Lease Commitment Summary

The following table presents future minimum commitments of the Company due under non-cancelable operating leases with original or remaining terms in excess of one year at December 31, 2015. Our operating lease obligations are related to our principal executive offices in Irvine, California, offices in Bedminster, New Jersey and our research facility in Durham, North Carolina.

Minimum lease payments were as follows at December 31, 2015:

(in thousands)	
2016	$1,623
2017	1,598
2018	1,291
2019	1,390
2020	1,295
2020 and thereafter	611
Total minimum lease payments	$7,808

Rent expense was $1.5 million, $579,000 and $403,000 for the years ended December 31, 2015, 2014 and 2013, respectively, and is reflected in general and administrative expenses and research and development expenses as determined by the underlying activities occurring at each of the Company's locations.

Litigation

The Company may periodically become subject to legal proceedings and claims arising in connection with its business. Except as set forth below, the Company is not a party to any known litigation, is not aware of any unasserted claims and does not have contingency reserves established for any litigation liabilities.

A putative securities class action lawsuit captioned Kelley et al. v. Aerie Pharmaceuticals, Inc., et al., Case No. 3:15-cv-03007, was filed against the Company and certain of its officers and directors in the United States District Court for the District of New Jersey on April 29, 2015. An amended complaint was filed on September 28, 2015 on behalf of a purported class of persons and entities who purchased or otherwise acquired the Company's publicly traded securities between June 25, 2014 and April 23, 2015. The amended complaint asserts claims under the Exchange Act and alleges that the defendants made materially false and misleading statements or omitted allegedly material information during that period related to, among other things, the prospects of the Company's initial Phase 3 registration trial of Rhopressa™, named "Rocket 1," and Rhopressa™.

The Company believes that the claims asserted in the action are without merit and intends to defend the lawsuit vigorously, and the Company expects to incur costs associated with defending the action. In addition, the Company has various insurance policies related to the risks associated with its business, including directors' and officers' liability insurance policies. However, there is no assurance that the Company will be successful in its defense of the action, and there is no assurance that the Company's insurance coverage, which contains a self-insured retention, will be

sufficient or that its insurance carriers will cover all claims or litigation costs. At this time, the Company cannot accurately predict the ultimate outcome of this matter.

Table of Contents

Due to the inherent uncertainties of litigation, the Company cannot reasonably predict the timing or outcomes, or estimate the amount of loss, or range of loss, if any, or their effect, if any, on the Company's financial statements.

Contract Service Providers

In the course of the Company's normal business operations, it has agreements with contract service providers to assist in the performance of its research and development, clinical research and manufacturing and other general business activities. Substantially all of these contracts are on an as needed basis. Future minimum commitments of the Company due under non-cancelable agreements with service providers was $620,000 as of December 31, 2015 and are expected to be incurred by December 2017.

15. Related-Party Transactions

Collaboration

In August 2015, the Company entered into a research collaboration and license agreement with GrayBug, Inc. ("GrayBug"). The collaboration is focused on researching the potential use of Graybug's biodegradable polymer technology to deliver certain of the Company's preclinical stage molecules to the back of the eye over a sustained period of time. The Board of Directors of the Company and that of GrayBug have a common Board member. This Board member did not participate in any deliberations associated with this transaction.

2012 Notes

Prior to their conversion into common stock in connection with the IPO (Note 8), the 2012 Notes were due to holders of the Company's convertible preferred stock. Interest expense on those obligations was $588,000 for the year ended December 31, 2013.

Consultation

For the years ended December 31, 2015, 2014 and 2013, the respective amounts of approximately $240,000, $333,000 and $190,000 were paid to board members, some of whom served as consultants of the Company through consulting agreements containing arm's-length terms typical of agreements entered into with unaffiliated third parties.

16. Benefit Plans

Defined Contribution Plans

Aerie has adopted a 401(k) deferred compensation plan. Eligible employees meeting the participant criteria may contribute up to the statutory limitation ($18,000 for 2015 and $17,500 for 2014). Aerie may contribute a discretionary match if it elects to do so. During the years ended December 31, 2015, 2014 and 2013, Aerie contributed $0 as a matching contribution to the plan.

In October 2015, Aerie Ireland Limited adopted the Aerie Pharmaceuticals Ireland Pension and Life Assurance Scheme. Eligible employees meeting the participation criteria may contribute up to the aggregate statutory limitation of 15% to 40% of remuneration depending on age. During the year ended December 31, 2015, Aerie Ireland Limited contributed $0 as a matching contribution to the plan.

Employee Stock Purchase Plan

On October 30, 2013, the Company adopted the 2013 Employee Stock Purchase Plan (the "Purchase Plan") under which substantially all employees may purchase the Company's common stock through payroll deductions and lump sum contributions at a price equal to 85% of the lower of the fair market values of the stock as of the beginning or the end of the offering periods. Employees may not purchase more than the fair value equivalent of $25,000 of stock during any calendar year. As of December 31, 2015, approximately 629,844 shares were reserved for future issuance under the Purchase Plan.

17. Subsequent Events

On February 24, 2016, the Board of Directors authorized grants of common stock options and restricted stock awards to the officers of the Company in the aggregate amount of 332,754 and 55,960, respectively. The options have an exercise price of $16.69 per share, a term of ten years and are subject to vesting conditions over a four-year period. The aggregate fair value of these option grants was approximately $3.8 million. The restricted stock awards are subject to vesting conditions over a four-year period. The aggregate fair value of these restricted stock awards was approximately $0.9 million.

Table of Contents

18. Selected Quarterly Financial Data (Unaudited)

The following table presents selected unaudited quarterly financial information for the years ended December 31, 2015 and 2014. The results for any quarter are not necessarily indicative of future quarterly results and, accordingly, period to period comparisons should not be relied upon as an indication of future performance.

(in thousands, except per share amounts)	FOR THE QUARTER ENDED DECEMBER 31,	SEPTEMBER 30,	JUNE 30,	MARCH 31,
Year Ended December 31, 2015				
Operating expenses	$(19,950)	$(17,366)	$(18,129)	$(19,641)
Net loss attributable to common stockholders	$(20,377)	$(17,961)	$(18,786)	$(17,239)
Net loss per share attributable to common stockholders—basic and diluted	$(0.76)	$(0.69)	$(0.73)	$(0.70)
	DECEMBER 31,	SEPTEMBER 30,	JUNE 30,	MARCH 31,
Year Ended December 31, 2014				
Operating expenses	$(15,973)	$(13,174)	$(11,843)	$(8,982)
Net loss attributable to common stockholders	$(16,501)	$(13,147)	$(11,814)	$(6,671)
Net loss per share attributable to common stockholders—basic and diluted	$(0.69)	$(0.54)	$(0.49)	$(0.28)

Table of Contents

EXHIBIT INDEX

EXHIBIT NO.	EXHIBIT DESCRIPTION
1.1	Sales Agreement, dated November 6, 2015, by and between Aerie Pharmaceuticals, Inc. and RBC Capital Markets LLC. (incorporated by reference to Exhibit 1.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-36152) filed on November 6, 2015).
1.2	Sales Agreement, dated November 6, 2015, by and between Aerie Pharmaceuticals, Inc. and Cantor Fitzgerald & Co. (incorporated by reference to Exhibit 1.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-36152) filed on November 6, 2015).
1.3	Sales Agreement, dated November 3, 2014, by and between Aerie Pharmaceuticals, Inc. and Cantor Fitzgerald & Co. (incorporated by reference to Exhibit 1.1 to the Registrant's Form S-3 Registration Statement (File No. 333-199821) filed on November 3, 2014).
3.1	Amended and Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-36152) filed on October 31, 2013).
3.2	Amended and Restated Bylaws of the Registrant (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K (File No. 001-36152) filed on October 31, 2013).
4.1†	Note Purchase Agreement between Aerie Pharmaceuticals, Inc. and Deerfield Partners, L.P., Deerfield International Master Fund, L.P., Deerfield Private Design Fund III, L.P., Deerfield Special Situations Fund, L.P. and Deerfield Special Situations International Master Fund, L.P., dated as of September 8, 2014 (incorporated by reference to Exhibit 4.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-36152) filed on November 12, 2014).
4.2	Form of Note (included in Exhibit 4.1) (incorporated by reference to Exhibit 4.2 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-36152) filed on November 12, 2014).
4.3	Security Agreement among Aerie Pharmaceuticals, Inc. and Deerfield Partners, L.P., Deerfield International Master Fund, L.P., Deerfield Private Design Fund III, L.P., Deerfield Special Situations Fund, L.P. and Deerfield Special Situations International Master Fund, L.P., as Purchasers, and Deerfield Management Company, L.P., as Agent for the Purchasers, dated September 8, 2014 (incorporated by reference to Exhibit 4.3 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-36152) filed on November 12, 2014).
10.1	Amended and Restated Investors' Rights Agreement by and among Aerie Pharmaceuticals, Inc. and TPG Biotechnology Partners, L.P., ACP IV, L.P., Sofinnova Venture Partners VII, L.P., Clarus Lifesciences II, L.P., Osage University Partners I, L.P., Thomas J. van Haarlem, M.D. and Casey Kopczynski, M.D., dated February 23, 2011 (incorporated by

	reference to Exhibit 10.1 to the Registrant's Form S-1 Registration Statement (File No. 333-191219) filed on October 3, 2013).
10.2	First Amendment to Amended and Restated Investors' Rights Agreement by and among Aerie Pharmaceuticals, Inc. and TPG Biotechnology Partners, L.P., ACP IV, L.P., Sofinnova Venture Partners VII, L.P., Clarus Lifesciences II, L.P. and Osage University Partners I, L.P., dated December 7, 2012 (incorporated by reference to Exhibit 10.2 to the Registrant's Form S-1 Registration Statement (File No. 333-191219) filed on October 3, 2013).
10.3	Form of Aerie Pharmaceuticals, Inc. Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.3 to the Registrant's Form S-1 Registration Statement (File No. 333-191219) filed on October 3, 2013).
10.4	Aerie Pharmaceuticals, Inc. Amended and Restated Omnibus Incentive Plan (incorporated by reference to the appendix to the Registrant's Definitive Proxy Statement on Schedule 14A (File No. 001-36152) filed on February 27, 2015).
10.5	Form of Aerie Pharmaceuticals, Inc. Incentive Stock Option Agreement (Cliff Vesting) (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-36152) filed on February 24, 2015).
10.6	Form of Aerie Pharmaceuticals, Inc. Incentive Stock Option Agreement (Monthly Vesting) (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K (File No. 001-36152) filed on February 24, 2015).

Table of Contents

10.7	Form of Aerie Pharmaceuticals, Inc. Restricted Stock Agreement (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K (File No. 001-36152) filed on February 24, 2015).
10.8	Form of Aerie Pharmaceuticals, Inc. Incentive Stock Option Agreement (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-36152) filed on March 19, 2014).
10.9	Aerie Pharmaceuticals, Inc. 2005 Stock Option Plan, dated as of July 13, 2005 (incorporated by reference to Exhibit 10.5 to the Registrant's Form S-1 Registration Statement (File No. 333-191219) filed on October 3, 2013).
10.10	First Amendment of Aerie Pharmaceuticals, Inc. 2005 Stock Option Plan, dated as of February 19, 2008 (incorporated by reference to Exhibit 10.6 to the Registrant's Form S-1 Registration Statement (File No. 333-191219) filed on October 3, 2013).
10.11	Second Amendment of Aerie Pharmaceuticals, Inc. 2005 Stock Option Plan, dated as of December 3, 2009 (incorporated by reference to Exhibit 10.7 to the Registrant's Form S-1 Registration Statement (File No. 333-191219) filed on October 3, 2013).
10.12	Third Amendment of Aerie Pharmaceuticals, Inc. 2005 Stock Option Plan, dated as of February 23, 2011 (incorporated by reference to Exhibit 10.8 to the Registrant's Form S-1 Registration Statement (File No. 333-191219) filed on October 3, 2013).
10.13	Fourth Amendment of Aerie Pharmaceuticals, Inc. 2005 Stock Option Plan, dated as of August 9, 2013 (incorporated by reference to Exhibit 10.9 to the Registrant's Form S-1 Registration Statement (File No. 333-191219) filed on October 3, 2013).
10.14	Fifth Amendment of Aerie Pharmaceuticals, Inc. 2005 Stock Option Plan, dated as of September 16, 2013 (incorporated by reference to Exhibit 10.10 to the Registrant's Form S-1 Registration Statement (File No. 333-191219) filed on October 3, 2013).
10.15	Form of Indemnification Agreement for officers and directors (incorporated by reference to Exhibit 10.19 to the Registrant's Form S-1 Registration Statement (File No. 333-191219) filed on October 21, 2013).
10.16	Employment Agreement, dated as of September 20, 2013, by and between Aerie Pharmaceuticals, Inc. and Vicente Anido, Jr., Ph.D. (incorporated by reference to Exhibit 10.18 to the Registrant's Form S-1 Registration Statement (File No. 333-191219) filed on October 3, 2013).
10.17	Employment Agreement, dated as of July 31, 2013, by and between Aerie Pharmaceuticals, Inc. and Thomas Mitro (incorporated by reference to Exhibit 10.17 to the Registrant's Form S-1 Registration Statement (File No. 333-191219) filed on October 3, 2013).
10.18	Amended and Restated Employment Agreement, dated as of December 18, 2013, between Aerie Pharmaceuticals, Inc. and Thomas Mitro (incorporated by reference to Exhibit 10.1

	to the Registrant's Current Report on Form 8-K (File No. 001-36152) filed on December 20, 2013).
10.19	Letter Agreement, dated as of September 24, 2012, by and between Aerie Pharmaceuticals, Inc. and Richard Rubino (incorporated by reference to Exhibit 10.13 to the Registrant's Form S-1 Registration Statement (File No. 333-191219) filed on October 3, 2013).
10.20	Amended and Restated Employment Agreement, dated as of December 18, 2013, between Aerie Pharmaceuticals, Inc. and Richard Rubino (incorporated by reference to Exhibit 10.2 to the Registrant's Current Report on Form 8-K (File No. 001-36152) filed on December 20, 2013).
10.21	Amended and Restated Employment Agreement, dated as of December 18, 2013, between Aerie Pharmaceuticals, Inc. and Brian Levy (incorporated by reference to Exhibit 10.3 to the Registrant's Current Report on Form 8-K (File No. 001-36152) filed on December 20, 2013).
10.22	Employment Agreement, dated as of December 18, 2013, between Aerie Pharmaceuticals, Inc. and Casey Kopczynski (incorporated by reference to Exhibit 10.4 to the Registrant's Current Report on Form 8-K (File No. 001-36152) filed on December 20, 2013).
10.23	Separation and Release Agreement, dated as of July 9, 2015, by and between Aerie Pharmaceuticals, Inc. and Brian Levy (incorporated by reference to Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 001-36152) filed on July 9, 2015).
21.1*	Subsidiaries of the Registrant.

Table of Contents

23.1*	Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm.
31.1*	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) promulgated under the Securities Exchange Act of 1934, as amended.
31.2*	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) promulgated under the Securities Exchange Act of 1934, as amended.
32.1*	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS**	XBRL Instance Document.
101.SCH**	XBRL Taxonomy Extension Schema Document.
101.CAL**	XBRL Taxonomy Extension Calculation Linkbase Document.
101.LAB**	XBRL Taxonomy Extension Label Linkbase Database.
101.PRE**	XBRL Taxonomy Extension Presentation Linkbase Document.
101.DEF**	XBRL Taxonomy Extension Definition Linkbase Document.

† Certain portions of this exhibit have been omitted and separately filed with the SEC pursuant to a request for confidential treatment which has been granted by the SEC.

* Filed herewith.

** Attached as Exhibit 101 to this report are the following formatted in XBRL (Extensible Business Reporting Language): (i) Consolidated Balance Sheets at December 31, 2015 and 2014, (ii) Consolidated Statements of Operations and Comprehensive Loss for the years ended December 31, 2015, 2014 and 2013 (iii) Consolidated Statements of Cash Flows for the years ended December 31, 2015, 2014 and 2013 and (iv) Notes to Consolidated Financial Statements.