AERIE PHARMACEUTICALS INC
Form 424B4
October 28, 2013
**Table of Contents**

**Filed Pursuant to Rule 424(b)(4)**
**Registration No. 333-191219**

**PROSPECTUS**

# 6,720,000 Shares

## Common Stock

We are offering 6,720,000 shares of our common stock. This is our initial public offering and no public market currently exists for our common stock. Our common stock has been approved for listing on the NASDAQ Global Market under the symbol AERI.

**Investing in our common stock involves a high degree of risk. Please read Risk Factors beginning on page 12 of this prospectus.**

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012, and will be subject to reduced public company reporting requirements.

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

| | PER SHARE | TOTAL |
|---|---|---|
| Public Offering Price | $ 10.00 | $ 67,200,000 |
| Underwriting Discounts and Commissions | $ 0.70 | $ 4,704,000 |
| Proceeds to Aerie Pharmaceuticals, Inc. before expenses [(1)] | $ 9.30 | $ 62,496,000 |

(1) See Underwriting for additional information regarding underwriter compensation.

At our request, the underwriters have allocated an aggregate of 1,000,000 shares of our common stock in this offering to our existing principal stockholders and their affiliated entities. These shares will be offered and sold on the same terms as the other shares that are being offered and sold in this offering to the public. Although we anticipate that these stockholders will purchase all of the shares of our common stock that they have indicated an interest in purchasing, indications of interest are not binding agreements or commitments to purchase and any of these stockholders may determine to purchase more, less or no shares in this offering.

Delivery of the shares of common stock is expected to be made on or about October 30, 2013. We have granted the underwriters an option for a period of 30 days to purchase an additional 1,008,000 shares of our common stock. If the underwriters exercise the option in full, the total underwriting discounts and commissions payable by us will be $5,409,600, and the total proceeds to us, before expenses, will be $71,870,400.

**RBC Capital Markets** **Stifel**

**Canaccord Genuity** **Needham & Company**

**Prospectus dated October 24, 2013**

Table of Contents

**TABLE OF CONTENTS**



**You should rely only on the information contained in this prospectus and any free writing prospectus prepared by or on behalf of us or to which we have referred you. We have not authorized anyone to provide you with information that is different. We are offering to sell shares of our common stock, and seeking offers to buy shares of our common stock, only in jurisdictions where offers and sales are permitted. The information in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of our common stock.**

Until and including November 18, 2013, 25 days after the date of this prospectus, all dealers that buy, sell or trade our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealer s obligation to deliver a prospectus when acting as an underwriter and with respect to unsold allotments or subscriptions.

For investors outside of the United States: neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus.

Table of Contents

## PROSPECTUS SUMMARY

*This summary highlights information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. Before you decide to invest in our common stock, you should read the entire prospectus carefully, including the Risk Factors section and the financial statements and related notes appearing at the end of this prospectus. In this prospectus, unless otherwise stated or the context otherwise indicates, references to Aerie, we, us, our and similar references refer to Aerie Pharmaceuticals, Inc.*

### 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. Glaucoma is one of the largest segments in the global ophthalmic market. In 2012, branded and generic glaucoma product sales exceeded $4.5 billion in the United States, Europe and Japan in aggregate, according to IMS, and prescription volume is expected to grow, driven in large part by the aging population. Our strategy is to advance our product candidates, including dual-action AR-13324 and triple-action PG324, to regulatory approval and commercialize these products ourselves in the United States. We plan to build a commercial team of approximately 100 sales representatives to target approximately 10,000 high prescribing eye-care professionals throughout the United States. For certain key markets outside the United States, including Europe, Japan and emerging markets, we intend to explore partnership opportunities through collaboration and licensing arrangements. We plan to further maximize our commercial potential by identifying and advancing additional product candidates, both through our internal discovery efforts and through possible in-licensing or acquisitions of additional ophthalmic products or product candidates that would complement our current product portfolio. Our senior leadership team has extensive experience in the ophthalmology market and has overseen the development and commercialization at major pharmaceutical companies of several successful ophthalmic products, including *Acular*, *Alphagan P*, *Bepreve*, *Besivance*, *Bromday*, *Istalol*, *Ocuflox*, *Retisert*, *Vitrase*, *Xibrom* and *Zylet*. If our products are approved and we are commercially successful, we believe Aerie could become a market-leading ophthalmic company.

Our product candidates are once-daily eye drops that, if approved, will provide eye-care professionals with the first novel intraocular pressure-lowering mechanisms of action, or MOA, to treat glaucoma in nearly 20 years. Our lead product candidate, dual-action AR-13324, recently completed a Phase 2b clinical trial. We are currently planning two Phase 3 registration trials for this product candidate, which we expect to commence in mid-2014. Additionally, we are planning to commence a Phase 2b clinical trial by early 2014 for our triple-action PG324, a fixed-dose combination of AR-13324 and the prostaglandin analogue, or PGA, latanoprost, the most commonly prescribed drug for the treatment of patients with glaucoma.

Glaucoma is a progressive and highly individualized disease, in which elevated levels of intraocular pressure, or IOP, are associated with damage to the optic nerve, which results in irreversible vision loss and potentially blindness. Patients may suffer the adverse effects of glaucoma across a wide range of IOP levels. The level of IOP in healthy individuals is generally accepted to be 10 to 21 millimeters of mercury, or mmHg. The majority of glaucoma patients have IOP of 26 mmHg or below at the time of diagnosis, which we refer to as low to moderately elevated IOP. Glaucoma is treated by the reduction of IOP, which has been shown to slow the progression of vision loss. The U.S. Food and Drug Administration, or FDA, recognizes sustained lowering of IOP as the primary clinical endpoint for regulatory approval. Once glaucoma develops, it is a chronic condition that requires life-long treatment. The initial treatment for glaucoma patients is typically the use of a prescription eye drop. 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, non-

Table of Contents

PGA products are used either as add-on therapy to the PGA or as an alternative monotherapy. Due to the multiple daily dosings, side effects and contraindications of non-PGA products, we believe there is a significant unmet need in the non-PGA market segment, which represents approximately half of the U.S. and European glaucoma market based on prescription volumes.

Our primary product candidates, once-daily dual-action AR-13324 and once-daily triple-action PG324, lower IOP through novel MOAs. Our product candidates inhibit both Rho Kinase, or ROCK, and the norepinephrine transporter, or NET. Through ROCK inhibition, they reduce IOP by increasing fluid outflow through the trabecular meshwork, or the TM, the tissue responsible for elevated IOP in glaucoma and the eye s primary drain, which accounts for approximately 80% of fluid drainage. Through NET inhibition, AR-13324 also lowers IOP by reducing the production of eye fluid. PG324, a single-drop fixed-dose combination of AR-13324 with latanoprost, lowers IOP through the same MOAs as AR-13324, and also by increasing fluid outflow through the uveoscleral pathway, the eye s secondary drain.

We believe that dual-action AR-13324 has several significant differentiating characteristics that would make it a strong competitor in the non-PGA market segment, if approved, including:

**Strong IOP-Lowering Effect** In our Phase 2b clinical trial, once-daily AR-13324 demonstrated mean IOP reductions of 5.7 and 6.2 mmHg on days 28 and 14, respectively. Studies have shown that a sustained 5 mmHg reduction in IOP reduces risk of disease progression by approximately 50%. If confirmed in our planned Phase 3 registration trials, we believe this level of IOP reduction would equal or exceed that of all currently marketed non-PGA drugs.

**Once-Daily Dosing Advantage** The most commonly prescribed non-PGA drugs are dosed two to three times daily. AR-13324 is being developed as a once-daily dosed glaucoma therapy. This more convenient dosing regimen is expected to result in higher patient compliance, which may lead to improved outcomes.

**Favorable Tolerability Profile** Currently marketed non-PGA drugs have several tolerability issues indicated on their product labels, including blurred vision, unusual tastes, ocular allergic reaction and itching of the eye. In our Phase 2a and Phase 2b clinical trials for AR-13324, a total of 209 patients were exposed to AR-13324. The main tolerability finding for AR-13324 was transient, or temporary, hyperemia, which is a cosmetic asymptomatic redness of the eye. Most hyperemia was scored as mild. Hyperemia is a common tolerability finding associated with the most widely prescribed glaucoma drugs.

**Lack of Systemic Side Effects** AR-13324 has demonstrated a lack of systemic side effects in clinical trials to date. The currently marketed non-PGA drugs have systemic side effect issues indicated on their product labels, including among others, lethargy, reduced heart rate, Stevens Johnson syndrome and blood dyscrasias. Further, the most widely prescribed non-PGA drug, timolol, has contraindications, including bronchospasm, arrhythmia and heart failure.

**Novel Dual-Action MOA** If approved, we believe AR-13324 would be the only once-daily drug available that specifically targets the TM, the diseased tissue responsible for elevated IOP in glaucoma. We believe AR-13324 will also be the first glaucoma drug to inhibit NET, which reduces fluid production in the eye. In addition, we believe the AR-13324 dual-action MOA is highly complementary to the MOA of the market-leading PGAs, which increase fluid outflow through the uveoscleral pathway.

**Consistent IOP-Lowering Effect Across Various Baseline IOPs** In our Phase 2b clinical trial, AR-13324 demonstrated a distinct ability to reduce IOP at consistent levels across all baseline IOPs tested in the trial. Published studies have indicated that currently marketed PGA and non-PGA drugs do not lower IOP as effectively in patients with low to moderately elevated baseline IOPs relative to patients with higher IOPs. Patients with low to moderately elevated IOPs represent the significant majority of glaucoma patients.

Table of Contents

Despite various safety and tolerability issues and the need to dose two to three times daily, the most commonly prescribed non-PGA drugs each generated peak annual global revenues over $400 million prior to the introduction of their generic equivalents.

Based on our preclinical data to date, we believe that triple-action PG324 would be the only glaucoma product that covers the full spectrum of IOP-lowering mechanisms, giving it the potential to provide a greater IOP-lowering effect than any currently approved glaucoma product. Therefore, we believe that PG324 could compete with both PGA and non-PGA therapies.

We own the worldwide rights to all indications for our current 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, AR-13324 and PG324, in the United States through at least 2030.

**Our Product Pipeline**

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 1,500 synthesized ROCK-selective and dual-action ROCK/NET inhibitors. We advanced one compound from each of these drug classes into Phase 2 clinical development to determine whether our single-action ROCK-selective drug, AR-12286, or our dual-action ROCK/NET drug, AR-13324, offered the better efficacy and tolerability profile in patients with glaucoma. We selected dual-action AR-13324 for advancement to Phase 3 clinical development based upon its superior clinical profile relative to AR-12286. We continue 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.

Our decision to advance AR-13324 and discontinue development of AR-12286 was based upon a comparison of the outcomes of similarly designed 28-day Phase 2 clinical trials of the respective compounds. The trials showed that the IOP-lowering effect of AR-12286 declined by 1.4 mmHg from day 7 to day 28, while AR-13324 provided a stable IOP-lowering effect from day 7 to day 28. In addition, a subsequent three-month Phase 2 clinical trial for AR-12286 revealed that AR-12886 s loss of efficacy continued beyond day 28. Therefore, in June 2013, we discontinued development of AR-12286 and its fixed-dose combination product PG286, a combination of AR-12286 and the PGA travoprost.

Our lead product candidate AR-13324 has several important characteristics that distinguish it from AR-12286. AR-13324 lowers IOP through a dual mechanism of action by inhibiting both ROCK and NET, whereas AR-12286 has a single mechanism of action inhibiting only ROCK. In addition, AR-13324 has a distinct chemical composition that, when converted into its active form in the eye, results in a molecule that is ten times more potent at inhibiting ROCK than AR-12286. Furthermore, in addition to being a potent inhibitor of ROCK, AR-13324 also inhibits Protein Kinase C, or PKC, which we believe is an alternate pathway for smooth muscle contraction that can lead to contraction of the TM, even when ROCK is inhibited. AR-12286 does not inhibit PKC. Also, in a six-month toxicology study with exaggerated dosing of AR-12286, lens opacities, otherwise known as cataracts, were observed in rabbit eyes beginning at three months. In a similar six-month toxicology study with exaggerated dosing of AR-13324, no adverse lens effects were observed.

Table of Contents

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 |
|---|---|---|---|
| AR-13324 | Dual-action ROCK/NET inhibitor | Phase 3 registration trials expected to begin mid-2014 | Wholly-Owned |
| PG324 | Triple-action Combination of dual-action AR-13324 and latanoprost, a PGA | Phase 2b clinical trial expected to begin by early 2014 | Wholly-Owned |
| AR-13533 | Dual-action Second generation ROCK/NET inhibitor | Preclinical | Wholly-Owned |

***Overview of Dual-Action AR-13324***

Our lead product candidate, AR-13324, is the first of a new dual-action class of glaucoma drugs that was discovered by our scientists. AR-13324 is a once-daily eye drop designed to reduce IOP in patients with glaucoma or ocular hypertension. It increases fluid outflow through the primary drain of the eye while also reducing eye fluid production. It acts through the inhibition of both ROCK and NET. In addition, AR-13324 has inhibitory activity against a secondary signaling pathway, PKC, which acts in parallel to the primary signaling pathway, ROCK, to promote cell contraction in the TM, contributing to the ability of AR-13324 to maintain its efficacy.

We completed an AR-13324 Phase 2b clinical trial in May 2013. This 28-day trial included 224 patients who were treated once daily with AR-13324 or latanoprost. Although AR-13324 is expected to compete primarily against other non-PGA drugs, latanoprost was used as the comparator because it is the most widely-prescribed drug of all currently marketed glaucoma products. In the Phase 2b trial, AR-13324 was highly effective with once-daily dosing at lowering IOP, with the highest dose resulting in mean IOP reductions of 5.7 and 6.2 mmHg on days 28 and 14, respectively. In the analysis of the full clinical trial cohort with a baseline IOP range of 22 to 36 mmHg, the mean IOP lowering for our once-daily AR-13324 was 1.2 mmHg less than that of latanoprost and in line with published historical data for twice-daily timolol, the most commonly prescribed non-PGA drug.

In a protocol specified analysis of patients with a moderately elevated baseline IOP range of 22 to 26 mmHg, the mean IOP lowering of latanoprost and AR-13324 were clinically and statistically equivalent. While latanoprost produced smaller IOP reductions in patients with moderately elevated IOPs than in patients with highly elevated IOPs, AR-13324 was shown to maintain essentially the same IOP-lowering effect irrespective of the baseline. Publications have reported a similarly declining efficacy trend, in line with that observed for latanoprost, for currently marketed non-PGA glaucoma drugs, including timolol. We believe this should place AR-13324 in a favorable competitive position because a significant majority of glaucoma patients have such moderately elevated baseline IOP.

We are planning two Phase 3 registration trials that will measure efficacy of AR-13324 over three months and safety over 12 months. The trials will include at least 1,200 patients in total. The primary efficacy endpoint of the trials will be to demonstrate non-inferiority of IOP lowering for AR-13324 (dosed once daily) compared to timolol (dosed twice daily), the most widely used comparator in registration trials for glaucoma. Assuming we commence the Phase 3 trials in mid-2014 as planned and fully enroll the trials within our anticipated timeframe, we would expect efficacy data from the two trials in mid-2015.

If approved, AR-13324 is expected to compete against non-PGA products, the significant majority of which have been in the market for at least 20 years. The non-PGA market segment represents approximately half of the total prescription volume of the glaucoma market, for which 2012 branded and generic product sales exceeded $4.5

Table of Contents

billion in the United States, Europe and Japan in aggregate according to IMS. Due to the multiple daily dosings, side effects and contraindications of the currently marketed non-PGA products, we believe there is a significant unmet need in this market segment. We believe that AR-13324 has several significant differentiating characteristics that would make it a strong competitor in the non-PGA market segment.

***Overview of Triple-Action PG324***

Our once-daily, triple-action product candidate PG324 is a combination of our dual-action compound AR-13324 formulated with latanoprost in a single eye drop. If approved, we believe that PG324 would be the first glaucoma product to lower IOP through all three MOAs:

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

Triple-action PG324 has been tested in a preclinical primate model to assess its effectiveness at lowering IOP. The results of this three-day study show that at all time points measured, PG324 dosed once daily reduced IOP substantially more than latanoprost alone dosed once daily.

We plan to commence a randomized, controlled 28-day Phase 2b clinical trial in approximately 300 patients by early 2014. The trial will be designed to measure the efficacy of two concentrations of PG324 compared to latanoprost and to AR-13324, all dosed once daily. The efficacy endpoint will be superiority of PG324 to each of its components. Assuming we commence the Phase 2b trial by early 2014 and fully enroll the trial within our anticipated timeframe, we would expect results in mid-2014.

We believe PG324, if approved, would be the only glaucoma product that covers the full spectrum of IOP-lowering mechanisms, thereby giving it the potential to provide a greater IOP-lowering effect than any currently approved glaucoma product and could compete in both the PGA and non-PGA markets.

***Overview of Second-Generation, Dual-Action AR-13533***

In addition to our primary product candidates, AR-13324 and PG324, we are in the preclinical development stage with AR-13533, our second generation dual-action ROCK/NET inhibitor. AR-13533 does not require enzymatic conversion in the eye to deliver maximal ROCK inhibitor activity, and therefore AR-13533 may provide additional IOP-lowering effect in patients beyond that obtained with AR-13324. We have not submitted an investigational new drug application, or IND, for AR-13533 to the FDA and there can be no assurance that an IND will be submitted.

**Our Strategy**

Our goal is to be 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.*** Based on the results from our Phase 2b clinical trial for dual-action AR-13324, we plan to proceed into Phase 3 registration trials for this drug. Additionally, we plan to initiate a Phase 2b clinical trial for PG324, our triple-action combination of AR-13324 and latanoprost and, over the longer term, to evaluate opportunities associated with preclinical-stage AR-13533, our second generation dual-action ROCK/NET inhibitor.

Table of Contents

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

***Explore partnerships with leading pharmaceutical and biotechnology companies to maximize the value of our product candidates outside the United States.*** We currently plan to explore the licensing of commercialization rights or other forms of collaboration with qualified potential partners for the commercialization of our product candidates in certain key markets outside of the United States, including Europe, Japan and emerging markets.

***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. 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 possible in-licensing or acquisitions of additional ophthalmic product candidates or products.*** We continually 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 evaluate the expansion of our product portfolio through in-licensing or acquisitions of additional ophthalmic product candidates or products.

**Risk Factors Associated with Our Business**

Our business is subject to numerous risks, as more fully described in the section entitled Risk Factors immediately following this prospectus summary. You should read these risks before you invest in our common stock. In particular, our risks include, but are not limited to, the following:

- we have not obtained and may never obtain regulatory approval for any of our product candidates;
- failure can occur at any stage of clinical development and, if the clinical trials for our product candidates are unsuccessful, we could be required to abandon development, as was the case recently with AR-12286 and PG286 when AR-12286 did not meet desired efficacy endpoints;
- regulatory approval could be substantially delayed for all or a subset of our product candidates if the FDA or European regulatory authorities require additional time or studies to assess the products;
- we currently have no source of revenue and we will need to obtain additional financing to fund our operations;
- we have incurred net losses since inception and, as of June 30, 2013, we had an accumulated deficit during the development stage of $74.0 million;
- we expect to incur substantial losses for the foreseeable future and may never achieve or maintain profitability;
- we depend substantially on the success regarding safety, efficacy and tolerability of our product candidates;

we may be unable to successfully manufacture or commercialize our product candidates;

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;

Table of Contents

we depend upon our key personnel and our ability to attract and retain employees;

if we cannot successfully defend our intellectual property, additional competitors could enter the market and sales of affected products may decline materially; and

our independent registered public accounting firm issued an opinion on our financial statements as of and for the year ended December 31, 2012 that expresses doubt about our ability to continue as a going concern.

**Corporate Information**

We were incorporated under the laws of the State of Delaware in June 2005. Our principal executive offices are located at 135 US Highway 206, Suite 15, Bedminster, New Jersey 07921, and our telephone number is (908) 470-4320. Our website address is www.aeriepharma.com. The information contained on, or that can be accessed through, our website is not part of this prospectus. Solely for convenience, the trademarks and trade names in this prospectus are referred to without the ® and symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.

Aerie is a registered trademark of Aerie Pharmaceuticals, Inc. All other trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners.

**Implications of Being an Emerging Growth Company**

We qualify as an emerging growth company as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. An emerging growth company may take advantage of relief from certain reporting requirements and other burdens that are otherwise applicable generally to public companies. These provisions include:

only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced Management s Discussion and Analysis of Financial Condition and Results of Operations disclosure;

exemption from the auditor attestation requirement on the effectiveness of our internal controls over financial reporting;

reduced disclosure about our executive compensation arrangements; and

no requirements for non-binding advisory votes on executive compensation or golden parachute arrangements.

We may take advantage of these provisions for up to five years or such earlier time that we no longer qualify as an emerging growth company. We would cease to be an emerging growth company if we have more than $1.0 billion in annual revenue, have more than $700 million in market value of our capital stock held by non-affiliates or issue more than $1.0 billion of non-convertible debt over a three-year period. We may choose to take advantage of some but not all of these reduced burdens. For example, we have taken advantage of the reduced reporting requirements with respect to disclosure regarding our executive compensation arrangements, have presented only two years of audited financial statements, have presented reduced Management s Discussion and Analysis of Financial Condition and Results of Operations disclosure and have taken the exemption from auditor attestation on the effectiveness of our internal controls over financial reporting. To the extent that we take advantage of these reduced burdens, the information that we provide stockholders may be different than you might obtain from other public companies in which you hold equity interests.

Table of Contents

**The Offering**

| | |
|---|---|
| **Common stock to be offered by us** | 6,720,000 shares. |
| **Common stock to be outstanding immediately after this offering** | 22,205,717 shares. |
| **Option to purchase additional shares** | We have granted the underwriters an option for 30 days from the date of this prospectus to purchase up to 1,008,000 additional shares of common stock. |
| **Use of proceeds** | The net proceeds to us from this offering, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, will be approximately $59.0 million.<br><br>We anticipate that the net proceeds from this offering will be used as follows:<br><br>approximately $24.0 million and $10.0 million for direct clinical and non-clinical costs, respectively, associated with the completion of Phase 3 registration trials for our product candidate AR-13324;<br><br>approximately $4.0 million and $1.5 million for direct clinical and non-clinical costs, respectively, associated with the completion of the Phase 2b clinical trial for our product candidate PG324; and<br><br>the remainder for working capital and general corporate purposes.<br><br>In the ordinary course of our business, we expect to evaluate from time to time acquiring, investing in or in-licensing complementary products, technologies or businesses. We currently do not have any agreements or commitments with respect to any potential acquisition, investment or license. See Use of Proceeds. |
| **NASDAQ Global Market symbol** | AERI |
| **Risk factors** | You should read the Risk Factors section of this prospectus for a discussion of factors to consider carefully before deciding to invest in shares of our common stock. |

Table of Contents

At our request, the underwriters have allocated an aggregate of 1,000,000 shares of our common stock in this offering to our existing principal stockholders and their affiliated entities. These shares will be offered and sold on the same terms as the other shares that are being offered and sold in this offering to the public. Although we anticipate that these stockholders will purchase all of the shares of our common stock that they have indicated an interest in purchasing, indications of interest are not binding agreements or commitments to purchase and any of these stockholders may determine to purchase more, less or no shares in this offering.

In addition, at our request, certain of the underwriters have reserved up to 5% of the common stock being offered by this prospectus (excluding the underwriters option to purchase any additional shares) for sale at the initial public offering price to our directors, officers, employees, consultants and other individuals associated with us and members of their families. The number of shares available for sale to the general public will be reduced to the extent such persons purchase these reserved shares. See Underwriting.

The number of shares of common stock to be outstanding immediately after this offering is based on 1,021,209 shares of common stock outstanding as of September 30, 2013, and excludes:

- 3,189,660 shares of common stock issuable upon the exercise of stock options outstanding as of September 30, 2013 under our 2005 Stock Option Plan, or the 2005 Plan, having a weighted average exercise price of $2.1634 per share;
- 3,229,068 shares of common stock reserved for future issuance under our 2013 Omnibus Incentive Plan (including 68,492 shares of common stock that were previously reserved for issuance under the 2005 Plan, under which no further awards may be granted following this offering), as well as any future increases in the number of shares of common stock reserved for issuance under this plan;
- 645,814 shares of common stock reserved for issuance under our 2013 Employee Stock Purchase Plan;
- 317,900 shares of restricted stock that are subject to vesting restrictions; and
- 717,801 shares of common stock issuable upon the exercise of warrants that are expected to remain outstanding following the closing of this offering. See Description of Capital Stock Warrants.

Unless otherwise indicated, all information in this prospectus assumes or gives effect to:

- a 1-for-5 reverse stock split of our common stock effected on October 8, 2013;
- the automatic conversion of all outstanding shares of our convertible preferred stock into an aggregate of 12,120,531 shares of common stock immediately prior to the closing of this offering;
- the conversion of the principal and accrued interest outstanding under our $18.0 million in aggregate principal amount of our 8% convertible notes due December 31, 2013, or the outstanding notes, into 1,860,363 shares of common stock immediately prior to the closing of this offering at a conversion price equal to the initial public offering price;
- the net exercise on the date of this prospectus of warrants to purchase 1,486,830 shares of convertible preferred stock that will subsequently be automatically converted into 297,366 shares of common stock immediately prior to the closing of this offering;

the net exercise immediately prior to the closing of this offering of warrants to purchase 931,240 shares of convertible preferred stock that will subsequently be automatically converted into 186,248 shares of common stock immediately prior to the closing of this offering;

the filing of our amended and restated certificate of incorporation, which will occur prior to the closing of this offering; and

no exercise of the underwriters option to purchase additional shares.

Table of Contents

**Summary Financial Data**

The following table summarizes our financial data. We have derived the following statement of operations and comprehensive loss data for the years ended December 31, 2012 and 2011 from our audited financial statements, included elsewhere in this prospectus. We have derived the following statement of operations and comprehensive loss data for the six months ended June 30, 2013 and 2012 and the period from inception (June 22, 2005) to June 30, 2013 and balance sheet data as of June 30, 2013 from our unaudited financial statements appearing elsewhere in this prospectus. The unaudited financial statements have been prepared on the same basis as the audited financial statements and, in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary to fairly present our financial position as of June 30, 2013 and results of operations for the six months ended June 30, 2013 and 2012 and the period from inception (June 22, 2005) to June 30, 2013. Our historical results are not necessarily indicative of the results that may be expected in the future. The following summary financial data should be read in conjunction with Management s Discussion and Analysis of Financial Condition and Results of Operations and our financial statements and related notes included elsewhere in this prospectus.

| | SIX MONTHS ENDED JUNE 30, | | YEAR ENDED DECEMBER 31, | | PERIOD FROM INCEPTION (JUNE 22, 2005) TO JUNE 30, 2013 |
|---|---|---|---|---|---|
| | 2013 | 2012 | 2012 | 2011 | |
| | (in thousands, except share and per share data) | | | | |
| | (unaudited) | | | | (unaudited) |
| **Statement of Operations and Comprehensive Loss Data:** | | | | | |
| Expenses: | | | | | |
| General and administrative | $ (3,406) | $ (2,285) | $ (5,020) | $ (3,521) | $ (23,303) |
| Research and development | (6,328) | (5,932) | (9,273) | (10,695) | (49,477) |
| Loss from operations | $ (9,734) | $ (8,217) | $ (14,293) | $ (14,216) | $ (72,780) |
| Other income (expense), net | (384) | 376 | (685) | 1,249 | (1,126) |
| Net loss | $ (10,118) | $ (7,841) | $ (14,978) | $ (12,967) | $ (73,906) |
| Net loss attributable to common stockholders basic and diluted [1] | $ (10,392) | $ (8,115) | $ (15,643) | $ (13,419) | |
| Net loss per share attributable to common stockholders basic and diluted[1] | $ (10.68) | $ (8.51) | $ (16.39) | $ (14.50) | |
| Weighted-average number of shares outstanding basic and diluted [1] | 973,460 | 953,114 | 954,695 | 925,625 | |
| Pro forma net loss per share attributable to common stockholders basic and diluted (unaudited)[2] | $ (0.53) | | | | |