AERIE PHARMACEUTICALS INC
Form 424B5
September 19, 2016
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Filed Pursuant to Rule 424(b)(5)

Registration No. 333-213643

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price Per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee(1)
Common Stock, par value $0.001 per share	2,542,373	$29.50	$75,000,003.50	$7,552.50

(1) Calculated in accordance with Rule 456(b) and 457(r) of the Securities Act of 1933, as amended, and relates to the Registration Statement on Form S-3 (File No. 333-213643) filed by the Registrant on September 15, 2016.

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PROSPECTUS SUPPLEMENT

(To Prospectus dated September 15, 2016)

2,542,373 Shares

Common Stock

We are offering 2,542,373 shares of our common stock. Our common stock is listed on the Nasdaq Global Market under the symbol AERI. On September 15, 2016, the last reported sale price of our common stock on the Nasdaq Global Market was $30.61 per share.

	Per Share	Total
Public offering price	$ 29.50	$ 75,000,003.50
Underwriting discount (1)	$ 1.24	$ 3,152,542.52
Proceeds, to us before expenses	$ 28.26	$ 71,847,460.98

(1) We have agreed to reimburse the underwriter for certain expenses in connection with this offering. See Underwriting.

Investing in our common stock involves risks. You should carefully consider all of the information set forth in this prospectus supplement, the accompanying base prospectus and the documents incorporated by reference in this prospectus supplement before deciding to invest in our common stock. Please see Risk Factors on page S-10 of this prospectus supplement and page 6 of the accompanying base prospectus and in the documents incorporated by reference in this prospectus supplement and the accompanying base prospectus to read about factors you should consider before buying shares of our common stock.

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

The underwriter expects to deliver the shares of common stock against payment on or about September 21, 2016.

Cantor Fitzgerald & Co.

The date of this prospectus supplement is September 15, 2016.

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You should rely only on the information contained or incorporated by reference in this prospectus supplement, in the accompanying base prospectus and in any free writing prospectus with respect to this offering filed by us with the Securities and Exchange Commission (the SEC). Neither we nor the underwriter has authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information you should not rely on it. You should assume that the information appearing in this prospectus supplement, the accompanying base prospectus, any free writing prospectus with respect to the offering filed by us with the SEC and the documents incorporated by reference herein and therein is accurate only as of their respective dates. Our business, financial condition, results of operations and prospects may have changed since those dates.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this offering and also adds to and updates information contained in the accompanying base prospectus and the documents incorporated by reference into the accompanying base prospectus. The second part, the accompanying base prospectus, gives more general information, some of which may not apply to this offering. You should read both this prospectus supplement and the accompanying base prospectus before deciding to invest in our common stock.

To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying base prospectus or in any document incorporated by reference in this prospectus supplement having an earlier date than the date of this prospectus supplement, on the other hand, you should rely on the information in this prospectus supplement. You should also read and consider the additional information under the captions Information Incorporated by Reference and Where You Can Find More Information in this prospectus supplement.

We and the underwriter are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The distribution of this prospectus supplement and the accompanying base prospectus and the offering of the common stock in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement and the accompanying base prospectus must inform themselves about, and observe any restrictions relating to, the offering of the common stock and the distribution of this prospectus supplement and the accompanying base prospectus outside the United States. This prospectus supplement and the accompanying base prospectus do not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus supplement and the accompanying base prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

References in this prospectus supplement to the Company, Aerie, we, us and our and similar terms refer to Aerie Pharmaceuticals, Inc. and its subsidiaries.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the documents incorporated by reference contain 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, wou should, exploring, pursuing or other words that convey uncertainty of future events or outcomes to identify these forward-looking statements.

Forward-looking statements appear in a number of places throughout this prospectus supplement and the documents incorporated by reference herein, 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 product candidates 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 request, 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 in the United States, Canada, Europe, Japan and elsewhere;
- our expectations related to the use of proceeds from our initial public offering (IPO) in October 2013, the issuance and sale of our privately placed senior secured convertible notes in September 2014 (the 2014 Convertible Notes) 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 coverage and reimbursement for our product candidates;

the glaucoma patient market size and the 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 our Annual Report on Form 10-K for the year ended December 31, 2015, as filed with the SEC on March 2, 2016. You should not rely upon forward-looking statements as predictions of future events.

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Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus supplement and the documents incorporated by reference herein, 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 prospectus supplement and the documents incorporated by reference herein. 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 prospectus supplement and the documents incorporated by reference herein, they may not be predictive of results or developments in future periods. Any forward-looking statements that we make in this prospectus supplement are as of the date of this prospectus supplement. 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 prospectus supplement.

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SUMMARY

This summary highlights information about this prospectus supplement and may not contain all of the information that may be important to you. You should read the following summary together with the more detailed information appearing elsewhere in this prospectus supplement and accompanying base prospectus, as well as the financial statements and related notes thereto and other information included in or incorporated by reference in this prospectus supplement before making any investment decision.

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 the United States. We are 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 expect to explore partnership opportunities through collaboration and licensing arrangements in Europe and Japan and may potentially commercialize ourselves in Europe. We are also 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 initial public offering in October 2013 and raised net proceeds of approximately $68 million. Since our IPO, we have raised additional net proceeds of approximately $124 million, through the sale and issuance of our 2014 Convertible Notes in September 2014, and approximately $147 million, through at-the-market sales during 2015 and 2016, which includes approximately $49 million sold under an at-the-market sales agreement with Cantor Fitzgerald & Co. on September 15, 2016. For additional information, please see Recent Developments At-the-Market Sales below. 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. If our products are approved and we are commercially successful, we believe Aerie could become a major ophthalmic pharmaceutical company.

Our lead product candidate, Rhopressa™, is a novel once-daily eye drop designed to lower intraocular pressure (IOP) in patients with glaucoma or ocular hypertension. We announced our submission of a new drug application (NDA) with the U.S. Food and Drug Administration (FDA) for Rhopressa™ on September 6, 2016. Rocket 1, our initial Phase 3 registration trial which was designed to measure efficacy over three months, 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 our second Phase 3 registration trial, named Rocket 2, which was 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. Safety data for the 12-month period of the Rocket 2 trial was released in February 2016. The NDA filing for Rhopressa™ utilized Rocket 2 as the pivotal clinical trial and Rocket 1 as supportive in nature. In addition to our

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Rocket 1 and Rocket 2 clinical trials, we are currently conducting a one year, safety-only study in Canada, named Rocket 3, and an additional Phase 3 registration trial for Rhopressa™, named Rocket 4 in the United States, which commenced in September 2015. Rocket 4 is designed to generate adequate six-month safety data for European regulatory approval. Rocket 4 is not required for NDA filing purposes. We expect to report the 90-day topline primary efficacy data for Rocket 4 in the fourth quarter of 2016. European regulatory filings are currently expected to be submitted in the second half of 2017.

Our second product candidate, Roclatan , 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. The first Phase 3 registration trial for Roclatan , named Mercury 1, commenced in September 2015 and on September 14, 2016 we announced that Mercury 1 achieved its primary efficacy endpoint of demonstrating superiority of Roclatan to each of its components. For additional information, please see Recent Developments Mercury 1 below. We commenced an additional Phase 3 trial in the United States for Roclatan , named Mercury 2, in March 2016. Mercury 2 is a 90-day efficacy and safety trial. If Mercury 1 and Mercury 2 are successful, a Roclatan NDA filing is expected to take place near year-end 2017. 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 benefit our commercialization prospects in Europe. We believe Roclatan has the potential to provide a greater IOP-lowering effect than any currently approved glaucoma product. Therefore, we believe that if Roclatan is approved, it could compete with both PGA (prostaglandin analog) 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.

We are developing Rhopressa as the first of a new class of compounds that is designed to lower IOP in patients through novel mechanisms of action (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 if Rhopressa is approved, it will compete with non-PGA products as a preferred adjunctive therapy to PGAs, due to its strong and consistent IOP-lowering effect with once-daily dosing relative to currently marketed non-PGA products and 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 glaucoma, as well as for patients who choose to avoid the cosmetic issues associated with PGAs.

We are also evaluating possible uses of our existing proprietary portfolio of Rho Kinase inhibitors beyond glaucoma. We have issued several research updates on preclinical results demonstrating the potential for Rhopressa to have disease-modifying activity in glaucoma patients by stopping and potentially reversing 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. Our research has also shown the potential of Rhopressa to promote retinal ganglion cell survival and axon regeneration. We have also commenced research to evaluate injectable sustained release formulation technologies with the potential capability of delivering Rhopressa internally in the eye over several months for the treatment of glaucoma. Additionally, an early-stage molecule, AR-13154, has shown preclinically the potential to decrease lesion size in wet age-related macular degeneration 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. We continually explore and discuss potential additional opportunities for new ophthalmic products,

delivery alternatives and new therapeutic areas. We are currently focused on the evaluation of delivery

technologies for the delivery of our owned molecules to the front and back of the eye over sustained periods and are in the early stages of collaboration with a third party.

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, Rhopressa and Roclatan , in the United States through at least 2030.

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 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 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 entered into between Aerie Limited and Aerie Ireland Limited.

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 announced our submission of the NDA for Rhopressa on September 6, 2016, using our successful Rocket 2 clinical trial as the pivotal trial and Rocket 1 data as supportive in nature. 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 regulatory filings in Europe by approximately mid-2017.

Roclatan 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 and on September 14, 2016 we announced that Mercury 1 achieved its primary efficacy endpoint of demonstrating superiority of Roclatan to each of its components. We commenced our second Phase 3 trial for Roclatan , named Mercury 2, in March 2016. If Mercury 1 and Mercury 2 are successful, we expect to file an NDA for Roclatan near year-end 2017. 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.

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 the United States 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 North America. Our strategy includes developing our business outside of North

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America, including obtaining regulatory approval on our own for our lead product candidates in Europe and possibly obtaining regulatory approval on our own or 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.

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 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 may license or acquire additional product candidates and technologies to broaden our presence in ophthalmology, and we continually explore and discuss potential additional opportunities for new ophthalmic products, delivery alternatives and new therapeutic areas with potential partners. Our approach has consistently been to explore opportunities with minimal initial investment allowing us to more fully evaluate the probability of success prior to making a material commitment. We are currently focused on the evaluation of delivery technologies for the delivery of our owned molecules to the front and back of the eye over sustained periods.

Recent Developments

Mercury 1

On September 14, 2016, we reported the successful 90-day primary efficacy results of our 12-month Phase 3 Mercury 1 clinical trial for Roclatan. The study achieved its primary efficacy endpoint demonstrating statistical superiority over each of its components, including Rhopressa, and market-leading PGA, latanoprost, all of which were dosed once daily in the evening. The study evaluated patients with maximum baseline IOPs ranging from above 20 to below 36 mmHg (millimeters of mercury) at nine measured time points over the 90-day trial. The IOP-lowering effect of Roclatan exceeded that of monotherapy with latanoprost in a range of 1.3 to 2.5 mmHg and Rhopressa in a range of 1.8 to 3.0 mmHg, with efficacy levels remaining consistent for all arms in the study throughout the 90-day trial. Throughout the duration of the study, the mean diurnal IOP-lowering effect of Roclatan exceeded that of latanoprost by an average of 1.9 mmHg and exceeded Rhopressa by an average of 2.6 mmHg. Roclatan reduced mean diurnal IOPs to 16 mmHg or lower in 61% of patients, a significantly higher percentage than observed in the comparator arms in the study. The most common Roclatan adverse event observed in the study was hyperemia, or eye redness, which was reported in approximately 50% of patients, or 30% above baseline, and was scored as mild for approximately 80% of affected patients. There were no drug-related serious adverse events for any of the comparators in the trial.

Topline results of a clinical trial do not necessarily predict final results. The information presented above reflects our preliminary review of the 90-day topline primary efficacy results for Mercury 1 based solely upon information available to us as of the date of this prospectus supplement. The preliminary topline primary efficacy results presented above are subject to the completion of our data review procedures and completion of the 12-month safety trial. Further review of these results, and the results obtained at the completion of Mercury 1, may change the conclusions drawn from our preliminary review indicating less promising results than we currently anticipate. Additional information

about the Mercury 1 results will not be available until after this offering is completed. In particular, on September 14, 2016, we announced that we will participate in an investor conference on October 5, 2016 during which we plan to cover further details from the Mercury 1 trial.

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Accordingly, you should not place undue reliance upon this preliminary data. Adverse events may occur or other risks may be discovered as Mercury 1 or other Roclatan™ trials progress that may cause us to suspend or terminate clinical trials for this product candidate. Moreover, clinical data are often susceptible to varying interpretations and analyses, and while we believe that the 90-day topline primary efficacy results for Mercury 1 are satisfactory, we do not know whether the full 12-month safety study will demonstrate consistent or adequate efficacy and safety sufficient to obtain regulatory approval to market Roclatan™. See Risk Factors Additional Risks Relating to this Offering Additional information about the Mercury 1 results will not be available until after this offering is completed elsewhere in this prospectus supplement and Risk Factors Risks Related to Development, Regulatory Approval and Commercialization 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 contained in our Annual Report on Form 10-K for the year ended December 31, 2015 incorporated by reference herein.

At-the-Market Sales

Subsequent to June 30, 2016, we issued and sold a total of 2,543,533 shares of our common stock under separate at-the-market sales agreements with RBC Capital Markets, LLC and Cantor Fitzgerald & Co. and received net proceeds of approximately $45.3 million. In addition, we sold 1,524,200 additional shares of our common stock under a $50.0 million at-the-market sales agreement entered into with Cantor Fitzgerald & Co. on September 15, 2016, which shares will be issued on or about September 20, 2016.

Corporate 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 also have offices in Bedminster, New Jersey and Durham, North Carolina. We were incorporated in Delaware in June 2005. Our internet address is http://www.aeriepharma.com. The information found on our website is not incorporated by reference into this prospectus supplement.

Implications of Being an Emerging Growth Company

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012. We will remain an emerging growth company until the earlier of December 31, 2018 or such time when we have more than $1 billion in annual revenue, we issue more than $1 billion of non-convertible debt over a three-year period, or we have more than $700 million in market value of our stock held by non-affiliates as of the end of the second quarter of that fiscal year.

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THE OFFERING

Common stock offered by us	2,542,373 shares.
Common stock to be outstanding immediately after this offering	29,191,978 shares.
Use of proceeds	We currently intend to use the net proceeds from this offering for general corporate purposes, including the complete funding of Rhopressa™ commercialization costs, execution of clinical trials in Japan, commencement of construction of a manufacturing plant in Ireland and continuation of preclinical activity in support of our product pipeline, along with ongoing working capital requirements. See Use of Proceeds on page S-9 of this prospectus supplement.
Nasdaq Global Market symbol	AERI.
Risk factors	Investing in our common stock involves risks. Please see Risk Factors on page S-8 of this prospectus supplement and page 6 of the accompanying base prospectus, and in the documents incorporated by reference herein, to read about factors you should consider before deciding to purchase shares of our common stock.

The number of shares of our common stock to be outstanding immediately after this offering is based on 26,649,605 shares outstanding as of June 30, 2016, and excludes as of such date:

- 184,633 shares of restricted stock outstanding as of June 30, 2016 that are subject to vesting restrictions and are not considered outstanding for accounting purposes;
- 5,271,279 shares of common stock issuable upon the exercise of stock options outstanding as of June 30, 2016, under our equity compensation plans, having a weighted average exercise price of $11.04 per share;
- 613,426 shares of common stock reserved for issuance under our 2013 Employee Stock Purchase Plan as of June 30, 2016;
- 2,449,607 shares of common stock reserved as of June 30, 2016, for future issuance under our Amended and Restated Equity Plan;

380,982 shares of common stock issuable upon the exercise of warrants outstanding as of June 30, 2016, having a weighted average exercise price of $2.10 per share; and

2,543,553 shares of common stock issued after June 30, 2016 pursuant to our at-the-market sales agreements and 1,524,200 additional shares of common stock sold under our $50.0 million at-the-market sales agreement on September 15, 2016, which shares will be issued on or about September 20, 2016.

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RISK FACTORS

You should consider carefully the risks described below and discussed under the section captioned Risk Factors contained in our Annual Report on Form 10-K for the year ended December 31, 2015, which is incorporated by reference in this prospectus supplement in its entirety, together with other information in this prospectus supplement, and the information and documents incorporated by reference in this prospectus supplement, and any free writing prospectus with respect to this offering filed by us with the SEC, before you make a decision to invest in our common stock. 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 these risks 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.

Additional Risks Relating to this Offering

Our management will have broad discretion in the use of the net proceeds from this offering and may allocate the net proceeds from this offering in ways that you and other stockholders may not approve.

Our management will have broad discretion in the use of the net proceeds, including for any of the purposes described in the section entitled Use of Proceeds, and you will not have the opportunity as part of your investment decision to assess whether the net proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. The failure of our management to use these funds effectively could have a material adverse effect on our business, cause the market price of our common stock to decline and delay the development of our product candidates. Pending their use, we may invest the net proceeds from this offering in short-term, investment-grade, interest-bearing instruments and U.S. government securities. These investments may not yield a favorable return to our stockholders.

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. In addition, we sold 1,524,200 additional shares of our common stock under a $50.0 million at-the-market sales agreement entered into with Cantor Fitzgerald & Co. on September 15, 2016, which shares will be issued on or about September 20, 2016. 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.

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.

We have never declared or paid cash dividends on our common stock. 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 any existing or 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 in this offering for the foreseeable future.

You will experience immediate dilution in the book value per share of the common stock you purchase.

Because the price per share of our common stock being offered may be higher than the book value per share of our common stock, you may suffer immediate substantial dilution in the net tangible book value of the common stock you purchase in this offering. See Dilution for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

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Additional information about the Mercury 1 results will not be available until after this offering is completed.

The information presented in this prospectus supplement under Summary Recent Developments Mercury 1 reflects our preliminary review of the 90-day topline primary efficacy results for Mercury 1 based solely upon information available to us as of the date of this prospectus supplement. These preliminary topline primary efficacy results are subject to the completion of our data review procedures and completion of the 12-month safety trial. Further review of these results, and the results obtained at the completion of Mercury 1, may change the conclusions drawn from our preliminary review indicating less promising results than we currently anticipate. Additional information about the Mercury 1 results will not be available until after this offering is completed. In particular, on September 14, 2016, we announced that we will participate in an investor conference on October 5, 2016 during which we plan to cover further details from the Mercury 1 trial. Accordingly, you should not place undue reliance upon this preliminary data. Adverse events may occur or other risks may be discovered as Mercury 1 or other Roclatan™ trials progress that may cause us to suspend or terminate clinical trials for this product candidate. Moreover, clinical data are often susceptible to varying interpretations and analyses, and while we believe that the 90-day topline primary efficacy results for Mercury 1 are satisfactory, we do not know whether the full 12-month safety study will demonstrate consistent or adequate efficacy and safety sufficient to obtain regulatory approval to market Roclatan™. See Risk Factors Risks Related to Development, Regulatory Approval and Commercialization 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 contained in our Annual Report on Form 10-K for the year ended December 31, 2015 incorporated by reference herein.

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USE OF PROCEEDS

We estimate that the net proceeds from the sale of shares of common stock that we are offering will be approximately $71.3 million, after deducting our estimated offering expenses.

We intend to use the net proceeds from this offering for general corporate purposes, including the complete funding of Rhopressa™ commercialization costs, execution of clinical trials in Japan, commencement of construction of a manufacturing plant in Ireland and continuation of preclinical activity in support of our product pipeline, along with ongoing working capital requirements. We may also use a portion of the net proceeds for the licensing or acquisition of, or the development of, additional product candidates and/or to fund possible investments in and the acquisition of complementary businesses or partnerships. However, we have no present plans, agreements or commitments with respect to any potential acquisition, investment or license.

The expected use of the net proceeds from the sale of common stock offered by this prospectus supplement represents our intentions based upon our current plans and business conditions. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our clinical trials and development efforts, as well as any unforeseen cash needs. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering. Pending our use of the net proceeds from this offering, we intend to invest the net proceeds in a variety of capital preservation investments, including short-term, investment-grade, interest-bearing instruments and U.S. government securities.

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DILUTION

If you invest in our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the public offering price per share of our common stock and the as adjusted net tangible book value per share of our common stock upon closing of this offering. Net tangible book value per share of our common stock is determined at any date by subtracting our total liabilities from the amount of our total tangible assets (total assets less intangible assets) and dividing the difference by the number of shares of our common stock deemed to be outstanding at that date.

Our historical net tangible book value (deficit) as of June 30, 2016 was approximately $(17.5) million, or $(0.66) per share, based on 26,649,605 shares of common stock outstanding as of June 30, 2016.

After giving effect to our receipt of approximately $71.3 million of estimated net proceeds (after deducting underwriting discounts and commissions and estimated offering expenses payable by us) from our sale of common stock in this offering at the public offering price of $29.50 per share, our as adjusted net tangible book value as of June 30, 2016 would have been $53.9 million, or $1.85 per share. This amount represents an immediate increase in net tangible book value of $2.51 per share of our common stock to existing stockholders and an immediate dilution in net tangible book value of $27.65 per share of our common stock to new investors purchasing shares of common stock in this offering at the public offering price.

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

Public offering price per share		$ 29.50
Historical net tangible book value per share	$ (0.66)	
Increase per share attributable to new investors	2.51	
As adjusted net tangible book value per share after this offering		1.85
Dilution per share to new investors		$ 27.65

The information discussed above is illustrative only and will adjust based on the actual public offering price and other terms of this offering determined at pricing.

The number of shares of our common stock to be outstanding immediately after this offering is based on 26,649,605 shares of common stock outstanding as of June 30, 2016, and excludes as of such date:

- 184,633 shares of restricted stock outstanding as of June 30, 2016 that are subject to vesting restrictions and are not considered outstanding for accounting purposes;

- 5,271,279 shares of common stock issuable upon the exercise of stock options outstanding as of June 30, 2016, under our equity compensation plans, having a weighted average exercise price of $11.04 per share;

613,426 shares of common stock reserved for issuance under our 2013 Employee Stock Purchase Plan as of June 30, 2016;

2,449,607 shares of common stock reserved as of June 30, 2016, for future issuance under our Amended and Restated Equity Plan;

380,982 shares of common stock issuable upon the exercise of warrants outstanding as of June 30, 2016, having a weighted average exercise price of $2.10 per share; and

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2,543,553 shares of common stock issued after June 30, 2016 pursuant to our at-the-market sales agreements and 1,524,200 additional shares of common stock sold under our $50.0 million at-the-market sales agreement on September 15, 2016, which shares will be issued on or about September 20, 2016.

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PRICE RANGE OF COMMON STOCK

Our common stock has been trading on the Nasdaq Global Market under the symbol AERI since our IPO on October 25, 2013. Prior to this date, there was no public market for our common stock. 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
2016		
Third Quarter (through September 15, 2016)	$ 34.62	$ 16.61
Second Quarter	19.99	11.89
First Quarter	24.08	10.82
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

As of June 30, 2016, we had 26,649,605 shares of common stock outstanding held by approximately eight 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.

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U.S. FEDERAL INCOME AND ESTATE TAX CONSIDERATIONS

The following is a summary of the material U.S. federal income and estate tax consequences of the ownership and disposition of our common stock that is being issued pursuant to this offering. This summary is limited to a non-U.S. holder (as defined below) that holds our common stock as a capital asset (generally, investment property). This summary does not discuss all of the aspects of U.S. federal income and estate taxation that may be relevant to a non-U.S. holder in light of the non-U.S. holder s particular investment or other circumstances. In addition, this summary also does not address any tax considerations arising under the laws of any U.S. state or local jurisdiction or non-U.S. jurisdiction or under the U.S. federal gift tax laws. Accordingly, all prospective non-U.S. holders should consult their own tax advisors with respect to the U.S. federal, state, local and non-U.S. tax consequences of the ownership and disposition of our common stock.

This summary is based on provisions of the U.S. Internal Revenue Code of 1986, as amended, or the Code, applicable U.S. Treasury regulations and administrative and judicial interpretations, all as in effect or in existence on the date of this prospectus. Subsequent developments in U.S. federal income or estate tax law, including changes in law or differing interpretations, which may be applied retroactively, could alter the U.S. federal income and estate tax consequences of owning and disposing of our common stock as described in this summary. We cannot assure you that the U.S. Internal Revenue Service, or the IRS, will not challenge one or more of the tax consequences described in this summary, and we have not obtained, nor do we intend to obtain, any ruling from the IRS or opinion of counsel with respect to any of the tax consequences of the ownership or disposition of our common stock by a non-U.S. holder.

As used in this summary, the term non-U.S. holder means a beneficial owner of our common stock that is not, for U.S. federal income tax purposes:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States or of any state thereof or the District of Columbia;
- an entity or arrangement treated as a partnership for U.S. federal income tax purposes;
- an estate whose income is includible in gross income for U.S. federal income tax purposes regardless of its source; or
- a trust, if (1) a U.S. court is able to exercise primary supervision over the trust s administration and one or more United States persons (within the meaning of the Code) has the authority to control all of the trust s substantial decisions, or (2) the trust has a valid election in effect under applicable U.S. Treasury regulations to be treated as a United States person.

If an entity or arrangement treated as a partnership for U.S. federal income tax purposes holds our common stock, the tax treatment of a partner in the partnership generally will depend upon the status of the partner, the activities of the partnership and certain determinations made at the partner level. Partnerships, and partners in partnerships, that hold

our common stock should consult their own tax advisors as to the particular U.S. federal income and estate tax consequences of owning and disposing of our common stock that are applicable to them.

This summary does not consider any specific facts or circumstances that may apply to a non-U.S. holder and does not address any special tax rules that may apply to particular non-U.S. holders, such as:

- financial institutions, insurance companies, tax-exempt organizations, pension plans, brokers, dealers or traders in stocks, securities or currencies, certain former citizens or long-term residents of the United States, controlled foreign corporations or passive foreign investment companies; or

- a non-U.S. holder holding our common stock as part of a conversion, constructive sale, wash sale or other integrated transaction or a hedge, straddle or synthetic security;

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a non-U.S. holder that holds or receives our common stock pursuant to the exercise of any employee stock option or otherwise as compensation; or

a non-U.S. holder that at any time owns, directly, indirectly or constructively, 5% or more of our capital stock.

Each non-U.S. holder should consult a tax advisor regarding the U.S. federal, state, local and non-U.S. income and other tax consequences of owning and disposing of our common stock.

Dividends

Distributions on our common stock generally will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. If a distribution exceeds our current and accumulated earnings and profits, the excess will be treated as a tax-free return of the non-U.S. holder s investment, up to (and will reduce, but not below zero) such non-U.S. holder s tax basis in the common stock. Any remaining excess will be treated as capital gain that will be subject to the tax treatment described below in Gain on Disposition of Our Common Stock.

As discussed above in the section titled Dividend Policy, we do not intend to pay cash dividends on our common stock for the foreseeable future. In the event that we do make cash distributions on our common stock, the gross amounts paid to a non-U.S. holder that are treated as dividends not effectively connected with such non-U.S. holder s conduct of a trade or business in the United States will be subject to withholding of U.S. federal income tax at a rate of 30%, or a lower rate under an applicable income tax treaty. In order to claim the benefit of an applicable income tax treaty, a non-U.S. holder will be required to provide to the applicable withholding agent a properly executed IRS Form W-8BEN or W-8BEN-E (or other applicable form) in accordance with the applicable certification and disclosure requirements. Special rules apply to partnerships and other pass-through entities, and these certification and disclosure requirements also may apply to beneficial owners of partnerships and other pass-through entities that hold our common stock.

Dividends paid on our common stock that are effectively connected with a non-U.S. holder s conduct of a trade or business in the United States and, if required by an applicable income tax treaty, that are attributable to a permanent establishment or fixed base maintained by the non-U.S. holder in the United States, will be taxed on a net income basis at the regular graduated rates and in the manner applicable to United States persons. In that case, withholding of U.S. federal income tax discussed above will not apply if the non-U.S. holder provides to the applicable withholding agent a properly executed IRS Form W-8ECI (or successor form) in accordance with the applicable certification and disclosure requirements. In addition, a non-U.S. holder that is treated as a corporation for U.S. federal income tax purposes may be subject to a branch profits tax at a 30% rate, or a lower rate under an applicable income tax treaty, on the non-U.S. holder s earnings and profits (attributable to dividends on our common stock or otherwise) that are effectively connected with the non-U.S. holder s conduct of a trade or business within the United States, subject to adjustments.

The certifications described above must be provided to the applicable withholding agent prior to the payment of dividends and must be updated periodically. A non-U.S. holder may obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for a refund with the U.S. Internal Revenue Service. Non-U.S. holders should consult their own tax advisors regarding their entitlement to benefits under a relevant income tax treaty and the manner of claiming the benefits.

The foregoing is subject to the discussions below under U.S. Information Reporting and Backup Withholding and FATCA Withholding.

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Gain on Disposition of Our Common Stock

A non-U.S. holder generally will not be subject to U.S. federal income tax (including withholding thereof) on any gain recognized on a sale or other taxable disposition of our common stock unless:

- the gain is effectively connected with the non-U.S. holder s conduct of a trade or business in the United States and, if required by an applicable income tax treaty, is attributable to a permanent establishment or fixed base maintained by the non-U.S. holder in the United States; in this case, the gain will be subject to U.S. federal income tax on a net income basis at the regular graduated rates and in the manner applicable to United States persons (unless an applicable income tax treaty provides otherwise) and, if the non-U.S. holder is treated as a corporation for U.S. federal income tax purposes, the branch profits tax described above may also apply;

- the non-U.S. holder is an individual who is present in the United States for a period aggregating more than 182 days in the taxable year of the disposition and meets other requirements (in which case, except as otherwise provided by an applicable income tax treaty, the gain, which may be offset by certain U.S. source capital losses, generally will be subject to a flat 30% U.S. federal income tax, even though the non-U.S. holder is not considered a resident alien under the Code); or

- we are or have been a U.S. real property holding corporation for U.S. federal income tax purposes at any time during the shorter of the five-year period ending on the date of disposition or the period that the non-U.S. holder held our common stock.

Generally, a corporation is a U.S. real property holding corporation if the fair market value of its U.S. real property interests equals or exceeds 50% of the sum of the fair market value of its worldwide real property interests (including U.S. real property interests) plus its other assets used or held for use in a trade or business. The tax relating to stock in a U.S. real property holding corporation generally will not apply to a non-U.S. holder whose holdings, direct, indirect and constructive, at all times during the applicable period, constituted 5% or less of our common stock, provided that our common stock was regularly traded on an established securities market. We believe that we are not currently, and we do not anticipate becoming in the future, a U.S. real property holding corporation. No assurance can be provided that our common stock will be regularly traded on an established securities market for purposes of the rules described above. Non-U.S. holders should consult their own tax advisors regarding the possible adverse U.S. federal income tax consequences to them if we are, or were to become, a U.S. real property holding corporation.

The foregoing is subject to the discussions below under U.S. Information Reporting and Backup Withholding and FATCA Withholding.

Federal Estate Tax

Our common stock that is owned or treated as owned by an individual who is not a U.S. citizen or resident of the United States (as specially defined for U.S. federal estate tax purposes) at the time of death will be included in the individual s gross estate for U.S. federal estate tax purposes, unless an applicable estate tax or other treaty provides otherwise and, therefore, may be subject to U.S. federal estate tax.

U.S. Information Reporting and Backup Withholding

The applicable withholding agent with respect to a non-U.S. holder generally will be required to report to the IRS and to such non-U.S. holder payments of dividends on our common stock and the amount of U.S. federal income tax, if any, withheld with respect to those payments. Copies of the information returns reporting such dividends and any withholding may also be made available to the tax authorities in the country in which the non-U.S. holder resides under the provisions of a treaty or agreement. A non-U.S. holder will be exempt from backup withholding on dividends paid on our common stock if the non-U.S. holder provides to the applicable withholding agent a properly executed IRS Form W-8BEN or W-8BEN-E (or other applicable form) certifying

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under penalties of perjury that the non-U.S. holder is not a United States person, or otherwise meets documentary evidence requirements for establishing that it is not a United States person or otherwise qualifies for an exemption.

The gross proceeds from the disposition of our common stock may be subject to U.S. information reporting and backup withholding. If a non-U.S. holder sells our common stock outside the United States through a non-U.S. office of a non-U.S. broker and the sales proceeds are paid to the non-U.S. holder outside the United States, then the U.S. backup withholding and information reporting requirements generally will not apply to that payment. However, U.S. information reporting, but not U.S. backup withholding, will apply to a payment of sales proceeds, even if that payment is made outside the United States, if a non-U.S. holder sells our common stock through a non-U.S. office of a broker that is a United States person or has certain enumerated connections with the United States, unless the broker has documentary evidence in its files that the non-U.S. holder is not a United States person and certain other conditions are met or the non-U.S. holder otherwise qualifies for an exemption.

If a non-U.S. holder receives payments of the proceeds of a sale of our common stock to or through a U.S. office of a broker, the payment is subject to both U.S. backup withholding and information reporting unless the non-U.S. holder provides to the broker a properly executed IRS Form W-8BEN or W-8BEN-E (or other applicable form) certifying under penalties of perjury that the non-U.S. holder is not a United States person or the non-U.S. holder otherwise qualifies for an exemption.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund to a non-U.S. holder, or a credit against a non-U.S. holder s U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

FATCA Withholding

The Foreign Account Tax Compliance Act and related Treasury guidance (commonly referred to as FATCA) impose U.S. federal withholding tax at a rate of 30% on payments to certain foreign entities of (i) U.S.-source dividends (including dividends paid on our common stock) and (ii) the gross proceeds from the sale or other disposition after December 31, 2018 of property that produces U.S.-source dividends (including sales or other dispositions of our common stock). This withholding tax applies to a foreign entity, whether acting as a beneficial owner or an intermediary, unless such foreign entity complies with (i) certain information reporting requirements regarding its U.S. account holders and its U.S. owners and (ii) certain withholding obligations regarding certain payments to its account holders and certain other persons. Accordingly, the entity through which a non-U.S. holder holds its common stock will affect the determination of whether such withholding is required. Non-U.S. holders are encouraged to consult their tax advisors regarding FATCA.

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UNDERWRITING

We have entered into an underwriting agreement with Cantor Fitzgerald & Co. with respect to the common stock being offered hereby. Subject to the terms and conditions of the underwriting agreement, the underwriter has agreed to purchase from us 2,542,373 shares of our common stock.

The underwriting agreement provides that the obligation of the underwriter is subject to certain conditions precedent and that the underwriter has agreed to purchase all of the shares of common stock sold under the underwriting agreement if any of these shares are purchased.

We have agreed to indemnify the underwriter against specified liabilities, including liabilities under the Securities Act, and to contribute to payments the underwriter may be required to make in respect thereof.

The underwriter is offering the shares of common stock, subject to prior sale, when, as and if issued to and accepted by it, subject to approval of legal matters by its counsel and other conditions specified in the underwriting agreement. The underwriter reserves the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Underwriting discount and commissions and offering expenses. The underwriter has agreed to purchase the shares of common stock from us at $28.26 per share (representing approximately $71.8 million aggregate proceeds to us, before offering expenses). The underwriter may offer the shares of common stock from time to time for sale in one or more transactions on The Nasdaq Global Market, in the over-the-counter market, through negotiated transactions or otherwise at market prices prevailing at the time of sale, at prices related to prevailing market prices or at negotiated prices. In connection with the sale of the shares of common stock offered hereby, the underwriter may be deemed to have received compensation in the form of an underwriting discount. The underwriter may effect such transactions by selling shares of common stock to or through dealers, and such dealers may receive compensation in the form of discounts, concessions or commissions from the underwriter and/or purchasers of shares of common stock for whom they may act as agents or to whom they may sell as principal. We estimate expenses payable by us in connection with this offering, other than the underwriting discount referred to above, will be approximately $500,000. We have also agreed to reimburse the underwriters for certain of their expenses in an amount up to $20,000 in the aggregate.

Discretionary accounts. The underwriter does not intend to confirm sales of shares of common stock to any accounts over which it has discretionary authority.

Stabilization. In connection with this offering, the underwriter may engage in stabilizing transactions, overallotment transactions, syndicate covering transactions and purchases to cover positions created by short sales in accordance with Regulation M under the Exchange Act.

Stabilizing transactions permit bids to purchase shares of common stock so long as the stabilizing bids do not exceed a specified maximum, and are engaged in for the purpose of preventing or retarding a decline in the market price of the common stock while the offering is in progress.

Overallotment transactions involve sales by the underwriter of shares of common stock in excess of the number of shares of common stock the underwriter is obligated to purchase. This creates a syndicate short position which may be either a covered short position or a naked short position. In a covered short position,

the number of shares of common stock overallotted by the underwriter, if any, is not greater than the number of shares of common stock that they may purchase in the option to purchase additional shares. In a naked short position, the number of shares of common stock involved is greater than the number of shares of common stock in the option to purchase additional shares, if any. The underwriter may close out any short position by exercising their option to purchase additional shares, if any, and/or purchasing shares of common stock in the open market.

Syndicate covering transactions involve purchases of common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source

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of shares of common stock to close out the short position, the underwriter will consider, among other things, the price of shares of common stock available for purchase in the open market as compared with the price at which the underwriter may purchase shares of common stock through exercise of the option to purchase additional shares, if any. If the underwriter sells more shares of common stock than could be covered by exercise of the option to purchase additional shares, if any, and, therefore, has a naked short position, the position can be closed out only by buying shares of common stock in the open market. A naked short position is more likely to be created if the underwriter is concerned that after pricing there could be downward pressure on the price of the shares of common stock in the open market that could adversely affect investors who purchase in the offering.

These stabilizing transactions and syndicate covering transactions may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock in the open market may be higher than it would otherwise be in the absence of these transactions. Neither we nor the underwriter make any representation or prediction as to the effect that the transactions described above may have on the price of our common stock. These transactions may be effected on The Nasdaq Global Market, in the over-the-counter market or otherwise and, if commenced, may be discontinued at any time.

Passive market making. In connection with this offering, the underwriter may engage in passive market making transactions in our common stock on The Nasdaq Global Market in accordance with Rule 103 of Regulation M under the Exchange Act, during a period before the commencement of offers or sales of common stock and extending through the completion of the distribution. A passive market maker must display its bid at a price not in excess of the highest independent bid of that security. However, if all independent bids are lowered below the passive market maker s bid, that bid must then be lowered when specified purchase limits are exceeded.

Lock-up agreements. Pursuant to certain lock-up agreements, we and our executive officers and directors, have agreed, subject to certain exceptions, not to directly or indirectly offer, sell, assign, transfer, pledge, contract to sell, or otherwise dispose of, or announce the intention to otherwise dispose of, or enter into any swap, hedge or similar agreement or arrangement that transfers, in whole or in part, the economic risk of ownership of, or engage in any short selling of, or make any demand or request or exercise any right with respect to the registration of, or file with the SEC a registration statement under the Securities Act relating to, any common stock or securities convertible into or exercisable or exchangeable for common stock without the prior written consent of the underwriter, for a period of 90 days after the date of the underwriting agreement.

This lock-up provision applies to common stock and securities convertible into or exercisable or exchangeable for common stock owned now or acquired later by the person executing the agreement or for which the person executing the agreement later acquires the power of disposition. The exceptions to the lock-up for executive officers and directors include: (a) the transfer of shares of common stock or any securities convertible into or exercisable or exchangeable for common stock (i) as a bona fide gift to any member of the immediate family of the executive officer or director or to a trust formed for the benefit of an immediate family member, (ii) by will or intestate succession, or (iii) as a bona fide gift to a charity, non-profit organization or educational institution; (b) the exercise of options or warrants to purchase our common stock; (c) the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of common stock; (d) a transfer or sale of any shares pursuant to an existing Rule 10b5-1 plan; and (e) any transfer pursuant to an order of a court or regulatory agency or by operation of law. The exceptions to the lock-up for us include: (a) our sale of shares of common stock in this offering and (b) the issuance of restricted common stock or options to acquire common stock pursuant to our benefit plans, qualified equity incentive plans or other compensation plans.

Notice to Investors

United Kingdom. In the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are qualified investors (as defined in

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the Prospectus Directive) (i) who have professional experience in matters relating to investments falling within Article 19 (5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the Order) and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as relevant persons). This document must not be acted on or relied on in the United Kingdom by persons who are not relevant persons. In the United Kingdom, any investment or investment activity to which this document relates is only available to, and will be engaged in with, relevant persons.

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

to any legal entity which is a qualified investor as defined in the Prospectus Directive;

to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the underwriter; or

in any other circumstances falling within Article 3(2) of the Prospectus Directive,

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

Each person in a Relevant Member State who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed that it is a qualified investor within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive. In the case of any shares being offered to a financial intermediary as that term is used in Article 3(2) of the Prospectus Directive, each such financial intermediary will be deemed to have represented, acknowledged and agreed that the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Relevant Member State to qualified investors as so defined or in circumstances in which the prior consent of the underwriter has been obtained to each such proposed offer or resale.

We, the underwriter and its affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

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

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

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Hong Kong. The shares may not be offered or sold in Hong Kong, by means of any document, other than (a) to professional investors as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a prospectus as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the securities has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to securities which are or are intended to be disposed of only to persons outside Hong Kong or only to professional investors as defined in the Securities and Futures Ordinance and any rules and regulations made under that Ordinance.

Japan. The shares have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) and, accordingly, will not be offered or sold, directly or indirectly, in Japan, or for the benefit of any Japanese Person or to others for re-offering or resale, directly or indirectly, in Japan or to any Japanese Person, except in compliance with all applicable laws, regulations and ministerial guidelines promulgated by relevant Japanese governmental or regulatory authorities in effect at the relevant time. For the purposes of this paragraph, Japanese Person shall mean any person resident in Japan, including any corporation or other entity organized under the laws of Japan.

Canada. The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

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

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

Electronic offer, sale and distribution of shares of common stock. A prospectus in electronic format may be made available on the websites maintained by the underwriter or selling group members, if any, participating in this offering and the underwriter participating in this offering may distribute prospectuses electronically. Other than the prospectus in electronic format, the information on these websites is not part of this prospectus supplement, the accompanying prospectus or the registration statement of which the accompanying prospectus forms a part, has not been approved or endorsed by us or any underwriter in its capacity as underwriter, and should not be relied upon by investors.

Other relationships. The underwriter and its affiliates have provided, and may in the future provide, various investment banking, commercial banking and other financial services for us and our affiliates for which they have received, and may in the future receive, customary fees. We have entered into sales agreements with the underwriter pursuant to our at-the-market programs, including a sales agreement that we entered into with the

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underwriter on September 15, 2016, under which we sold 1,524,200 shares of our common stock with an aggregate sales price of $50.0 million through the underwriter, acting as our sales agent. Accordingly, they have received customary fees and commissions for these transactions.

Listing on The Nasdaq Global Market. Our common stock is traded on The Nasdaq Global Market under the symbol AERI. The transfer agent for our common stock is American Stock Transfer & Trust Company, LLC.

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LEGAL MATTERS

The legal validity of the common stock offered by this prospectus supplement will be passed upon for us by Fried, Frank, Harris, Shriver & Jacobson LLP, New York, New York. The underwriter is being represented in connection with this offering by Latham & Watkins LLP, San Diego, California.

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EXPERTS

The financial statements incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2015 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

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INFORMATION INCORPORATED BY REFERENCE

The SEC s rules allow us to incorporate by reference information into this prospectus supplement, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus supplement, and information that we file with the SEC will automatically update and supersede the previously filed information. In the case of a conflict or inconsistency between information in this prospectus supplement and/or information incorporated by reference into this prospectus supplement, you should rely on the information contained in the document that was filed later.

We incorporate by reference our documents listed below and any future filings made by us with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, other than any portions of the respective filings that were furnished, pursuant to Item 2.02 or Item 7.01 of Current Reports on Form 8-K (including exhibits related thereto) or other applicable SEC rules, rather than filed, prior to the termination of the offering under this prospectus supplement:

- our Annual Report on Form 10-K for the year ended December 31, 2015, which was filed with the SEC on March 2, 2016;
- the information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2015 from our Definitive Proxy Statement on Schedule 14A, which was filed with the SEC on April 29, 2016;
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2016 and June 30, 2016, which were filed with the SEC on May 3, 2016 and August 4, 2016, respectively;
- our Current Reports on Form 8-K, which were filed with the SEC on June 9, 2016, June 22, 2016 and September 15, 2016 (Accession No. 0001193125-16-710277); and
- the description of our common stock contained in our Registration Statement on Form 8-A, which was filed with the SEC on October 25, 2013, including any amendments or reports filed for the purpose of updating the description.

You may obtain copies of any of these filings by contacting us at the address and telephone number indicated below or by contacting the SEC as described below under the section entitled Where You Can Find More Information. Documents incorporated by reference are available from us without charge, excluding all exhibits unless an exhibit has been specifically incorporated by reference into this prospectus supplement, by requesting them in writing or by telephone or at our website at:

Aerie Pharmaceuticals, Inc.

Attention: Investor Relations

2030 Main Street, Suite 1500

Irvine, California 92614

(949) 526-8700

www.aeriepharma.com

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WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the common stock offered hereby. As permitted by SEC rules, this prospectus supplement does not contain all of the information we have included in the registration statement and the accompanying exhibits. You may refer to the registration statement and the exhibits for more information about us and our securities. The registration statement and the exhibits are available at the SEC s Public Reference Room or through its website as described below.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You can read and copy any materials we file with the SEC at its Public Reference Room at 100 F Street N.E., Washington DC, 20549. You can obtain information about the operations of the SEC Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains a website that contains information we file electronically with the SEC, which you can access over the Internet at http://www.sec.gov. General information about us, including our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports, is available free of charge through our website at http://www.aeriepharma.com as soon as reasonably practicable after we electronically file them with, or furnish them to, the SEC. Information on our website is not incorporated into this prospectus supplement or our other securities filings and is not a part of these filings.

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PROSPECTUS

Common Stock

We may offer and sell from time to time, in one or more offerings, shares of our common stock.

The common stock may be offered or sold by us at fixed prices, at prevailing market prices at the time of sale or at prices negotiated with purchasers, to or through underwriters, broker-dealers, agents, or through any other means described in this prospectus under Plan of Distribution and in supplements to this prospectus in connection with a particular offering of common stock.

This prospectus describes the general manner in which common stock may be offered and sold by us. When we sell common stock under this prospectus, we will, if necessary and required by law, provide a prospectus supplement that will contain specific information about the terms of that offering. Any prospectus supplement may also add to, update, modify or replace information contained in this prospectus. We urge you to read carefully this prospectus, any accompanying prospectus supplement and any documents we incorporate by reference into this prospectus and any accompanying prospectus supplement before you make your investment decision.

Our common stock is listed on the Nasdaq Global Market under the symbol AERI. As of September 14, 2016, the closing price of our common stock was $21.13 per share.

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

Investing in our common stock involves risks. You should carefully consider all of the information set forth in this prospectus, including the risk factors set forth under Risk Factors in our Annual Report on Form 10-K for the year ended December 31, 2015 filed with the Securities and Exchange Commission on March 2, 2016 (which document is incorporated by reference herein), as well as the risk factors and other information contained in any accompanying prospectus supplement and any related free writing prospectus and any documents we incorporate by reference into this prospectus and any accompanying prospectus supplement, before deciding to invest in our common stock. See Incorporation of Certain Information By Reference.

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

The date of this prospectus is September 15, 2016.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission (the SEC) using the SEC s shelf registration rules. Pursuant to this prospectus, we may, from time to time, sell shares of our common stock in one or more offerings.

When we sell common stock under this prospectus, we will, if necessary and required by law, provide a prospectus supplement that will contain specific information about the terms of that offering. That prospectus supplement may include a discussion of any risk factors or other special considerations that apply to that offering. Any prospectus supplement may also add to, update, modify or replace information contained in this prospectus. If there is any inconsistency between the information in this prospectus and any prospectus supplement, you should rely on the information in that prospectus supplement. You should carefully read both this prospectus and any prospectus supplement together with the additional information described under the heading Incorporation of Certain Information by Reference.

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

You should rely only on the information provided in this prospectus, including information incorporated by reference as described above, or any prospectus supplement or free writing prospectus that we have specifically referred you to. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We will not make an offer to sell securities in any jurisdiction where the offer or sale is not permitted. You should not assume that the information in this prospectus, any accompanying prospectus supplement or any documents we incorporate by reference into this prospectus and any prospectus supplement is accurate as of any date other than the date on the front of those documents. Our business, financial condition, results of operations and prospects may have changed since those dates.

References in this prospectus to the Company, Aerie, we, us and our and similar terms refer to Aerie Pharmaceu Inc. and its consolidated subsidiaries.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein contain 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, estimates, anticipates, expects, plans, intends, may, would, could, other words that convey uncertainty of future events or outcomes to identify these forward-looking statements.

Forward-looking statements appear in a number of places throughout this prospectus and the documents incorporated by reference herein, 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 product candidates 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 request, 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 in the United States, Canada, Europe, Japan and elsewhere;
- our expectations related to the use of proceeds from our initial public offering (IPO) in October 2013, the issuance and sale of our privately placed senior secured convertible notes in September 2014 (the 2014 Convertible Notes) 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 coverage and reimbursement for our product candidates;
- the glaucoma patient market size and the 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 our Annual Report on Form 10-K for the year ended December 31, 2015, as filed with the SEC on March 2, 2016. You should not rely upon forward-looking statements as predictions of future events.

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Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus and the documents incorporated by reference herein, 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 prospectus and the documents incorporated by reference herein. 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 prospectus and the documents incorporated by reference herein, they may not be predictive of results or developments in future periods. Any forward-looking statements that we make in this prospectus are as of the date of this prospectus. 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 prospectus.

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THE COMPANY

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 the United States. We are 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 expect to explore partnership opportunities through collaboration and licensing arrangements in Europe and Japan and may potentially commercialize ourselves in Europe. We are also 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 initial public offering in October 2013 and raised net proceeds of approximately $68 million. Since our IPO, we have raised additional net proceeds of approximately $124 million, through the sale and issuance of our 2014 Convertible Notes in September 2014, and approximately $98 million, through at-the-market sales during 2015 and 2016 (through August 31, 2016). 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. If our products are approved and we are commercially successful, we believe Aerie could become a market-leading ophthalmic pharmaceutical company.

Our lead product candidate, Rhopressa™, is a novel once-daily eye drop designed to lower intraocular pressure (IOP), in patients with glaucoma or ocular hypertension. We announced our submission of a new drug application (NDA), with the U.S. Food and Drug Administration (FDA) for Rhopressa™ on September 6, 2016. We are developing Rhopressa as the first of a new class of compounds that is designed to lower IOP in patients through novel mechanisms of action, or 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 if Rhopressa is approved, it will compete with non-PGA (prostaglandin analog) products as a preferred adjunctive therapy to PGAs, due to its strong and consistent IOP-lowering effect with once-daily dosing relative to currently marketed non-PGA products and 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 glaucoma, as well as for patients who choose to avoid the cosmetic issues associated with PGAs.

Our second product candidate, Roclatan , 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. The first Phase 3 registration trial for Roclatan , named Mercury 1, commenced in September 2015 and on September 14, 2016 we announced that Mercury 1 achieved its primary efficacy endpoint of demonstrating superiority of Roclatan to each of its components. We commenced an additional Phase 3 trial in the United States for Roclatan , named Mercury 2, in March 2016. We believe Roclatan has the potential to provide a greater IOP-lowering effect than any currently approved glaucoma product. Therefore, we believe that if Roclatan is approved, it 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.

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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, Rhopressa and Roclatan , in the United States through at least 2030.

Our principal executive offices are located at 2030 Main Street, Suite 1500, Irvine, California 92614, and our telephone number is (949) 526-8700. We also have offices in Bedminster, New Jersey and Durham, North Carolina. We were incorporated in Delaware in June 2005. Our internet address is http://www.aeriepharma.com. The information found on our website is not incorporated by reference into this prospectus.

We are an emerging growth company, as defined in the Jumpstart Our Business Startups Act of 2012. We will remain an emerging growth company until the earlier of December 31, 2018 or such time when we have more than $1 billion in annual revenue, we issue more than $1 billion of non-convertible debt over a three-year period, or we have more than $700 million in market value of our stock held by non-affiliates as of the end of the second quarter of that fiscal year.

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RISK FACTORS

You should consider carefully the risks set forth under Risk Factors in our Annual Report on Form 10-K for the year ended December 31, 2015, filed with the SEC on March 2, 2016 (which document is incorporated by reference herein), as well as other risk factors described under the caption Risk Factors in any accompanying prospectus supplement and any documents we incorporate by reference into this prospectus, including all future filings we make with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, before deciding to invest in our common stock. See Incorporation By Reference. See also the information contained under the heading Special Note Regarding Forward-Looking Statements above.

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USE OF PROCEEDS

Unless otherwise indicated in an accompanying prospectus supplement, the net proceeds from the sale of our common stock offered pursuant to this prospectus will be used for general corporate purposes and working capital requirements. We may also use a portion of the net proceeds for the licensing or acquisition of, or the development of, additional product candidates and/or to fund possible investments in and the acquisition of complementary businesses or partnerships. However, we have no present plans, agreements or commitments with respect to any potential acquisition, investment or license.

The expected use of the net proceeds from the sale of our common stock offered pursuant to this prospectus represents our intentions based upon our current plans and business conditions. The amounts and timing of our actual expenditures may vary significantly depending on numerous factors, including the progress of our clinical trials and development efforts, as well as any unforeseen cash needs. As a result, our management will retain broad discretion over the allocation of the net proceeds from this offering. Pending our use of the net proceeds from the sale of our common stock offered pursuant to this prospectus, we intend to invest the net proceeds in a variety of capital preservation investments, including short-term, investment-grade, interest-bearing instruments and U.S. government securities.

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DILUTION

To the extent required by the Securities Act and the rules promulgated thereunder, we will set forth in a prospectus supplement the following information regarding any material dilution of the equity interests of investors purchasing securities in an offering under this prospectus:

- the net tangible book value per share of our equity securities before and after the offering;
- the amount of the increase in such net tangible book value per share attributable to the cash payments made by purchasers in the offering; and
- the amount of the immediate dilution from the public offering price which will be absorbed by such purchasers.

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DESCRIPTION OF CAPITAL STOCK

The following describes the capital stock that we may offer under this prospectus, including the material provisions of our amended and restated certificate of incorporation, our amended and restated bylaws and certain provisions of the Delaware General Corporation Law (the DGCL). Because the following is only a summary, it does not contain all of the information that may be important to you. For a complete description, you should refer to our amended and restated certificate of incorporation and amended and restated bylaws, copies of which have been filed with the SEC. See Incorporation of Certain Information by Reference and Where You Can Find More Information.

General

Our amended and restated certificate of incorporation authorizes us to issue up to 150,000,000 shares of common stock, par value $0.001 per share, and 15,000,000 shares of preferred stock, par value $0.001 per share. As of June 30, 2016, we had issued and outstanding 26,649,605 shares of common stock and no shares of preferred stock.

In addition, as of June 30, 2016, we had outstanding 184,633 shares of restricted stock, options to purchase 5,271,279 shares of common stock and warrants to purchase 380,982 shares of common stock.

As of June 30, 2016 we had 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.

Common Stock

Holders of our common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders and do not have cumulative voting rights. An election of directors by our stockholders shall be determined by a plurality of the votes cast by the stockholders entitled to vote on the election. Holders of common stock are entitled to receive proportionately any dividends as may be declared by our board of directors, subject to any preferential dividend rights of outstanding preferred stock.

In the event of our liquidation or dissolution, the holders of common stock are entitled to receive proportionately all assets available for distribution to stockholders after the payment of all debts and other liabilities and subject to the prior rights of any outstanding preferred stock. Holders of common stock have no preemptive, subscription, redemption or conversion rights. All outstanding shares of our common stock are fully paid and non-assessable. The rights, preferences and privileges of holders of common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

Preferred Stock

Under the terms of our amended and restated certificate of incorporation, our board of directors is authorized to issue shares of preferred stock in one or more series without stockholder approval. Our board of directors has the discretion to determine the rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of preferred stock.

The issuance of preferred stock, while providing flexibility in connection with possible acquisitions, future financings and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or could discourage a third party from seeking to acquire, a majority of our outstanding voting stock. We have no current

intention to issue any shares of preferred stock.

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Stock Options

As of June 30, 2016, options to purchase 5,271,279 shares of our common stock at a weighted average exercise price of $11.04 per share were outstanding, of which options to purchase 2,760,266 shares of our common stock were exercisable, at a weighted average exercise price of $9.48 per share.

Warrants

As of June 30, 2016, the following warrants were outstanding:

	Warrant			
Number of Underlying Shares	Exercise Price Per Share		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 2019	Common Stock
223,482	$	0.05	December 2020	Common Stock

Anti-Takeover Provisions

Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws contain provisions that could have the effect of delaying, deferring or discouraging another party from acquiring control of us. These provisions, which are summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board of directors.

Staggered Board; Removal of Directors

Our amended and restated certificate of incorporation and our amended and restated bylaws divide our board of directors into three classes with staggered three-year terms. In addition, a director may be removed only for cause. Any vacancy on our board of directors, including a vacancy resulting from an enlargement of our board of directors, may be filled only by vote of a majority of our directors then in office. Furthermore, our amended and restated certificate of incorporation provides that the authorized number of directors may be changed only by the resolution of our board of directors. The classification of our board of directors and the limitations on the removal of directors, change to the authorized numbers of directors and filling of vacancies could make it more difficult for a third party to acquire, or discourage a third party from seeking to acquire, control of our company.

Stockholder Action by Written Consent; Special Meetings

Our amended and restated certificate of incorporation provides that our stockholders may not act by written consent. Our amended and restated certificate of incorporation and our amended and restated bylaws also provide that, except as otherwise required by law, special meetings of our stockholders can only be called by our chairman of the board, our chief executive officer or our board of directors.

Advance Notice Requirements for Stockholder Proposals

Our amended and restated bylaws establish an advance notice procedure for stockholder proposals to be brought before an annual meeting of stockholders, including proposed nominations of persons for election to our board of directors. Stockholders at an annual meeting will only be able to consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of our board of directors or by a stockholder of record on the record date for the meeting who is entitled to vote at the meeting and who has delivered timely written notice in proper form to our secretary of the stockholder s intention to bring such business before the meeting. These provisions could have the effect of delaying until the next stockholder meeting stockholder actions that are favored by the holders of a majority of our outstanding voting securities.

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Section 203 of the Delaware General Corporation Law

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

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested holder;
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (a) by persons who are directors and also officers and (b) pursuant to employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

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

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits by or through the corporation.

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

corporation.

Amendments to Our Bylaws

The DGCL provides generally that the affirmative vote of a majority of the shares presents at any meeting and entitled to vote on a matter is required to amend a corporation s bylaws, unless a corporation s bylaws requires a greater percentage. Our amended and restated bylaws may be amended or repealed by a vote of the majority of the directors present at any regular or special meeting of our board of directors at which a quorum is present or by the affirmative vote of the holders of at least 75% of the votes that all of our stockholders would be entitled to cast in any annual election of directors.

Corporate Opportunities

To address situations in which officers or directors may have conflicting duties to different corporations, Section 122(17) of the DGCL allows a corporation to renounce, in its certificate of incorporation or by action of its board of directors, any interest or expectancy of the corporation in specified classes or categories of business opportunities. Our amended and restated certificate of incorporation renounces any interest or expectancy in, or

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in being offered an opportunity to participate in, any business opportunity that may be a corporate opportunity for any of ACP IV, L.P., Clarus Lifesciences II, L.P., Sofinnova Venture Partners VII, L.P. or TPG Funds, L.P. or any of their respective affiliates or any of their or their affiliates respective partners, members, directors, stockholders, employees or agents (whether or not any such person is our director), other than someone who is our employee. We do not renounce our interest in any corporate opportunity offered to any such person if such opportunity is offered to such person expressly and solely in his or her capacity as our director. By becoming a stockholder in our company, you will be deemed to have received notice of and consented to these provisions of our amended and restated certificate of incorporation.

Limitation on Liability and Indemnification of Officers and Directors

Our amended and restated certificate of incorporation limits the liability of directors to the fullest extent Delaware law permits. The effect of these provisions is to eliminate the rights of our Company and our stockholders, through stockholders derivative suits on behalf of our Company, to recover monetary damages against a director for breach of fiduciary duty as a director, including breaches resulting from grossly negligent behavior. However, our directors will be personally liable to us and our stockholders for any breach of the director s duty of loyalty, for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, under Section 174 of the DGCL or for any transaction from which the director derived an improper personal benefit. In addition, our amended and restated certificate of incorporation and bylaws provide that we will indemnify our directors and officers to the fullest extent Delaware law permits. We have entered into indemnification agreements with our current directors and officers. We also maintain directors and officers insurance.

Listing on the Nasdaq Global Market

Our common stock is listed on the Nasdaq Global Market under the symbol AERI.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC.

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PLAN OF DISTRIBUTION

General

We may sell the shares of our common stock covered by this prospectus from time to time using one or more of the following methods:

underwritten public offerings;

at-the-market sales to or through market makers or into an existing market for the securities;

ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;

block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;

purchases by a broker-dealer as principal and resale by the broker-dealer for its account;

privately negotiated transactions;

short sales (including short sales against the box);

through the writing or settlement of standardized or over-the-counter options or other hedging or derivative transactions, whether through an options exchange or otherwise;

by pledge to secure debts and other obligations;

in other ways not involving market makers or established trading markets, including direct sales to purchasers or sales effected through agents;

a combination of any such methods of sale; and

any other method permitted pursuant to applicable law.

To the extent required by law, this prospectus may be amended or supplemented from time to time to describe a specific plan of distribution. Any prospectus supplement relating to a particular offering of our common stock may

include the following information to the extent required by law:

- the terms of the offering;
- the names of any underwriters, dealers or agents participating in the offering;
- the purchase price of the securities sold by us to any underwriter or dealer and the net proceeds we expect to receive from the offering;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any delayed delivery arrangements;
- any agency fees or underwriting discounts and other items constituting agents or underwriters compensation;
- any public offering price;
- any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchange or market on which the securities may be listed.

We may offer our common stock to the public through underwriting syndicates represented by managing underwriters or through underwriters without an underwriting syndicate. If underwriters are used for the sale of our common stock, the common stock will be acquired by the underwriters for their own account. The underwriters may resell the common stock in one or more transactions, including in negotiated transactions at a fixed public offering price or at varying prices determined at the time of sale. In connection with any such

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underwritten sale of our common stock, underwriters may receive compensation from us in the form of discounts, concessions or commissions. Underwriters may sell common stock to or through dealers, and the dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters or commissions from the purchasers for whom they may act as agents. Such compensation may be in excess of customary discounts, concessions or commissions. Underwriting compensation will not exceed 8% for any offering under this registration statement.

If we use an underwriter or underwriters to effectuate the sale of common stock, we will execute an underwriting agreement with those underwriters at the time of sale of those shares of common stock. To the extent required by law, the names of the underwriters will be set forth in the prospectus supplement used by the underwriters to sell those shares of common stock. Unless otherwise indicated in the prospectus supplement relating to a particular offering of common stock, the obligations of the underwriters to purchase our common stock will be subject to customary conditions precedent and the underwriters will be obligated to purchase all of the shares of our common stock offered if any of the shares of common stock are purchased.

In effecting sales, brokers or dealers engaged by us may arrange for other brokers or dealers to participate. Broker-dealers may receive discounts, concessions or commissions from us (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. Such compensation may be in excess of customary discounts, concessions or commissions. If dealers are utilized in the sale of securities, the names of the dealers and the terms of the transaction will be set forth in a prospectus supplement, if required.

We may also sell our common stock from time to time through agents. The applicable prospectus supplement will name any agent involved in the offer or sale of such common stock and will list commissions payable to these agents if required. These agents will be acting on a best efforts basis to solicit purchases for the period of their appointment, unless otherwise stated in any required prospectus supplement.

We may sell shares of our common stock directly to purchasers. In this case, we may not engage underwriters or agents in the offer and sale of such shares.

Indemnification

We may enter agreements under which underwriters, dealers and agents who participate in the distribution of our common stock may be entitled to indemnification by us against various liabilities, including liabilities under the Securities Act, and to contribution with respect to payments which the underwriters, dealers or agents may be required to make.

Price Stabilization and Short Positions

If underwriters or dealers are used in the sale, until the distribution of the securities is completed, rules of the SEC may limit the ability of any underwriters to bid for and purchase the securities. As an exception to these rules, representatives of any underwriters are permitted to engage in transactions that stabilize the price of the securities. These transactions may consist of bids or purchases for the purpose of pegging, fixing or maintaining the price of the securities. If the underwriters create a short position in the securities in connection with the offering (that is, if they sell more securities than are set forth on the cover page of the prospectus supplement) the representatives of the underwriters may reduce that short position by purchasing securities in the open market.

We make no representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. In addition, we make no representation that the representatives of

any underwriters will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

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LEGAL MATTERS

The legal validity of the common stock offered by this prospectus will be passed upon for us by Fried, Frank, Harris, Shriver & Jacobson LLP, New York, New York. Any underwriters will be advised about legal matters by their own counsel, which will be named in a prospectus supplement to the extent required by law.

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EXPERTS

The financial statements incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2015 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

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INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC s rules allow us to incorporate by reference information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, and information that we file with the SEC will automatically update and supersede the previously filed information. In the case of a conflict or inconsistency between information in this prospectus and/or information incorporated by reference into this prospectus, you should rely on the information contained in the document that was filed later.

We incorporate by reference our documents listed below and any future filings made by us with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, other than any portions of the respective filings that were furnished, pursuant to Item 2.02 or Item 7.01 of Current Reports on Form 8-K (including exhibits related thereto) or other applicable SEC rules, rather than filed, prior to the termination of the offering under this prospectus:

- our Annual Report on Form 10-K for the year ended December 31, 2015, which was filed with the SEC on March 2, 2016;
- the information specifically incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2015 from our Definitive Proxy Statement on Schedule 14A, which was filed with the SEC on April 29, 2016;
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2016 and June 30, 2016, which were filed with the SEC on May 3, 2016 and August 4, 2016, respectively;
- our Current Reports on Form 8-K, which were filed with the SEC on June 9, 2016, June 22, 2016 and September 15, 2016; and
- the description of our common stock contained in our Registration Statement on Form 8-A, which was filed with the SEC on October 25, 2013, including any amendments or reports filed for the purpose of updating the description.

You may obtain copies of any of these filings by contacting us at the address and telephone number indicated below or by contacting the SEC as described below under the section entitled Where You Can Find More Information. Documents incorporated by reference are available from us without charge, excluding all exhibits unless an exhibit has been specifically incorporated by reference into this prospectus, by requesting them in writing, by telephone or at our website at:

Aerie Pharmaceuticals, Inc.

Attention: Investor Relations

2030 Main Street, Suite 1500

Irvine, California 92614

(949) 526-8700

www.aeriepharma.com

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WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the common stock offered hereby. This prospectus is part of a registration statement we have filed with the SEC. As permitted by SEC rules, this prospectus does not contain all of the information we have included in the registration statement and the accompanying exhibits. You may refer to the registration statement and the exhibits for more information about us and our common stock. The registration statement and the exhibits are available at the SEC s Public Reference Room or through its website as described below.

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You can read and copy any materials we file with the SEC at its Public Reference Room at 100 F Street N.E., Washington DC, 20549. You can obtain information about the operations of the SEC Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains a website that contains information we file electronically with the SEC, which you can access over the Internet at http://www.sec.gov. General information about us, including our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports, is available free of charge through our website at http://www.aeriepharma.com as soon as reasonably practicable after we electronically file them with, or furnish them to, the SEC. Information on our website is not incorporated into this prospectus or our other securities filings and is not a part of these filings.

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2,542,373 Shares

Common Stock

PROSPECTUS SUPPLEMENT

Cantor Fitzgerald & Co.

September 15, 2016