UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

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

For the quarterly period ended September 30, 2019

or

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

For the transition period from__________ to __________

Commission File Number: 001-36152

Aerie Pharmaceuticals, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**20-3109565**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification Number)**

4301 Emperor Boulevard, Suite 400
Durham, North Carolina 27703
(919) 237-5300
(Address of principal executive offices, zip code and telephone number, including area code)

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Shares of common stock, par value $0.001 per share	AERI	Nasdaq Global Market

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes: No:

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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

As of November 1, 2019, there were 46,321,454 shares of the registrant's common stock, par value $0.001, outstanding.

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Unless otherwise indicated or the context requires, the terms "Aerie," "Company," "we," "us" and "our" refer to Aerie Pharmaceuticals, Inc. and its subsidiaries. References to "approved products" means products approved by the U.S. Food and Drug Administration ("FDA") or other regulatory authorities; references to "product candidates" means products that are in development but not yet approved by the FDA or other regulatory authorities; references to "future product candidates" means products that have not yet been developed.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). We may, in some cases, use terms such as "predicts," "believes," "potential," "proposed," "continue," "estimates," "anticipates," "expects," "plans," "intends," "may," "would," "could," "might," "will," "should," "exploring," "pursuing" or 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 report and include statements regarding our intentions, beliefs, projections, outlook, analyses or current expectations concerning, among other things:

- the potential future sales of Rhopressa® (netarsudil ophthalmic solution) 0.02% ("Rhopressa®") or of Rocklatan® (netarsudil and latanoprost ophthalmic solution) 0.02%/0.005% ("Rocklatan®") in the United States, and the potential future sales in the United States of any current or future product candidates, if approved;
- the potential future sales in jurisdictions outside of the United States of Rhopressa®, named Rhokiinsa® (netarsudil ophthalmic solution) 0.02% ("Rhokiinsa®") in Europe, or Rocklatan®, named Roclanda® (netarsudil and latanoprost ophthalmic solution) 0.02%/0.005% ("Roclanda®") in Europe, or their equivalents, and those of any current or future product candidates;
- our commercialization, marketing, manufacturing and supply management capabilities and strategies in and outside of the United States;
- third-party payer coverage and reimbursement for our approved products, product candidates and any future product candidates, if approved;
- the glaucoma patient market size and the rate and degree of market adoption of our approved products, product candidates and any future product candidates, if approved, by eye care professionals and patients;
- the timing, cost or other aspects of the commercial launch of our approved products, product candidates and any future product candidates, if approved;
- the success, timing and cost of our ongoing and anticipated preclinical studies and clinical trials for our product candidates and any future product candidates, including statements regarding the timing of initiation and completion of the studies and trials;
- our expectations regarding the effectiveness of our approved products, product candidates and any future product candidates and our expectations regarding the results of any clinical trials and preclinical studies;
- the timing of and our ability to request, obtain and maintain FDA or other regulatory authority approval of, or other action with respect to our approved products, product candidates and any future product candidates in the United States, Europe, Japan and elsewhere, including the expected timing of, and regulatory and/or other review of, filings for such product candidates;
- our expectations related to the use of proceeds from our financing activities;
- our estimates regarding anticipated operating expenses and capital requirements and our needs for additional financing;

- our plans to pursue development of additional product candidates and technologies in ophthalmology, including development of our approved products or product candidates for additional indications, our preclinical retinal programs and other therapeutic opportunities, and our plans to explore possible uses of our existing proprietary compounds beyond ophthalmology;
- the potential advantages of our approved products, product candidates and any future product candidates;
- 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, product candidates or technologies; 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, industry change and other factors beyond our control, and depend on regulatory approvals and economic and other environmental circumstances that may or may not occur in the future or may occur on longer or shorter timelines than anticipated. We discuss many of these risks in greater detail under the heading “Risk Factors” in Part I, Item 1A of our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, as filed with the Securities and Exchange Commission (“SEC”) on March 1, 2019, and other documents we have filed or furnished with the SEC.

In particular, FDA approval of Rhopressa® and Rocklatan® do not constitute FDA approval of AR-1105, AR-13503 or any future product candidates in the United States, and there can be no assurance that we will receive FDA approval for AR-1105, AR-13503 or any future product candidates. FDA approval of Rhopressa® and Rocklatan® does not constitute regulatory approval of Rhopressa®, or Rhokiinsa® as it will be named in Europe, and Rocklatan®, or Roclanda® as it will be named in Europe, in jurisdictions outside the United States, and there can be no assurance that we will receive regulatory approval for our current or future product candidates in jurisdictions outside the United States. Neither the European Medicines Agency ("EMA") acceptance of our Marketing Authorisation Application ("MAA") for Rhokiinsa® nor the EMA Committee for Medicinal Products in Human Use (“CHMP”) positive opinion recommending approval of the MAA constitutes EMA approval of Rhokiinsa® and does not provide assurance that the EMA will approve Rhokiinsa®. In addition, the preclinical research discussed in this report is preliminary and the outcome of such preclinical studies may not be predictive of the outcome of later clinical trials. Any future clinical trial results may not demonstrate safety and efficacy sufficient to obtain regulatory approval related to the preclinical research findings discussed in this report, and we may suspend or discontinue research programs at any time for any reason.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that we have a reasonable basis for each forward-looking statement contained in this report, we caution you that forward-looking statements are not guarantees of future performance and that our actual results of operations, financial condition and liquidity, and the development of the industry in which we operate, may differ materially from the forward-looking statements contained in this report. In addition, even if our results of operations, financial condition and liquidity, and events in the industry in which we operate, are consistent with the forward-looking statements contained in this report, they may not be predictive of results or developments in future periods.

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

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

AERIE PHARMACEUTICALS, INC.

Condensed Consolidated Balance Sheets
(Unaudited)
(in thousands, except share data)

	SEPTEMBER 30, 2019	DECEMBER 31, 2018
Assets		
Current assets		
Cash and cash equivalents	$ 248,702	$ 202,818
Short-term investments	92,075	—
Accounts receivable, net	33,278	2,715
Inventory	14,673	10,112
Prepaid expenses and other current assets	7,940	4,530
Total current assets	396,668	220,175
Long-term investments	5,020	—
Property, plant and equipment, net	58,277	60,525
Operating lease right-of-use assets	17,216	—
Other assets	2,027	4,344
Total assets	$ 479,208	$ 285,044
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable	$ 11,480	$ 12,403
Accrued expenses and other current liabilities	55,728	38,381
Operating lease liabilities	5,802	—
Total current liabilities	73,010	50,784
Convertible notes, net	183,553	—
Long-term operating lease liabilities	12,235	—
Other non-current liabilities	1,206	6,454
Total liabilities	270,004	57,238
Commitments and contingencies (Note 13)		
Stockholders' equity		
Preferred stock, $0.001 par value; 15,000,000 shares authorized as of September 30, 2019 and December 31, 2018; None issued and outstanding	—	—
Common stock, $0.001 par value; 150,000,000 shares authorized as of September 30, 2019 and December 31, 2018; 45,998,956 and 45,478,883 shares issued and outstanding as of September 30, 2019 and December 31, 2018, respectively	46	45
Additional paid-in capital	1,050,252	924,180
Accumulated other comprehensive loss	(158)	—
Accumulated deficit	(840,936)	(696,419)
Total stockholders' equity	209,204	227,806
Total liabilities and stockholders' equity	$ 479,208	$ 285,044

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

AERIE PHARMACEUTICALS, INC.

Condensed Consolidated Statements of Operations and Comprehensive Loss
(Unaudited)
(in thousands, except share and per share data)

	THREE MONTHS ENDED SEPTEMBER 30,		NINE MONTHS ENDED SEPTEMBER 30,	
	2019	2018	2019	2018
Product revenues, net	$ 18,544	$ 7,302	$ 45,231	$ 9,725
Total revenues, net	18,544	7,302	45,231	9,725
Costs and expenses:				
Cost of goods sold	2,063	205	3,149	264
Selling, general and administrative	32,171	32,685	102,935	88,727
Pre-approval commercial manufacturing	5,841	7,248	16,117	18,920
Research and development	21,796	28,502	60,584	59,631
Total costs and expenses	61,871	68,640	182,785	167,542
Loss from operations	(43,327)	(61,338)	(137,554)	(157,817)
Other (expense) income, net	(6,075)	(24,050)	(7,053)	(23,291)
Loss before income taxes	(49,402)	(85,388)	(144,607)	(181,108)
Income tax (benefit) expense	—	—	(90)	3
Net loss	$ (49,402)	$ (85,388)	$ (144,517)	$ (181,111)
Net loss per common share—basic and diluted	$ (1.09)	$ (1.96)	$ (3.19)	$ (4.47)
Weighted average number of common shares outstanding—basic and diluted	45,448,190	43,657,423	45,372,608	40,505,534
Net loss	$ (49,402)	$ (85,388)	$ (144,517)	$ (181,111)
Unrealized (loss) gain on available-for-sale investments	(158)	8	(158)	27
Comprehensive loss	$ (49,560)	$ (85,380)	$ (144,675)	$ (181,084)

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

AERIE PHARMACEUTICALS, INC.

Consolidated Statements of Stockholders' Equity
(Unaudited)
(in thousands, except share data)

	COMMON STOCK		ADDITIONAL PAID-IN CAPITAL	ACCUMULATED OTHER COMPREHENSIVE (LOSS) GAIN	ACCUMULATED DEFICIT	TOTAL
	SHARES	AMOUNT				
Balances at December 31, 2017	36,947,637	$ 37	$ 597,318	$ (28)	$ (461,728)	$ 135,599
Cumulative effect adjustment from adoption of ASU 2016-16	—	—	—	—	(2,137)	(2,137)
Issuance of common stock, net of commissions and expenses of $1,345	2,313,824	2	136,373	—	—	136,375
Issuance of common stock upon exercise of stock options and warrants	28,654	—	95	—	—	95
Issuance of common stock for restricted stock awards, net	212,995	1	(1,596)	—	—	(1,595)
Stock-based compensation	—	—	8,762	—	—	8,762
Other comprehensive loss	—	—	—	(129)	—	(129)
Net loss	—	—	—	—	(40,699)	(40,699)
Balances at March 31, 2018	39,503,110	$ 40	$ 740,952	$ (157)	$ (504,564)	$ 236,271
Issuance of common stock upon exercise of stock purchase rights	16,965	—	872	—	—	872
Issuance of common stock upon exercise of stock options and warrants	319,257	—	2,732	—	—	2,732
Issuance of common stock for restricted stock awards, net	41	—	(369)	—	—	(369)
Stock-based compensation	—	—	10,180	—	—	10,180
Commissions and expenses related to issuance of common stock	—	—	70	—	—	70
Other comprehensive gain	—	—	—	148	—	148
Net loss	—	—	—	—	(55,024)	(55,024)
Balances at June 30, 2018	39,839,373	$ 40	$ 754,437	$ (9)	$ (559,588)	$ 194,880
Issuance of common stock upon exercise of stock options	234,308	—	1,146	—	—	1,146
Issuance of common stock for restricted stock awards, net	8,099	—	(107)	—	—	(107)
Stock-based compensation	—	—	9,945	—	—	9,945
Issuance of shares upon conversion of 2014 Convertible Notes	5,369,447	5	148,078	—		148,083
Cumulative effect adjustment from adoption of ASU 2016-16	—	—	—	—	15	15
Other comprehensive gain	—	—	—	8		8
Net loss	—	—	—	—	(85,388)	(85,388)
Balances at September 30, 2018	45,451,227	$ 45	$ 913,499	$ (1)	$ (644,961)	$ 268,582

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

AERIE PHARMACEUTICALS, INC.

Consolidated Statements of Stockholders' Equity (continued)
(Unaudited)
(in thousands, except share data)

	COMMON STOCK SHARES	COMMON STOCK AMOUNT	ADDITIONAL PAID-IN CAPITAL	ACCUMULATED OTHER COMPREHENSIVE LOSS	ACCUMULATED DEFICIT	TOTAL
Balances at December 31, 2018	45,478,883	$ 45	$ 924,180	$ —	$ (696,419)	$ 227,806
Issuance of common stock upon exercise of stock options and warrants	141,245	—	1,879	—	—	1,879
Issuance of common stock for restricted stock awards, net	301,848	1	(2,093)	—	—	(2,092)
Stock-based compensation	—	—	12,508	—	—	12,508
Net loss	—	—	—	—	(47,951)	(47,951)
Balances at March 31, 2019	45,921,976	$ 46	$ 936,474	$ —	$ (744,370)	$ 192,150
Issuance of common stock upon exercise of stock purchase rights	22,648	—	569	—	—	569
Issuance of common stock upon exercise of stock options	10,480	—	71	—	—	71
Issuance of common stock for restricted stock awards, net	(5,686)	—	(891)	—	—	(891)
Stock-based compensation	—	—	11,023	—	—	11,023
Net loss	—	—	—	—	(47,164)	(47,164)
Balances at June 30, 2019	45,949,418	$ 46	$ 947,246	$ —	$ (791,534)	$ 155,758
Issuance of common stock upon exercise of stock options	15,000	—	159	—	—	159
Issuance of common stock for restricted stock awards, net	34,538	—	267	—	—	267
Stock-based compensation	—		10,804	—	—	10,804
Other comprehensive loss	—	—	—	(158)	—	(158)
Equity component of Convertible Notes, net of issuance costs of $3,725	—	—	124,666	—	—	124,666
Payment for capped call share options	—	—	(32,890)	—	—	(32,890)
Net loss	—	—		—	(49,402)	(49,402)
Balances at September 30, 2019	45,998,956	$ 46	$ 1,050,252	$ (158)	$ (840,936)	$ 209,204

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

AERIE PHARMACEUTICALS, INC.

Condensed Consolidated Statements of Cash Flows
(Unaudited)
(in thousands)

	NINE MONTHS ENDED SEPTEMBER 30,	
	2019	**2018**
Cash flows from operating activities		
Net loss	$ (144,517)	$ (181,111)
Adjustments to reconcile net loss to net cash used in operating activities		
Depreciation	3,610	1,730
Amortization and accretion	6,335	833
Induced conversion of 2014 Convertible Notes	—	24,059
Stock-based compensation	33,921	29,015
Other non-cash	(252)	(207)
Changes in operating assets and liabilities		
Accounts receivable, net	(30,563)	(1,961)
Inventory	(4,080)	(5,299)
Prepaid, current and other assets	(2,715)	955
Accounts payable, accrued expenses and other current liabilities	18,576	10,924
Operating lease liabilities	(3,621)	—
Net cash used in operating activities	(123,306)	(121,062)
Cash flows from investing activities		
Purchase of available-for-sale investments	(97,268)	(56,195)
Proceeds from sales and maturities of investments	—	107,297
Purchase of property, plant and equipment	(7,911)	(29,404)
Net cash (used in) provided by investing activities	(105,179)	21,698
Cash flows from financing activities		
Proceeds from convertible notes, net of issuance costs	308,349	—
Payment for capped call options	(32,890)	—
Proceeds from sale of common stock, net	—	135,972
Payments related to issuance of stock for stock-based compensation arrangements, net	(597)	2,933
Payments of debt issuance costs	(532)	(1,621)
Proceeds from exercise of warrants	375	—
Other financing	(336)	(535)
Net cash provided by financing activities	274,369	136,749
Net change in cash and cash equivalents	45,884	37,385
Cash and cash equivalents, at beginning of period	202,818	197,569
Cash and cash equivalents, at end of period	$ 248,702	$ 234,954
Non-cash investing and financing activities		
Conversion of 2014 Convertible Notes to common stock	$ —	$ 148,078
Purchase of property, plant and equipment	$ 1,389	$ 3,066
Debt issuance costs included in accrued expense and other current liabilities	$ 1,275	$ —

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

AERIE PHARMACEUTICALS, INC.

Notes to the Condensed Consolidated Financial Statements
(Unaudited)

1. The Company

Aerie Pharmaceuticals, Inc. (“Aerie”), with its wholly-owned subsidiaries, Aerie Distribution, Inc., Aerie Pharmaceuticals Limited and Aerie Pharmaceuticals Ireland Limited (“Aerie Distribution,” “Aerie Limited” and “Aerie Ireland Limited,” respectively, together with Aerie, the “Company”), is an ophthalmic pharmaceutical company focused on the discovery, development and commercialization of first-in-class therapies for the treatment of patients with open-angle glaucoma, retinal diseases and other diseases of the eye. The Company has its principal executive offices in Durham, North Carolina, and operates as one business segment.

The Company has two U.S. Food and Drug Administration (“FDA”) approved products, Rhopressa® (netarsudil ophthalmic solution) 0.02% (“Rhopressa®”) and Rocklatan® (netarsudil and latanoprost ophthalmic solution) 0.02%/0.005% (“Rocklatan®”). Rhopressa® is a once-daily eye drop designed to reduce elevated intraocular pressure (“IOP”) in patients with open-angle glaucoma or ocular hypertension. Rocklatan® is a once-daily eye drop that is a fixed-dose combination of Rhopressa® and latanoprost, the most widely-prescribed prostaglandin analog (“PGA”). The Company is commercializing Rhopressa®, which was launched in the United States on April 30, 2018, and Rocklatan®, which was launched in the United States on May 1, 2019. In November 2019, the Company released topline data from its Phase 4 Multi-center Open-label Study (“MOST”), which observed Rhopressa® efficacy in various real-world clinical settings, including as an adjunctive product or monotherapy. The results indicated positive IOP reduction in all settings, along with a favorable tolerability profile. In addition to actively promoting these products in the United States, the Company is pursuing its strategy to obtain regulatory approval for Rhopressa® and Rocklatan® in Europe and Japan. If approved, Rhopressa® and Rocklatan® will be marketed under the namesRhokiinsa® and Roclanda®, respectively, in Europe.

In October 2018, the Company announced that the European Medicines Agency (“EMA”) accepted for review the marketing authorisation application (“MAA”) for Rhokiinsa®. In September 2019, the EMA Committee for Medicinal Products in Human Use (“CHMP”) adopted a positive opinion recommending approval of the MAA for Rhokiinsa®. The final decision by the European Commission is expected in the fourth quarter of 2019. Additionally, the Company has completed a Phase 1 clinical trial and a successful pilot Phase 2 clinical study in the United States on Japanese and Japanese-American subjects, which were designed to support meeting the requirements of Japan’s Pharmaceuticals and Medical Devices Agency (“PMDA”) for potential regulatory submission of Rhopressa® in Japan. In July 2019, the Company completed enrollment of its Phase 2 clinical trial initiated in March 2019 in Japan and topline results were released in November 2019. The study was designed in accordance with the requirements of the PMDA on Japanese patients in Japan to support subsequent Phase 3 registration trials that are also expected to be conducted in Japan. The results of the Phase 2 clinical trial indicated positive efficacy and tolerability results for the patient set, and the Company plans to move forward with plans for Phase 3 trial initiation in Japan, along with advancing discussions for a potential commercialization partner in Japan.

In Europe, the Company is currently conducting a Phase 3 registration trial, named Mercury 3, comparing Roclanda® to Ganfort®, a fixed-dose combination product marketed in Europe consisting of bimatoprost (a PGA) and timolol (a beta blocker). If successful, Mercury 3 is expected to improve the commercialization prospects of Roclanda® in Europe. The Company plans to submit an MAA with the EMA in early 2020 for Roclanda® if the EMA has approved Rhokiinsa® by such time.

The Company is also focused on furthering the development of its future product candidates focused on retinal diseases, particularly AR-1105 and AR-13503, described below. Through business development activities, the Company acquired worldwide ophthalmic rights to a bio-erodible polymer technology from DSM, a global science-based company headquartered in the Netherlands, and PRINT® implant manufacturing technology, which is a proprietary technology capable of creating precisely-engineered sustained-release products utilizing fully-scalable manufacturing processes, from Envisia Therapeutics Inc. (“Envisia”). Using these technologies, the Company has created a sustained-release ophthalmology platform and is currently developing two sustained-release implants focused on retinal diseases, AR-1105, an investigational dexamethasone intravitreal implant, and AR-13503, a Rho kinase/Protein kinase C inhibitor. In March 2019, the Company initiated a Phase 2 clinical trial of AR-1105 in patients with macular edema due to retinal vein occlusion and completed enrollment in October 2019. The Company also submitted its investigational new drug (“IND”) application for AR-13503 in March 2019, and in April 2019 the Company announced that the FDA had reviewed the IND for AR-13503 and as a result it is now in effect, allowing Aerie to initiate human studies in the treatment of neovascular age-related macular degeneration (“nAMD”) and diabetic macular edema (“DME”). The Company initiated a first-in-human clinical study for AR-13503 in the third quarter of 2019.

The Company owns over 4,000 Rho kinase inhibitor molecules, some of which have additional features including the inhibition of other kinases such as Janus kinase and those in the IκB family and evaluates this library on an ongoing basis for additional development opportunities. Early stage evaluations are underway for indications, including neuroenhancement, dry age-related macular degeneration ("AMD"), geographic atrophy, dry eye and psoriasis. The Company also evaluates outside business development opportunities to provide access to technologies developed outside of Aerie and has stated its particular interest in ophthalmic areas such as dry eye, which is a very large market in the United States.

The Company commenced generating product revenues related to sales of Rhopressa® in the second quarter of 2018 and Rocklatan® in the second quarter of 2019. The Company has incurred losses and experienced negative operating cash flows since inception. The Company had previously funded its operations primarily through the sale of equity securities and issuance of convertible notes prior to generating product revenues. In September 2019, the Company issued an aggregate principal amount of $316.25 million 1.50% convertible senior notes due 2024 (the "Convertible Notes") and simultaneously terminated its $200 million senior secured delayed draw term loan facility (the "credit facility"). See Note 10 for additional information.

If the Company does not successfully commercialize Rhopressa® and Rocklatan® or any current or future product candidates, if approved, it may not generate sufficient cash flows and may be unable to achieve profitability. Accordingly, the Company may be required to obtain further funding through public or private debt or equity offerings, or other arrangements. Adequate additional funding may not be available to the Company on acceptable terms, or at all. If the Company is unable to raise capital when needed or on acceptable terms, it may be forced to delay, reduce or eliminate its research and development programs or commercialization and manufacturing efforts.

2. Significant Accounting Policies

Basis of Presentation

The Company's interim condensed consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP"). In the opinion of management, the Company has made all necessary adjustments, which include normal recurring adjustments necessary for a fair presentation of the Company's condensed consolidated financial position and results of operations for the interim periods presented. Certain information and disclosures normally included in the annual consolidated financial statements prepared in accordance with U.S. GAAP have been condensed or omitted. These interim condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and accompanying notes for the year ended December 31, 2018 included in the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission ("SEC") on March 1, 2019. The results for the three and nine months ended September 30, 2019 are not necessarily indicative of the results to be expected for a full year, any other interim periods or any future year or period.

Principles of Consolidation

The interim condensed consolidated financial statements include the accounts of Aerie and its wholly-owned subsidiaries. All intercompany accounts, transactions and profits have been eliminated in consolidation. Certain reclassifications have been made to prior year amounts to conform to the current year presentation.

Use of Estimates

The preparation of condensed consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements and reported amounts of income and expenses during the reporting periods. Significant items subject to such estimates and assumptions include revenue recognition, inventories, lease accounting, accrued expenses, fair value measurements, acquisitions and stock-based compensation. Actual results could differ from the Company's estimates.

Concentration of Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist of cash, cash equivalents and investments. The Company's cash and cash equivalents, which include short-term highly liquid investments with original maturities of three months or less, are held at several financial institutions and at times may exceed insured limits. The Company has placed these funds in high quality institutions to minimize risk relating to exceeding insured limits. The Company's investment policy permits investments in U.S. federal government and federal agency securities, corporate bonds or commercial paper, money market instruments, and certain qualifying money market mutual funds, and places restrictions on credit ratings, maturities, and concentration by type and issuer. The Company is exposed to credit risk in the event of a default by the financial institutions holding its cash, cash equivalents and investments to the extent recorded on the condensed consolidated balance sheets.

The Company relies on its third-party manufacturers to produce the active pharmaceutical ingredient ("API") and final drug product for Rhopressa® and Rocklatan® and may rely on third-party manufacturers for its current and future product candidates. The Company obtained FDA approval for an additional Rhopressa® drug product contract manufacturer in the first quarter of 2019, which began to supply commercial product in the second quarter of 2019. Further, the Company has obtained FDA approval for an additional API contract manufacturer, which began to supply commercial API in the second quarter of 2019. The Company is in the process of adding an additional Rocklatan® drug product contract manufacturer, which is expected to begin commercial supply in early 2020. In addition, the Company has established its own manufacturing plant in Athlone, Ireland, for future commercial production of Rhopressa®, Rocklatan®, and if approved, Rhokiinsa® and Roclanda®. In September 2019, the Company submitted a prior approval supplement ("PAS") for the plant to the FDA, which, if approved, will permit production of Rocklatan® by the plant for sale in the United States. Commercial supply isexpected to be available in early 2020. The Company expects to continue to use product sourced from its contract manufacturers when its manufacturing plant in Athlone, Ireland, is operational.

Revenue Recognition

The Company accounts for its revenue transactions under Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 606, *Revenue from Contracts with Customers* ("ASC Topic 606"). In accordance with ASC Topic 606, the Company recognizes revenues when its customers obtain control of its product for an amount that reflects the consideration it expects to receive from its customers in exchange for that product. To determine revenue recognition for contracts that are determined to be in scope of ASC Topic 606, the Company performs the following five steps: (i) identify the contract(s) with a customer; (ii) identify the performance obligations in the contract; (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) recognize revenue when (or as) the Company satisfies the performance obligation. The Company only applies the five-step model to contracts when it is probable that the Company will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer. Once the contract is determined to be within the scope of ASC Topic 606, the Company assesses the goods or services promised within each contract and determines those that are performance obligations and assesses whether each promised good or service is distinct. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when such performance obligation is satisfied.

Aerie's customers include a limited number of national and select regional wholesalers (the "distributors"). These distributors subsequently resell the product, primarily to retail pharmacies that dispense the product to patients. Net product revenue is typically recognized when distributors obtain control of the Company's products, which occurs at a point in time, typically upon delivery of product to the distributors. The Company evaluates the creditworthiness of each of its distributors to determine whether it is probable that a significant reversal in the amount of the cumulative revenue recognized will not occur. The Company does not assess whether a contract has a significant financing component if the expectation is such that the period between the transfer of the promised goods to the customer and the receipt of payment will be less than one year. Standard credit terms do not exceed 75 days. The Company expenses incremental costs of obtaining a contract as and when incurred if the expected amortization period of the asset that would have been recognized is one year or less or the amount is immaterial. Shipping and handling costs related to the Company's product sales are included in selling, general and administrative expenses.

The Company's net product revenues through September 30, 2019 were generated through sales of Rhopressa®, which was commercially launched in the United States on April 30, 2018, and sales of Rocklatan®, which was commercially launched in the United States onMay 1, 2019. Product revenue is recorded net of trade discounts, allowances, commercial and government rebates, co-pay program coupons, chargebacks, U.S. government funding requirements for the coverage gap (commonly called the "donut hole") portion of the Medicare Part D program and estimated returns and other incentives. These reserves are classified as either reductions of accounts receivable or as current liabilities. The estimates of reserves established for variable consideration reflect current contractual and statutory requirements, known market events and trends, industry data and forecasted customer mix. The transaction price, which includes variable consideration reflecting the impact of discounts and allowances, may be subject to constraint and is included in the net product revenues only to the extent that it is probable that a significant reversal of the amount of the cumulative revenues recognized will not occur in a future period. Actual amounts may ultimately differ from these estimates. If actual results vary, estimates may be adjusted in the period such change in estimate becomes known, which could have an impact on earnings in the period of adjustment. See Note 3 for additional information.

Inventories

Inventories are stated at the lower of cost or net realizable value. The Company determines the cost of inventory using the first-in, first-out (“FIFO”) method. The Company analyzes its inventory levels at least quarterly and writes down inventory that is expected to expire prior to being sold, inventory in excess of expected sales requirements and inventory that fails to meet commercial sale specifications, with a corresponding charge to cost of goods sold. The determination of whether inventory costs will be realizable requires estimates by management of future expected inventory requirements based on sales forecasts. If actual net realizable value is less than the estimated amount or if actual market conditions are less favorable than the Company’s projections, additional inventory write-downs may be required. Charges for inventory write-downs are not reversed if it is later determined that the product is saleable.

Prior to the date the Company obtains regulatory approval for its product candidates or its manufacturing facilities such as its manufacturing plant in Athlone, Ireland, manufacturing costs related to commercial production are expensed as pre-approval commercial manufacturing expense on the condensed consolidated statements of operations and comprehensive loss. Once regulatory approval is obtained, the Company capitalizes such costs as inventory on the condensed consolidated balance sheets.

Property, Plant and Equipment, Net

Property, plant and equipment is recorded at historical cost. Depreciation is calculated using the straight-line method over the estimated useful lives of the related assets. Construction-in-progress reflects amounts incurred for property, plant or equipment construction or improvements that have not yet been placed in service and are not depreciated or amortized. Repairs and maintenance are expensed when incurred. Upon retirement or sale, the cost of the assets disposed of and the related accumulated depreciation are removed from the accounts, and any resulting gain or loss is included in the determination of net loss.

Estimated useful lives by major asset category are as follows:

Manufacturing equipment	10 years
Laboratory equipment	7 years
Furniture and fixtures	5 years
Software, computer and other equipment	3 years
Leasehold improvements	Lower of estimated useful life or term of lease

Leases

The Company determines if an arrangement is a lease at inception. For each lease, the lease term is determined at the commencement date and includes renewal options and termination options when it is reasonably certain that the Company will exercise that option. Operating leases with lease terms greater than one year are included in operating lease right-of-use (“ROU”) assets and current and long-term operating lease liabilities in the Company’s condensed consolidated balance sheets.

Operating lease ROU assets represent the right to use an underlying asset for the lease term and lease liabilities represent the obligation to make lease payments arising from the lease. Operating lease liabilities are recognized at commencement date based on the present value of lease payments over the lease term using an estimated rate of interest the Company would have to pay to borrow equivalent funds on a collateralized basis at the lease commencement date. The operating lease ROU assets are based on the liability adjusted for any prepaid or deferred rent and lease incentives. The incremental borrowing rate was utilized to discount lease payments over the expected term given that the Company’s operating leases do not provide an implicit rate. The Company estimates the incremental borrowing rate to reflect the profile of secured borrowing over the expected term of the leases based on the information available at the later of the date of adoption or the lease commencement date. Rent expense for the operating lease is recognized on a straight-line basis over the lease term.

The Company’s lease agreements have lease and non-lease components, which are generally accounted for as a single lease component. Non-lease components include lease operating expenses, which are variable costs under the Company’s current leases. For vehicle leases, the Company accounts for the lease and non-lease components as a single lease component and applies a portfolio approach to effectively account for the operating lease ROU assets and liabilities.

Investments

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

Available-for-sale investments in debt securities are recorded at fair value, with unrealized gains or losses included in comprehensive loss on the condensed consolidated statements of operations and comprehensive loss and in accumulated other comprehensive loss on the condensed consolidated balance sheets.

Realized gains and losses, interest income earned on the Company's cash, cash equivalents and investments, and amortization or accretion of discounts and premiums on investments are included within other (expense) income, net. Interest income was $0.5 million and $1.8 million for the three and nine months ended September 30, 2019, respectively, and $0.8 million and $2.5 million for the three and nine months ended September 30, 2018, respectively. Realized losses of $0.2 million were reclassified out of accumulated other comprehensive loss and recognized within other income (expense), net during the nine months ended September 30, 2018. There were no realized gains or losses recognized during the three and nine months ended September 30, 2019.

Fair Value Measurements

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

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

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

The Company's cash and cash equivalents were valued utilizing Level 1 inputs in the fair value hierarchy as of September 30, 2019 and December 31, 2018. The Company's investments were valued utilizing Level 2 inputs and the Convertible Notes were valued utilizing Level 3 inputs as of September 30, 2019. There were no transfers between the different levels of the fair value hierarchy during the nine months ended September 30, 2019.

Stock-Based Compensation

The estimated fair value of options to purchase common stock is determined on the date of grant using the Black-Scholes option pricing model. The fair value of restricted stock awards ("RSAs") and restricted stock units ("RSUs") granted are based on the market value of Aerie's common stock on the date of grant. Compensation expense related to time-based RSAs and RSUs is expensed on a straight-line basis over the vesting period. For RSAs with non-market performance conditions, the Company evaluates the criteria for each grant to determine the probability that the performance condition will be achieved. Compensation expense for RSAs with non-market performance conditions is recognized over the respective service period when it is deemed probable that the performance condition will be satisfied. Upon issuance and at each reporting period, the fair value of each stock appreciation rights ("SARs") award is estimated using the Black-Scholes option pricing model and is marked to market through stock-based compensation expense. SARs are liability-based awards as they may only be settled in cash.

Convertible Notes Transactions

The Company separately accounts for the liability and equity components of convertible notes transactions that can be settled in cash by allocating the proceeds from issuance between the liability component and the embedded conversion option in accordance with accounting for convertible debt instruments that may be settled in cash (including partial cash settlement) upon conversion. The value of the equity component is calculated by first measuring the fair value of the liability component, using the interest rate of a similar liability that does not have a conversion feature, as of the issuance date. The difference between the proceeds from the convertible debt issuance and the amount measured as the liability component is recorded as the equity component with a corresponding discount recorded on the debt. The Company recognizes amortization of the resulting discount using the effective interest method as interest expense on the condensed consolidated statements of operations and comprehensive loss. The equity component is not remeasured as long as it continues to meet the conditions for equity classification. The Company allocates issuance costs incurred to the liability and equity components. Issuance costs attributable to the liability component are amortized to expense over the respective term of the convertible notes, and issuance costs attributable to the equity component are netted with the respective equity component in additional paid-in capital.

In September 2019, the Company bought capped call options from financial institutions to minimize the impact of potential dilution of the Company's common stock upon conversion of its Convertible Notes. The capped call options meet the definition of a derivative in accordance with ASC 815, *Derivatives and Hedging* ("ASC 815"), however, qualify for derivative scope exception under ASC 815 for instruments indexed to a company's own stock. Accordingly, the premiums for the capped call options were recorded as additional paid-in capital on the Company's condensed consolidated balance sheets as the options are settleable in Aerie common stock at the election of the Company. See Note 10 for additional information.

Adoption of New Accounting Standards

In June 2018, the FASB issued ASU 2018-07,*Compensation—Stock Compensation (Topic 718): Improvements to Nonemployee Share-Based Payment Accounting* ("ASU 2018-07"), which expands the scope of ASC Topic 718, *Compensation—Stock Compensation* to include share-based payments issued to non-employees for goods or services. Consequently, the accounting for share-based payments to non-employees and employees will be substantially aligned. This ASU was effective for the Company beginning January 1, 2019. The adoption of ASU 2018-07 did not have a material impact on the Company's consolidated financial statements and disclosures.

In February 2016, the FASB issued ASU 2016-02,*Leases (Topic 842)* ("ASC Topic 842"). ASC Topic 842 is intended to improve financial reporting of leasing transactions by requiring organizations that lease assets to recognize assets and liabilities for the rights and obligations created by leases that extend more than twelve months on the balance sheet. This accounting update also requires additional disclosures surrounding the amount, timing, and uncertainty of cash flows arising from leases. ASC Topic 842 is effective for financial statements issued for annual and interim periods beginning on January 1, 2019. The Company has elected the optional transition method that provided the option to use the effective date of ASC Topic 842 as the date of initial application on transition. Accordingly, the Company did not adjust comparative periods or make the new required lease disclosures for periods before the effective date of January 1, 2019. There was no cumulative effect adjustment recognized to accumulated deficit upon adoption. As of the date of adoption of the new leasing standards, the Company recognized an operating lease ROU asset of approximately $17.3 million and a corresponding operating lease liability of approximately$17.9 million, which are included in the condensed consolidated balance sheets. The adoption of the new leasing standards did not have a material impact on the condensed consolidated statements of operations and comprehensive loss.

The Company elected to utilize the package of practical expedients permitted in ASC Topic 842. Accordingly, the Company accounted for its existing operating leases as operating leases under the new guidance (i) without reassessing the classification of the operating leases in accordance with ASC Topic 842, (ii) without reassessing whether an existing contract contained a lease and (iii) without reassessing initial direct costs. In addition, the Company elected not to allocate the consideration between lease and non-lease components for its operating leases. The Company also reassessed its lease conclusions for its manufacturing plant in Athlone, Ireland, under ASC Topic 842 since construction was still in progress as of the date of adoption. Upon the reassessment, the Company concluded it was the owner of the leased space for accounting purposes under ASC Topic 842 as of the date of adoption and therefore, maintained its previous build-to-suit lease accounting under the transition guidance of ASC Topic 842.

Recent Accounting Pronouncements

In August 2018, the FASB issued ASU 2018-13,*Fair Value Measurement (Topic 820-10): Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement* ("ASU 2018-13"), which changes the fair value measurement disclosure requirements of ASC Topic 820. Under this ASU, certain disclosure requirements for fair value measurements are eliminated, amended or added. These changes aim to improve the overall usefulness of disclosures to financial statement users and reduce unnecessary costs to companies when preparing the disclosures. The guidance is effective for the Company beginning on January 1, 2020 and prescribes different transition methods for the various provisions. The Company does not expect the adoption of ASU 2018-13 to have a material impact on its consolidated financial statements and disclosures.

In June 2016, the FASB issued ASU 2016-13,*Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"), which requires that financial assets measured at amortized cost be presented at the net amount expected to be collected. Currently, U.S. GAAP delays recognition of the full amount of credit losses until the likelihood of the loss occurring is probable. Under this ASU, the income statement will reflect an entity's current estimate of all expected credit losses. The measurement of expected credit losses will be based upon historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount. Credit losses relating to available-for-sale debt securities will be recorded through an allowance for credit losses rather than as a direct write-down of the security. In November 2018, the FASB issued ASU No. 2018-19, *Codification Improvements to Topic 326, Financial Instruments-Credit Losses* ("ASU 2018-19"), which clarifies that receivables from operating leases are accounted for using the lease guidance and not as financial instruments. Further, in May 2019, the FASB issued ASU No. 2019-05, *Financial Instruments—Credit Losses (Topic 326), Targeted Transition Relief* ("ASU 2019-05"), which provides transition relief and allows allow entities to elect the fair value option on certain financial instrument. The guidance is effective for the Company beginning on January 1, 2020. The new guidance prescribes different transition methods for the various provisions. The Company does not expect the adoption of ASU 2016-13, ASU 2018-19 or ASU 2019-05 to have a material impact on its consolidated financial statements and disclosures.

Net Loss per Common Share

Basic net loss per common share ("Basic EPS") is calculated by dividing the net loss by the weighted average number of shares of common stock outstanding for the period, without consideration for potentially dilutive securities with the exception of warrants for common stock with a $0.05 exercise price, which are exercisable for nominal consideration and are therefore included in the calculation of the weighted average number of shares of common stock as common stock equivalents. Diluted net loss per share ("Diluted EPS") gives effect to all dilutive potential shares of common stock outstanding during this period. For Diluted EPS, net loss used in calculating Basic EPS may be adjusted for certain items related to the dilutive securities.

For all periods presented, Aerie's potential common stock equivalents have been excluded from the computation of Diluted EPS as their inclusion would have had an anti-dilutive effect.

The potential common stock equivalents that have been excluded from the computation of Diluted EPS consist of the following:

	THREE MONTHS ENDED SEPTEMBER 30,		NINE MONTHS ENDED SEPTEMBER 30,	
	2019	**2018**	**2019**	**2018**
Outstanding stock options	8,535,266	6,951,639	8,535,266	6,951,639
Stock purchase warrants	79,500	154,500	79,500	154,500
Non-vested restricted stock awards and performance share units	755,179	584,124	755,179	584,124
Non-vested restricted stock units	43,071	—	43,071	—
Total	9,413,016	7,690,263	9,413,016	7,690,263

3. Revenue Recognition

Net product revenues for the three and nine months ended September 30, 2019 were derived from sales of Rhopressa® and Rocklatan® in the United States to customers and net product revenues for the three and nine months ended September 30, 2018 were derived from sales of Rhopressa® in the United States to customers. The Company commenced generating product revenue related to sales of Rocklatan® in the second quarter of 2019 following its commercial launch of Rocklatan® in the United States in May 2019. For thenine months ended September 30, 2019, three distributors accounted for 37%, 31% and 30% of total revenues, respectively. For the nine months ended September 30, 2018, three distributors accounted for 34%, 32% and 31% of total revenues, respectively. The Company commenced generating product revenues related to sales of Rhopressa® in the second quarter of 2018. Product affordability for the patient drives consumer acceptance, and this is generally managed through coverage by third-party payers, such as government or private healthcare insurers and pharmacy benefit managers ("Third-party Payers") and such product may be subject to rebates and discounts payable directly to those Third-party Payers.

The Company calculates its net product revenue based on the wholesale acquisition cost that the Company charges its distributors for Rhopressa® and Rocklatan® less provisions for (i) trade discounts and allowances, such as discounts for prompt payment and distributor fees, (ii) estimated rebates to Third-party Payers, estimated payments for Medicare Part D prescription drug program coverage gap (commonly called the "donut hole"), patient co-pay program coupon utilization, chargebacks and other discount programs and (iii) reserves for expected product returns. Provisions for revenue reserves reduced product revenues by $31.0 million and $73.8 million for the three and nine months ended September 30, 2019, respectively. For the three and nine months ended September 30, 2018, provisions for revenue reserves reduced product revenues by $6.4 million and $8.1 million, respectively.

Trade Discounts and Allowances: The Company generally provides discounts on sales of Rhopressa® and Rocklatan® to its distributors for prompt payment and pays fees for distribution services and for certain data that distributors provide to the Company. The Company expects its distributors to earn these discounts and fees, and accordingly deducts the full amount of these discounts and fees from its gross product revenues at the time such revenues are recognized.

Rebates, Chargebacks and Other Discounts: The Company contracts with Third-party Payers for coverage and reimbursement of Rhopressa® and Rocklatan®. The Company estimates the rebates and chargebacks it expects to be obligated to provide to Third-party Payers and deducts these estimated amounts from its gross product revenue at the time the revenue is recognized. The Company estimates the rebates and chargebacks that it expects to be obligated to provide to Third-party Payers based upon (i) the Company's contracts and negotiations with these Third-party Payers, (ii) estimates regarding the payer mix for Rhopressa® and Rocklatan® based on third-party data and actual utilization, (iii) inventory held by distributors and (iv) estimates of inventory held at the retail channel. Other discounts include the Company's co-pay assistance coupon programs for commercially-insured patients meeting certain eligibility requirements. The calculation of the accrual for co-pay assistance is based on an estimate of claims and the cost per claim that the Company expects to pay associated with product that has been recognized as revenue.

Product Returns: The Company estimates the amount of Rhopressa® and Rocklatan® that will be returned and deducts these estimated amounts from its gross revenue at the time the revenue is recognized. The Company currently estimates product returns based on historical industry information regarding rates for comparable pharmaceutical products and product portfolios, the estimated remaining shelf life of product shipped to distributors, and contractual agreements with the Company's distributors intended to limit the amount of inventory they maintain. Reporting from the distributors includes distributor sales and inventory held by distributors, which provides the Company with visibility into the distribution channel to determine when product would be eligible to be returned.

The Company did not have any contract assets (unbilled receivables) at September 30, 2019 or December 31, 2018, as customer invoicing generally occurs before or at the time of revenue recognition. The Company did not have any contract liabilities at September 30, 2019 or December 31, 2018, as the Company did not receive payments in advance of fulfilling its performance obligations to its customers. Amounts billed or invoiced are included in accounts receivable, net on the condensed consolidated balance sheets.

4. Investments

Cash, cash equivalents and investments as of September 30, 2019 included the following:

(in thousands)	AMORTIZED COST	GROSS UNREALIZED GAINS	GROSS UNREALIZED LOSSES	FAIR VALUE
Cash and cash equivalents:				
Cash and money market funds	$ 248,703	$ —	$ (1)	$ 248,702
Total cash and cash equivalents	$ 248,703	$ —	$ (1)	$ 248,702
Investments:				
Commercial paper (due within 1 year)	$ 39,551	$ —	$ (24)	$ 39,527
Corporate bonds (due within 1 year)	52,668	—	(120)	52,548
Corporate bonds (due within 2 years)	5,033	—	(13)	5,020
Total investments	$ 97,252	$ —	$ (157)	$ 97,095
Total cash, cash equivalents and investments	$ 345,955	$ —	$ (158)	$ 345,797

Cash and cash equivalents as of December 31, 2018 included the following:

(in thousands)	AMORTIZED COST	GROSS UNREALIZED GAINS	GROSS UNREALIZED LOSSES	FAIR VALUE
Cash and cash equivalents:				
Cash and money market funds	$ 202,818	$ —	$ —	$ 202,818
Total cash and cash equivalents	$ 202,818	$ —	$ —	$ 202,818

5. Fair Value Measurements

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

	FAIR VALUE MEASUREMENTS AS OF September 30, 2019			
(in thousands)	LEVEL 1	LEVEL 2	LEVEL 3	TOTAL
Cash and cash equivalents:				
Cash and money market funds	$ 248,702	$ —	$ —	$ 248,702
Total cash and cash equivalents:	$ 248,702	$ —	$ —	$ 248,702
Investments:				
Commercial paper	$ —	$ 39,527	$ —	39,527
Corporate bonds	—	57,568	—	57,568
Total investments	$ —	$ 97,095	$ —	$ 97,095
Total cash, cash equivalents and investments:	$ 248,702	$ 97,095	$ —	$ 345,797

	FAIR VALUE MEASUREMENTS AS OF December 31, 2018			
(in thousands)	LEVEL 1	LEVEL 2	LEVEL 3	TOTAL
Cash and cash equivalents:				
Cash and money market funds	$ 202,818	$ —	$ —	$ 202,818
Total cash and cash equivalents:	$ 202,818	$ —	$ —	$ 202,818

The fair value of the Company's Convertible Notes was$187.9 million as of September 30, 2019. The estimated fair value of Convertible Notes was determined based on a discounted cash flow analysis and a binomial lattice model. The valuation required the use of Level 3 unobservable inputs and subjective assumptions, including but not limited to the stock price volatility and bond yield. The use of alternative market assumptions and estimation methodologies could have had an effect on these estimates of fair value.

6. Inventory

Inventory consists of the following:

(in thousands)	SEPTEMBER 30, 2019	DECEMBER 31, 2018
Raw materials	$ 1,076	$ 836
Work-in-process	7,327	6,885
Finished goods	6,270	2,391
Total inventory	$ 14,673	$ 10,112

7. Property, Plant and Equipment, Net

Property, plant and equipment, net consists of the following:

(in thousands)	SEPTEMBER 30, 2019	DECEMBER 31, 2018
Manufacturing equipment	$ 17,992	$ 2,366
Laboratory equipment	7,374	6,038
Furniture and fixtures	1,648	1,815
Software, computer and other equipment	6,567	2,702
Leasehold improvements	29,671	4,072
Construction-in-progress	3,980	49,057
Property, plant and equipment	67,232	66,050
Less: Accumulated depreciation	(8,955)	(5,525)
Property, plant and equipment, net	$ 58,277	$ 60,525

Manufacturing Plant Build-Out

In the second quarter of 2019, the Company completed the build-out on its own manufacturing plant in Athlone, Ireland, for which it leases approximately 30,000 square feet of interior floor space and as such is not the legal owner of the space. However, in accordance with ASC Topic 842, the Company was deemed to be the owner of the leased space prior to completion of construction. Upon completion, the Company performed a sale-leaseback analysis and accounted for the transaction as a sale. The Company therefore derecognized the build-to-suit asset and the corresponding build-to-suit facility lease obligation of approximately $4.4 million as of the completion date. No gain or loss arose from the derecognition. The Company concurrently recognized an operating lease ROU asset and a corresponding operating lease liability related to the leaseback of the facility. See Note 8 for additional information.

The build-to-suit facility lease obligation was approximately $4.5 million as of December 31, 2018.

Also, upon completion of the build-out in the second quarter of 2019, amounts previously classified as construction-in-progress related to the manufacturing plant placed into service have been transferred to leasehold improvements and manufacturing equipment and are being amortized in accordance with the Company's policy. See Note 2 for additional information.

8. Leases

The Company has operating leases for corporate offices, research and development facilities, and a fleet of vehicles. The properties primarily relate to the Company's principal executive office and research facility located in Durham, North Carolina, regulatory, commercial support and other administrative activities located in Irvine, California, and clinical, finance and legal operations located in Bedminster, New Jersey. The Durham, North Carolina, facility consists of approximately 61,000 square feet of laboratory and office space under leases that expire between June 2020 and June 2024 and the Irvine, California, location consists of approximately 37,300 square feet of office space under a lease that expires in January 2022. The Company terminated its previous lease and entered into a lease for its new Bedminster, New Jersey, location, which consists of approximately 34,000 square feet of office space under a lease that expires in October 2029. There are also small offices in Malta, Ireland, the United Kingdom and Japan.

The Company is leasing approximately 30,000 square feet of interior floor space in Athlone, Ireland, for its manufacturing plant in Athlone, Ireland, which the Company has concluded is an operating lease upon completion of the build-out in the second quarter of 2019. As a result, the Company concurrently recognized an operating lease ROU asset and a corresponding operating lease liability related to the leaseback of the facility of approximately $2.4 million upon completion of the build-out. The Company is reasonably certain it will remain in the lease through the end of its lease term in 2037, however, the Company is permitted to terminate the lease as early as September 2027.

The Company's operating leases have remaining lease terms of approximately 1 year to 18 years, some of which include options to extend the leases.

Balance sheet information related to leases was as follows:

(in thousands)		**SEPTEMBER 30, 2019**
Operating Leases		
Operating lease right-of-use assets	$	17,216
Operating lease liabilities	$	5,802
Long-term operating lease liabilities		12,235
Total operating lease liabilities	$	18,037

The Company's right-of-use assets obtained in exchange for operating lease obligations was $2.8 million during the nine months ended September 30, 2019.

	SEPTEMBER 30, 2019
Operating Leases	
Weighted-average remaining lease term	8 years
Weighted-average discount rate	8%

Maturities of lease liabilities as of September 30, 2019 were as follows:

(in thousands) **Year Ending December 31,**		**OPERATING LEASES**
Remainder of 2019	$	1,479
2020		5,757
2021		4,031
2022		1,725
2023		1,715
Thereafter		10,997
Total undiscounted lease payments		25,704
Less: present value adjustment		(7,667)
Total lease liabilities	$	18,037

Under prior lease guidance, minimum lease payments under operating leases were as follows at December 31, 2018:

(in thousands) Year Ending December 31,	OPERATING LEASES	
2019	$	4,283
2020		4,855
2021		4,278
2022		1,643
2023		1,438
Thereafter		6,698
Total minimum lease payments	$	23,195

Lease expense for the Company's operating leases was $1.4 million and $3.9 million, including variable lease payments of $0.3 million and $1.1 million, for the three and nine months ended September 30, 2019, respectively. Rent expense for the Company's operating leases was $1.0 million and $2.4 million for the three and nine months ended September 30, 2018, respectively.

9. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consist of the following:

(in thousands)	SEPTEMBER 30, 2019		DECEMBER 31, 2018	
Accrued compensation and benefits	$	10,005	$	10,438
Accrued consulting and professional fees		4,326		3,927
Accrued research and development expenses (1)		5,538		7,503
Accrued revenue reserves		34,060		10,155
Accrued other (2)		1,799		6,358
Total accrued expenses and other current liabilities	$	55,728	$	38,381

(1) Comprised of accruals related to fees for investigative sites, contract research organizations, contract manufacturing organizations and other service providers that assist in conducting preclinical research studies and clinical trials.

(2) Comprised of accruals related to commercial manufacturing activities for the Company's product candidates prior to receipt of regulatory approval, as well as other business-related expenses.

10. Debt

Credit Facility

In September 2019, the Company terminated its $200 million credit facility with certain entities affiliated with Deerfield Management Company L.P. ("Deerfield") pursuant to which $100 million of delayed draw term loan commitments were provided by Deerfield in July 2018 (the "July 2018 tranche") and $100 million of delayed draw term loan commitments were provided by Deerfield in May 2019 (the "May 2019 tranche"). Upon termination, the Company paid aggregate fees of $6.5 million to Deerfield in respect of the fee on undrawn amounts and the exit fee for each of the July 2018 tranche and May 2019 tranche. No funds were drawn under either tranche at the time of termination.

Convertible Notes

In September 2019, the Company issued an aggregate principal amount of $316.25 million of Convertible Notes to qualified institutional buyers pursuant to Rule 144A of the Securities Act of 1933, as amended. The Convertible Notes, governed by an indenture between the Company and a trustee, are senior, unsecured obligations and do not include financial and operating covenants nor any restrictions on the payments of dividends, the incurrence of indebtedness or the issuance or repurchase of securities by Aerie or any of its subsidiaries. Interest on the Convertible Notes is payable semi-annually in cash in arrears at a rate of 1.50% per annum on April 1 and October 1 of each year, beginning on April 1, 2020. The Convertible Notes will mature on October 1, 2024 unless they are redeemed, repurchased or converted prior to such date. Prior to April 1, 2024, the Convertible Notes will be convertible at the option of holders only during certain periods and upon satisfaction of certain conditions. On and after April 1, 2024, the Convertible Notes will be convertible at the option of the holders any time until the close of business on the second scheduled trading day immediately preceding the maturity date. Upon conversion, the Convertible Notes may be settled in shares of Aerie common stock, cash or a combination, thereof, at the Company's election. The Company intends to settle the principal and interest amounts of the Convertible Notes in cash, and therefore, the Company currently does not expect the conversion to have a dilutive effect on the Company's earnings per share, as applicable.

The Convertible Notes have an initial conversion rate of 40.04 shares of Aerie common stock per $1,000 principal amount of the Convertible Notes, which will be subject to customary anti-dilution adjustments in certain circumstances. This represents an initial effective conversion price of approximately $24.98 per share, which represents a premium of approximately 35% to the $18.50 per share closing price of Aerie common stock on September 4, 2019, the date the Company priced the offering.

The Company may redeem all or any portion of the Convertible Notes, at its option, on or after October 3, 2022, at a cash redemption price equal to 100% of the principal amount of the Convertible Notes to be redeemed, plus accrued and unpaid interest, if any, to, but excluding, the redemption date, but only if the last reported sale price of Aerie common stock exceeds 130% of the conversion price then in effect for at least 20 trading days (whether or not consecutive) during any 30 consecutive trading day period (including the last trading day of such period) ending on, and including, the trading day immediately before the date the Company provides written notice of redemption; and the trading day immediately before the notice is sent.

Holders of Convertible Notes may require the Company to repurchase their Convertible Notes upon the occurrence of certain events that constitute a fundamental change under the indenture governing the Convertible Notes at a fundamental change repurchase price equal to 100% of the principal amount thereof, plus accrued and unpaid interest to, but excluding, the fundamental change repurchase date.

During the three months ended September 30, 2019, the conditions allowing holders of the Convertible Notes to elect to convert had not been met. As of September 30, 2019, the if-converted value of the Convertible Notes did not exceed the principal amount of the Convertible Notes.

In connection with the issuance of the Convertible Notes, the Company incurred debt issuance costs of $9.2 million for the three months ended September 30, 2019. In accordance with ASC Topic 470, *Debt*, these costs were allocated to debt and equity components in proportion to the allocation of proceeds. Issuance costs of $5.5 million were recorded as debt issuance costs in the net carrying value of Convertible Notes. The debt issuance costs are amortized on an effective interest basis over the term of the Convertible Notes. The remaining issuance costs of $3.7 million were recorded as additional paid-in capital, net with the equity component and such amounts are not subject to amortization.

The following table summarizes the carrying value of the Convertible Notes as of September 30, 2019:

(in thousands)	**SEPTEMBER 30, 2019**
Gross proceeds	$ 316,250
Unamortized debt discount and issuance costs	(132,697)
Carrying value	$ 183,553

The equity component of the Convertible Notes was recognized at issuance and represents the difference between the principal amount of the Convertible Notes and the fair value of the liability component of the Convertible Notes at issuance. The equity component was approximately $128.4 million at the time of issuance and its fair value is not remeasured as long as it continues to meet the conditions for equity classification.

Separately, the Company entered into privately negotiated capped call options with financial institutions. The capped call options cover, subject to customary anti-dilution adjustments, the number of shares of Aerie common stock that initially underlie the Convertible Notes. The cap price of the capped call options is $37.00 per share of Aerie common stock, representing a premium of 100% above the closing price of $18.50 per share of Aerie common stock on September 4, 2019, and is subject to certain adjustments under the terms of the capped call options. The capped call options are generally intended to reduce or offset potential dilution to Aerie common stock upon conversion of the Convertible Notes with such reduction and/ or offset, as the case may be, subject to a cap based on the cap price. The Company paid a total of $32.9 million in premiums for the capped call options, which was recorded as additional paid-in capital, using a portion of the gross proceeds from the issuance and sale of the Convertible Notes. The capped call options are excluded from diluted earnings per share because the impact would be anti-dilutive.

Interest expense related to the Convertible Notes, including stated interest and amortization of debt discount and issuance costs, was $1.4 million for the three months ended September 30, 2019.

Interest expense was $6.6 million and $9.0 million for the three and nine months ended September 30, 2019, respectively, and included amortization of debt discount and issuance costs related to the Convertible Notes and issuance costs and fees related to the credit facility. Interest expense was $0.8 million and $1.7 million for the three and nine months ended September 30, 2018, respectively, and included amortization of debt discount and issuance costs related to the 2014 Convertible Notes (as defined below) through the date of conversion, as well as issuance costs and fees related to the July 2018 tranche of the credit facility. In July 2018, the entire outstanding principal amount of senior secured convertible notes (the "2014 Convertible Notes") was converted into shares of Aerie common stock.

11. Stockholders' Equity

Warrants

As of September 30, 2019, the following equity-classified warrants to purchase common stock were outstanding:

NUMBER OF UNDERLYING SHARES	EXERCISE PRICE PER SHARE	WARRANT EXPIRATION DATE
75,000	$5.00	November 2019
4,500	$5.00	August 2020
223,481	$0.05	December 2019

The warrants outstanding as of September 30, 2019 are all currently exercisable. In October 2019, 298,481 warrants outstanding as of September 30, 2019 were exercised for shares of Aerie common stock.

12. Stock-Based Compensation

Stock-based compensation expense for options granted, RSAs, performance stock awards ("PSAs"), RSUs, SARs and stock purchase rights is reflected in the condensed consolidated statements of operations and comprehensive loss as follows:

	THREE MONTHS ENDED SEPTEMBER 30,		NINE MONTHS ENDED SEPTEMBER 30,	
(in thousands)	**2019**	**2018**	**2019**	**2018**
Selling, general and administrative	$ 7,041	$ 6,682	$ 23,253	$ 20,022
Pre-approval commercial manufacturing	807	700	2,490	1,804
Research and development	2,758	2,596	8,178	7,189
Total	$ 10,606	$ 9,978	$ 33,921	$ 29,015

Equity Plans

The Company maintains three equity compensation plans, the 2005 Aerie Pharmaceutical Stock Plan (the "2005 Plan"), the 2013 Omnibus Incentive Plan (the "2013 Equity Plan"), which was amended and restated as the Aerie Pharmaceuticals, Inc. Second Amended and Restated Omnibus Incentive Plan (the "Second Amended and Restated Equity Plan"), as described below, and the Aerie Pharmaceuticals, Inc. Inducement Award Plan (the "Inducement Award Plan"), as described below. The 2005 Plan, the Second Amended and Restated Equity Plan and the Inducement Award Plan are referred to collectively as the "Plans." The 2005 Plan was frozen in 2013 and no additional awards have been or will be made under the 2005 Plan.

On June 7, 2018, Aerie's stockholders approved the adoption of the Second Amended and Restated Equity Plan to increase the number of shares issuable under the plan by 4,500,000. The Second Amended and Restated Equity Plan provides for the granting of up to 10,229,068 equity awards in respect of Aerie common stock.

On December 7, 2016, Aerie's Board of Directors approved the Inducement Award Plan which provides for the granting of up to 418,000 equity awards in respect of common stock of Aerie and was subsequently amended during 2017 to increase the equity awards that may be issued by an additional 874,500 shares. Awards granted under the Inducement Award Plan are intended to qualify as employment inducement awards under NASDAQ Listing Rule 5635(c)(4).

Options to Purchase Common Stock

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

	NUMBER OF SHARES	WEIGHTED AVERAGE EXERCISE PRICE	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE (YEARS)	AGGREGATE INTRINSIC VALUE (000's)
Options outstanding at December 31, 2018	6,935,119	$ 28.96		
Granted	2,046,583	32.54		
Exercised	(139,119)	28.74		
Canceled	(307,317)	51.53		
Options outstanding at September 30, 2019	8,535,266	$ 29.02	6.8	$ 28,534
Options exercisable at September 30, 2019	5,404,516	$ 23.00	5.4	$ 28,304

As of September 30, 2019, the Company had $80.2 million of unrecognized compensation expense related to options granted under its equity plans. This expense is expected to be recognized over a weighted average period of 2.7 years as of September 30, 2019.

Restricted Stock Awards

The following table summarizes the RSAs, including PSAs, activity under the Plans:

	NUMBER OF SHARES	WEIGHTED AVERAGE FAIR VALUE PER SHARE
Non-vested RSAs at December 31, 2018	572,706	$ 48.18
Granted	494,167	41.13
Vested	(214,276)	45.76
Canceled	(97,418)	48.85
Non-vested RSAs at September 30, 2019	755,179	$ 44.20

As of September 30, 2019, the Company had $26.2 million of unrecognized compensation expense related to unvested RSAs, including PSAs. This expense is expected to be recognized over the weighted average period of 2.8 years as of September 30, 2019.

The vesting of the RSAs is time and service based with terms of one to four years. During the year ended December 31, 2017, the Company granted 98,817 PSAs with non-market performance conditions that vest upon the satisfaction of certain performance conditions and service conditions. During the nine months ended September 30, 2019, vesting for the remaining PSAs was deemed probable to occur. As of September 30, 2019, 69,171 PSAs were vested.

As of September 30, 2019, 43,071 non-vested RSAs were cancelled and replaced with a corresponding number of RSUs. The RSUs were issued with the same vesting provisions as the cancelled RSAs. Accordingly, the 43,071 RSUs outstanding at September 30, 2019 were non-vested. As of September 30, 2019, the weighted average fair value per RSU was $19.22, and the associated unrecognized compensation expense totaled $2.1 million. This expense is expected to be recognized over the weighted average period of 2.9 years as of September 30, 2019.

Stock Appreciation Rights

The following table summarizes the SARs activity under the Plans:

	NUMBER OF SHARES	WEIGHTED AVERAGE EXERCISE PRICE	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE (YEARS)	AGGREGATE INTRINSIC VALUE (000's)
SARs outstanding at December 31, 2018	91,000	$ 53.83		
Granted	113,851	33.73		
Exercised	—	—		
Canceled	(26,687)	50.15		
SARs outstanding at September 30, 2019	178,164	$ 41.49	4.2	$ —
SARs exercisable at September 30, 2019	17,250	$ 54.35	3.5	$ —

Holders of the SARs are entitled under the terms of the Plans to receive cash payments calculated based on the excess of the Company's common stock price over the target price in their award; consequently, these awards are accounted for as liability-classified awards and the Company measures compensation cost based on their estimated fair value at each reporting date, net of actual forfeitures, if any.

13. Commitments and Contingencies

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

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following management's discussion and analysis should be read in conjunction with our unaudited condensed consolidated financial statements and related notes that appear elsewhere in this report and with our audited financial statements and related notes and management's discussion and analysis of financial condition and results of operations included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, as filed with the SEC on March 1, 2019 ("2018 Form 10-K"). This discussion and analysis contains forward-looking statements that involve risks and uncertainties. Please see "Special Note Regarding Forward-Looking Statements" for additional factors relating to such statements and see "Risk Factors" in our 2018 Form 10-K and other documents we have filed or furnished with the SEC for a discussion of certain risk factors applicable to our business, financial condition and results of operations. Past operating results are not necessarily indicative of operating results in any future periods.

Overview

We are an ophthalmic pharmaceutical company focused on the discovery, development and commercialization of first-in-class therapies for the treatment of patients with open-angle glaucoma, retinal diseases and other diseases of the eye. Our strategy is to successfully commercialize our U.S. Food and Drug Administration ("FDA") approved products, Rhopressa® (netarsudil ophthalmic solution) 0.02% ("Rhopressa®") and Rocklatan® (netarsudil and latanoprost ophthalmic solution) 0.02%/0.005% ("Rocklatan®"). We have a commercial team that includes approximately 100 sales representatives targeting approximately 14,000 high prescribing eye-care professionals throughout the United States. This sales force is responsible for sales of Rhopressa® and now Rocklatan®, which launched in the United States on May 1, 2019.

Our strategy also includes developing our business outside of the United States, including obtaining regulatory approval in Europe and Japan on our own for Rhopressa® and Rocklatan®. If we obtain regulatory approval, we may commercialize one or both of Rhopressa® and Rocklatan® in Europe on our own or partner, depending on the overall pricing environment in that region, and will likely partner for commercialization of their equivalents in Japan. If approved, we expect that Rhopressa® and Rocklatan® will be marketed under the names Rhokiinsa® and Roclanda®, respectively, in Europe. To optimize the commercial opportunity, we expect to launch Roclanda® before Rhokiinsa® in Europe, if approved, as the European market is oriented more toward fixed-dose combination products. We are continuing to expand our presence in Europe where we have over 60 employees that manage the operation of our manufacturing plant in Athlone, Ireland, discussed below, as well our Phase 3 clinical trial for Roclanda®, which is ongoing in several European countries. We have hired key personnel, including the Chief Commercial Officer of Europe, and are building our clinical, medical affairs and commercial teams in Europe. In Japan, we opened an office in Tokyo and hired personnel to fill key leadership positions to help execute our strategy in that market. We commenced a Phase 2 clinical trial for Rhopressa® in Japan in March 2019, announced completion of enrollment for this trial in July 2019 and released topline data for this trial in November 2019, as discussed in "*—Marketed Products"* below.

We seek to enhance our longer-term commercial potential by identifying and advancing additional product candidates through our internal discovery efforts, our entry into potential research collaborations or in-licensing arrangements or our acquisition of additional ophthalmic products or technologies or product candidates that complement our current product portfolio, such as our collaboration with DSM, a global science-based company headquartered in the Netherlands, whereby we have access to their bio-erodible polymer technology, and our acquisition of assets from Envisia, designed to advance our progress in developing potential future sustained-release product candidates to treat retinal diseases, as discussed in "*—Product Candidates"* below.

In the second quarter of 2019, we completed the build-out on our manufacturing plant in Athlone, Ireland, for future commercial production of Rhopressa®, Rocklatan®, and, if approved, Rhokiinsa® and Roclanda®, which we commenced in January 2017. In September 2019, we submitted a prior approval supplement ("PAS") for the plant to the FDA, which, if approved, will permit production of Rocklatan® by the plant for sale in the United States. The Athlone manufacturing plant is expected to produce commercial supplies of Rocklatan® in early 2020, Rhopressa® in late 2020 and thereafter Rhokiinsa® and Roclanda®, if approved. Our current contract manufacturer produces commercial supply of Rhopressa® and Rocklatan®. We have obtained FDA approval for an additional Rhopressa® drug product contract manufacturer in the first quarter of 2019, which began to supply commercial product in the second quarter of 2019. Further, we have obtained FDA approval for an additional active pharmaceutical ingredient ("API") contract manufacturer, which began to supply commercial API in the second quarter of 2019, and we are in the process of adding an additional Rocklatan® drug product contract manufacturer, which is expected to begin commercial supply in early 2020. We expect to continue to use product sourced from our contract manufacturers when the manufacturing plant in Athlone, Ireland, plant is operational.

We own the worldwide rights to all indications for Rhopressa® and Rocklatan®. We have patent protection for Rhopressa® and Rocklatan® in the United States through early 2034 and internationally, through dates ranging from 2030 to 2037. Our intellectual property portfolio contains patents and pending patent applications related to composition of matter, pharmaceutical compositions, methods of use, and synthetic methods.

Product and Product Candidate Overview

Marketed Products

Rhopressa®, our first FDA-approved product, has demonstrated that it reduces intraocular pressure ("IOP") through Rho kinase ("ROCK") inhibition. Using this mechanism of action ("MOA"), Rhopressa® increases the outflow of aqueous humor through the trabecular meshwork ("TM"), which accounts for approximately 80% of fluid drainage from the healthy eye. Our recently FDA-approved product, once-daily Rocklatan®, is a fixed-dose combination of Rhopressa® and latanoprost, which reduces IOP through the same MOA as Rhopressa® and through a second MOA utilizing the ability of latanoprost to increase the outflow of aqueous humor through the uveoscleral pathway, the eye's secondary drain. Both Rhopressa® and Rocklatan® are taken once-daily in the evening and have shown in preclinical and clinical trials to be effective in reducing IOP, with a favorable safety profile.

Rhopressa®

Rhopressa® is a once-daily eye drop designed to reduce elevated IOP in patients with open-angle glaucoma or ocular hypertension. The active ingredient in Rhopressa®, netarsudil, is an Aerie-owned ROCK inhibitor. We believe that Rhopressa® represents the first of a new drug class for reducing IOP in patients with glaucoma in over 20 years. Initial indications point to healthcare professionals prescribing Rhopressa® as a concomitant therapy to prostaglandins or non-PGA (prostaglandin analog) medications when additional IOP reduction is desired. We believe Rhopressa® is primarily competing with other non-PGA products, due to its targeting of the diseased TM, its demonstrated ability to reduce IOP at consistent levels across tested baselines, its preferred once-daily dosing relative to other currently marketed non-PGA products and its safety profile. Adjunctive therapies currently represent nearly one-half of the glaucoma prescription market in the United States, according to IQVIA. We believe that Rhopressa® may also become a preferred therapy where PGAs are contraindicated, for patients who do not respond to PGAs and for patients who choose to avoid the cosmetic issues associated with PGA products.

We launched Rhopressa® in the United States at the end of April 2018. Rhopressa® is being sold to national and regional U.S. pharmaceutical distributors, and patients have access to Rhopressa® through pharmacies across the United States. We have obtained formulary coverage for Rhopressa® for the majority of lives covered under commercial and Medicare Part D plans.

In October 2018, we announced that the European Medicines Agency ("EMA") accepted our marketing authorisation application ("MAA") for review for Rhokiinsa®. In September 2019, the EMA Committee for Medicinal Products in Human Use ("CHMP") adopted a positive opinion recommending approval of the MAA. The final decision by the European Commission is expected in the fourth quarter of 2019.

Additionally, we completed a Phase 1 clinical trial and a successful pilot Phase 2 clinical study in the United States on Japanese and Japanese-American subjects, which were designed to support meeting the requirements of Japan's Pharmaceuticals and Medical Devices Agency ("PMDA") for potential regulatory submission of Rhopressa® in Japan. Topline results of the pilot Phase 2 study were announced in January 2019. In that study, both netarsudil arms produced significantly greater IOP reduction than the placebo arm at the specified timepoint and the safety findings were consistent with previous netarsudil trials. In July 2019, we completed enrollment of the Phase 2 clinical trial initiated in March 2019 in Japan and topline results were released in November 2019. The study was designed in accordance with the requirements of the PMDA on Japanese patients in Japan to support subsequent Phase 3 registration trials that are also expected to be conducted in Japan. The results of the Phase 2 clinical trial indicated positive efficacy and tolerability results for the patient set, and we plan to move forward with plans for Phase 3 initiation in Japan, along with advancing discussions for a potential commercialization partner in Japan.

In November 2019, we released topline data from our Phase 4 Multi-center Open-label Study ("MOST"), which observed Rhopressa® efficacy in various real-world clinical settings, including as an adjunctive product or monotherapy. The results indicated positive IOP reduction in all settings along with a favorable tolerability profile.

Rocklatan®

Rocklatan® is a once-daily fixed-dose combination of Rhopressa® and latanoprost, the most widely-prescribed drug for the treatment of patients with open-angle glaucoma. We believe, based on our clinical data, that Rocklatan® has the potential to provide a greater IOP-reducing effect than any currently marketed glaucoma medication. Therefore, we believe that Rocklatan®, once formulary coverage is obtained, could compete with both PGA and non-PGA therapies and become the product of choice for patients requiring maximal IOP reduction, including those with higher IOPs and those who present with significant disease progression despite using currently available therapies.

With respect to Rocklatan® in jurisdictions outside the United States, we initiated a Phase 3 registration trial for Roclanda®, named Mercury 3, in Europe during the third quarter of 2017. Mercury 3, a six-month efficacy and safety trial, is designed to compare Roclanda® to Ganfort®, a fixed-dose combination product marketed in Europe consisting of bimatoprost (a PGA) and timolol (a beta blocker). If successful, Mercury 3 is expected to improve the commercialization prospects of Roclanda® in Europe. We currently expect to read out topline 90-day efficacy data for the trial in mid 2020. Since Roclanda® is a fixed-dose combination product that includes Rhokiinsa®, we plan to submit an MAA with the EMA for Roclanda® in early 2020, if the EMA has approved Rhokiinsa® by such time.

Product Candidates

Our stated objective is to build a major ophthalmic pharmaceutical company. Through business development activities, we acquired worldwide ophthalmic rights to a bio-erodible polymer technology from DSM and PRINT® (Particle Replication in Non-wetting Templates) implant manufacturing technology, which is a proprietary technology capable of creating precisely-engineered sustained-release products utilizing fully-scalable manufacturing processes, from Envisia. Using these technologies, we have created a sustained-release ophthalmology platform and are currently developing two sustained-release implants focused on retinal diseases, AR-1105 and AR-13503.

AR-1105 (dexamethasone steroid implant)

In 2017, we acquired Envisia's intellectual property rights relating to a preclinical dexamethasone steroid implant using a biodegradable polymer-based drug delivery system that comprised of a blend of different poly D, L-lactic-*co*-glycolic acid ("PLGA") polymers and PRINT® technology for the potential treatment of macular edema due to retinal vein occlusion ("RVO") and diabetic macular edema ("DME") via intravitreal injection, which we refer to as AR-1105. We submitted the Investigational New Drug application ("IND") for this sustained-release implant in December 2018. We initiated a Phase 2 clinical trial of AR-1105 in patients with macular edema due to RVO during March 2019 and completed enrollment in October 2019.

AR-13503 (ROCK and Protein kinase inhibitor)

Our owned preclinical small molecule, AR-13503, is a ROCK and Protein kinase C inhibitor sustained-release implant with potential in the treatment of DME, wet age-related macular degeneration ("AMD") and other diseases of the retina. AR-13503, which has the same active metabolite as Rhopressa®, has shown lesion size decreases in an in vivo preclinical model of wet AMD at levels similar to the current market-leading wet AMD anti-vascular endothelial growth factor (vascular endothelial growth factor, "VEGF") product. When used in combination preclinically with the market-leading anti-VEGF product, AR-13503 produced greater lesion size reduction than the anti-VEGF product alone in a model of proliferative diabetic retinopathy. Pending additional studies, AR-13503 may have the potential to provide an entirely new mechanism and pathway to treat DME, wet AMD and related diseases of the retina.

Our licensed technology from DSM uses polyesteramide polymers to produce an injectable, thin fiber that is minute in size. Preclinical experiments have demonstrated early success in conjunction with AR-13503, including demonstration of linear, sustained elution rates over several months and achievement of target retinal drug concentrations. We submitted an IND application for AR-13503 in March 2019 and in April 2019, we announced that the FDA has reviewed the IND for AR-13503 and it is now in effect, allowing Aerie to initiate human studies in the treatment of neovascular age-related macular degeneration ("nAMD") and DME. We initiated a first-in-human clinical study for AR-13503 in the third quarter of 2019.

Pipeline Opportunities

We are also evaluating the PRINT® technology platform for sustained release of therapies to the front of the eye, including to treat glaucoma or ocular hypertension, as examples. We commenced operation of our good manufacturing practices-validated manufacturing facility for production of ophthalmic implants using PRINT® technology in our Durham, North Carolina, facility in October 2018.

We may continue to enter into research collaboration arrangements, license, acquire or develop 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.

We own over 4,000 ROCK inhibitor molecules, some of which have additional features including the inhibition of other kinases such as Janus kinase and those in the IκB family and we evaluate this library on an ongoing basis for additional development opportunities. Early stage evaluations are underway for indications, including neuroenhancement, dry AMD, geographic atrophy, dry eye and psoriasis. We also evaluate outside business development opportunities to provide access to technologies developed outside of Aerie and have stated our particular interest in ophthalmic areas such as dry eye, which is a very large market in the United States.

Financial Overview

Our cash, cash equivalents and investments totaled $345.8 million as of September 30, 2019. We believe that our cash, cash equivalents and investments, the net proceeds associated with the Convertible Notes (as defined below) issuance and projected cash flows from revenues, will provide sufficient resources for at least the next twelve months, though there may be need for additional financing activity as we continue to grow. See "—Liquidity and Capital Resources" below and Note 10 to our condensed consolidated financial statements included in this report for further discussion.

We have incurred net losses since our inception in June 2005. Until 2018, when we commenced commercial operations, our business activities were primarily limited to research and development and raising capital. As of September 30, 2019, we had an accumulated deficit of $840.9 million. We recorded net losses of $49.4 million and $144.5 million for the three and nine months ended September 30, 2019, respectively. For the three and nine months ended September 30, 2018 we recorded net losses of $85.4 million and $181.1 million, respectively. Our capital resources and business efforts are largely focused on activities relating to the commercialization of Rhopressa®, the launch and commercialization of Rocklatan®, advancing our product pipeline, international expansion and completion of our manufacturing plant in Athlone, Ireland. We expect to continue to incur operating losses until our products generate adequate commercial revenue to render Aerie profitable. If we do not successfully commercialize Rhopressa® and Rocklatan® or any future product candidates, if approved, we may be unable to generate adequate product revenues to achieve such profitability and may be required to obtain further funding through public or private debt or equity offerings or other arrangements. Adequate additional funding may not be available to us on acceptable terms, or at all. If we are unable to raise capital when needed or on acceptable terms, we may be forced to delay, reduce or eliminate our research and development programs or commercialization or manufacturing efforts.

Product Revenues, Net

We launched Rhopressa® in the United States in late April 2018 and commenced generating product revenues from sales of Rhopressa® during the second quarter of 2018. We launched Rocklatan® in the United States on May 1, 2019 and commenced generating product revenues from sales of Rocklatan® in the second quarter of 2019. Product affordability for the patient is critical to drive consumer acceptance, and this is generally managed through coverage by third-party payers, such as government or private healthcare insurers and pharmacy benefit managers ("Third-party Payers") and such product may be subject to rebates and discounts payable directly to those Third-party Payers. Our product revenues are recorded net of provisions relating to estimates for (i) trade discounts and allowances, such as discounts for prompt payment and distributor fees, (ii) estimated rebates to Third-party Payers, estimated payments for Medicare Part D prescription drug program coverage gap (commonly called the "donut hole"), patient co-pay program coupon utilization, chargebacks and other discount programs and (iii) reserves for expected product returns. These estimates reflect current contractual and statutory requirements, known market events and trends, industry data and forecasted customer mix. Actual amounts may ultimately differ from these estimates. If actual results vary, estimates may be adjusted in the period such change in estimate becomes known, which may have an impact on earnings in the period of adjustment.

Cost of Goods Sold

Cost of goods sold consists of direct and indirect costs to procure and manufacture product sold, including third-party manufacturing costs. We began capitalizing inventory costs for Rhopressa® and Rocklatan® after FDA approval. Prior to receiving FDA approval, such costs were expensed as pre-approval commercial manufacturing expenses. Cost of goods sold in 2019 will continue to be favorably impacted by sales of Rhopressa® and Rocklatan® inventory that was expensed prior to FDA approval; however, we do not expect the impact to be material.

Selling, General and Administrative Expenses

Selling, general and administrative expenses consist primarily of employee-related expenses, including salaries, benefits and stock-based compensation for all officers and employees in general management, sales and marketing, finance and administration. Other significant expenses include selling and marketing expenses, facilities expenses, shipping and handling costs and professional fees for audit, tax, legal and other services.

Pre-approval Commercial Manufacturing Expenses

Pre-approval commercial manufacturing expenses consist of costs incurred for commercial-related manufacturing activities for Rhopressa® and Rocklatan® prior to FDA approval of its products or its manufacturing facilities. These costs include expenses associated with the manufacturing of inventory in anticipation of commercial launch; expenses associated with the establishment of both our manufacturing plant in Athlone, Ireland, and our additional API and drug product contract manufacturers; and employee-related expenses, which include salaries, benefits and stock-based compensation for commercial-related manufacturing personnel prior to regulatory approval. Once regulatory approval is obtained, we will capitalize such costs as inventory on the condensed consolidated balance sheets.

Research and Development Expenses

We expense research and development costs to operations as incurred. Research and development expenses consist primarily of costs incurred for the research and development of our preclinical and clinical candidates, including employee-related expenses for research and development personnel.

Other (Expense) Income, Net

Other (expense) income primarily includes interest expense, interest income, foreign exchange gains and losses, and other income and expense. Interest expense consists of interest expense under the Convertible Notes and the 2014 Convertible Notes, including the amortization of debt discounts and issuance costs incurred. The conversion of the 2014 Convertible Notes occurred in July 2018. Interest expense also includes the amortization of issuance costs and fees incurred on the credit facility. Interest income primarily consists of interest earned on our cash, cash equivalents and investments. See "—Liquidity and Capital Resources" below and Note 10 to our condensed consolidated financial statements included in this report for further discussion. Foreign exchange gains and losses are primarily due to the remeasurement of our lease liabilities, which are denominated in a foreign currency and held by a subsidiary with a U.S. dollar functional currency.

Critical Accounting Policies and Use of Estimates

Our management's discussion and analysis of financial condition and results of operations is based on our condensed consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States ("U.S. GAAP"). The preparation of consolidated financial statements also requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, net revenue, costs and expenses and related disclosures. We evaluate our estimates and judgments on an ongoing basis. Significant estimates include assumptions used in the determination of revenue recognition, inventories, lease accounting, accrued expenses, fair value measurements, acquisitions and stock-based compensation. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Other than the application of lease accounting policies and estimates as described below, our critical accounting policies and significant estimates have not materially changed since the date we filed our 2018 Form 10-K. For more information on our critical accounting policies and estimates, refer to our 2018 Form 10-K.

Leases

We adopted Accounting Standards Update ("ASU") 2016-02, *Leases* ("ASC Topic 842") effective January 1, 2019. Under this new lease standard, practically all leases with lease terms in excess of one year are required to be recognized on the balance sheet as right-of-use assets and corresponding lease liabilities. Significant assumptions utilized in recognizing the right-of-use asset and corresponding liability included the expected lease term and the incremental borrowing rate. The expected lease term includes both contractual lease periods and, as applicable, extensions of the lease term when we have determined the exercise of the option to extend is reasonably certain to occur. The incremental borrowing rate was utilized to discount lease payments over the expected term given our operating leases do not provide an implicit rate. We estimated the incremental borrowing rate to reflect the profile of secured borrowing over the expected term of the leases. In addition, significant judgment was utilized in determining the impact of our build-to-suit lease for our manufacturing plant in Athlone, Ireland, upon adoption of ASC Topic 842, for which we concluded we were the owner of the leased space for accounting purposes. As a result, we maintained our previous accounting for our build-to-suit asset and liability upon adoption of ASC Topic 842, which was discounted at the implicit rate of the facility obligation.

The standard has been implemented using the optional transitional method and we elected to utilize certain practical expedients. In electing the optional transition method, we were required to recognize and measure operating leases existing at, or entered into after, the adoption date. We utilized an incremental borrowing rate on the adoption date to determine the present value of the remaining operating lease assets and liabilities. Prior period results have not been restated. See Note 2 to our condensed consolidated financial statements included in this report for further discussion.

Results of Operations

Comparison of the Three Months Ended September 30, 2019 and 2018

The following table summarizes the results of our operations for the three months endedSeptember 30, 2019 and 2018:

	THREE MONTHS ENDED SEPTEMBER 30,			
	2019	2018	CHANGE	% CHANGE
	(in thousands, except percentages)			
Product revenues, net	$ 18,544	$ 7,302	$ 11,242	*
Total revenues, net	18,544	7,302	11,242	
Costs and expenses:				
Cost of goods sold	2,063	205	1,858	*
Selling, general and administrative expenses	32,171	32,685	(514)	(2)%
Pre-approval commercial manufacturing	5,841	7,248	(1,407)	(19)%
Research and development expenses	21,796	28,502	(6,706)	(24)%
Total costs and expenses	61,871	68,640	(6,769)	(10)%
Loss from operations	(43,327)	(61,338)	18,011	(29)%
Other (expense) income, net	(6,075)	(24,050)	17,975	(75)%
Loss before income taxes	$ (49,402)	$ (85,388)	$ 35,986	(42)%

**Percentage not meaningful*

Product revenues, net

Product revenues, net amounted to$18.5 million and $7.3 million for the three months ended September 30, 2019 and 2018, respectively. Revenues recorded in the 2019 period relate to sales of Rhopressa® and Rocklatan®, which were launched in the United States in late April 2018 and in early May 2019, respectively. Revenues recorded in the 2018 period relate to sales of Rhopressa®, which was our first product to receive regulatory approval.

Cost of goods sold

Cost of goods sold was $2.1 million for the three months ended September 30, 2019, compared to $0.2 million in the prior year period. Our gross margin percentage of 88.9% and 97.2% for the three months ended September 30, 2019 and 2018, respectively, were favorably impacted by product sales with certain materials produced prior to FDA approval and therefore expensed in prior periods. If inventory sold during the three months ended September 30, 2019 and 2018 was valued at cost, our gross margin for the period then ended would have been 87.8% and 96.3%, respectively. Further, our gross margin percentage for thethree months ended September 30, 2019 was unfavorably impacted by approximately 5.9% primarily due to excess inventory write-off.

Selling, general and administrative expenses

Selling, general and administrative expenses decreased by$0.5 million for the three months ended September 30, 2019 as compared to the three months ended September 30, 2018. Aerie's commercial infrastructure has not changed significantly from thethird quarter of 2018.

Pre-approval commercial manufacturing expenses

Pre-approval commercial manufacturing expenses decreased by $1.4 million for the three months ended September 30, 2019 as compared to the three months ended September 30, 2018. Expenses were lower due to the receipt of regulatory approval of our API and drug product contract manufacturers, which began to supply commercial API and product, respectively, in the second quarter of 2019, as the cost of commercial API and product, respectively, produced by these manufacturers following regulatory approval were capitalized as inventory. These costs were partially offset by an increase of costs related to our manufacturing plant in Ireland, of which we completed the build-out in the second quarter of 2019.

Research and development expenses

Research and development expenses decreased by $6.7 million for the three months ended September 30, 2019 as compared to the three months ended September 30, 2018. This decrease primarily related to an expense of $7.4 million for thethree months ended September 30, 2018 related to our expanded collaboration agreement with DSM, of which $6.0 million was paid to DSM upon execution of such agreement in July 2018. Partially offsetting the decline was an increase in spend in the current year related to Rocklatan®.

Research and development expenses for Rhopressa® totaled $3.6 million and $3.9 million for the three months ended September 30, 2019 and 2018, respectively. Expenses for Rhopressa® during the three months ended September 30, 2019 and 2018 primarily relate to costs incurred for our clinical trials to support regulatory submission of Rhopressa® in Japan. Research and development expenses for Rocklatan® totaled $2.2 million and $0.9 million for the three months ended September 30, 2019 and 2018, respectively. Expenses for Rocklatan® during the three months ended September 30, 2019 primarily include costs related to the Mercury 3 registration trial in Europe.

Other (expense) income, net

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

	THREE MONTHS ENDED SEPTEMBER 30,		
	2019	**2018**	**CHANGE**
		(in thousands)	
Interest income	$ 476	$ 834	$ (358)
Interest expense	(6,604)	(763)	(5,841)
Other (expense) income	53	(24,121)	24,174
Other (expense) income, net	$ (6,075)	$ (24,050)	$ 17,975

The change in other (expense) income, net of $18.0 million for the three months ended September 30, 2019 as compared to the three months ended September 30, 2018 primarily relates to the value of the additional 329,124 shares of Aerie common stock issued to Deerfield in the amount of $24.1 million, which was recorded as other expense during the third quarter of 2018 in connection with the induced conversion of the entire outstanding principal amount of the 2014 Convertible Notes in July 2018. In addition, interest expense increased by $5.8 million in the third quarter of 2019 related to the amortization of issuance costs and fees incurred on the credit facility which was terminated in September 2019 as well as stated interest and amortization of debt discount and issuance costs related to the Convertible Notes. This increase in interest expense was partially offset by costs in the prior year for the amortization of issuance costs and fees incurred on the July 2018 tranche of the credit facility.

Comparison of the Nine Months Ended September 30, 2019 and 2018

The following table summarizes the results of our operations for thenine months ended September 30, 2019 and 2018:

	NINE MONTHS ENDED SEPTEMBER 30, 2019	NINE MONTHS ENDED SEPTEMBER 30, 2018	CHANGE	% CHANGE
	(in thousands, except percentages)			
Product revenues, net	$ 45,231	$ 9,725	$ 35,506	*
Total revenues, net	45,231	9,725	35,506	
Costs and expenses:				
Cost of goods sold	3,149	264	2,885	*
Selling, general and administrative expenses	102,935	88,727	14,208	16 %
Pre-approval commercial manufacturing	16,117	18,920	(2,803)	(15)%
Research and development expenses	60,584	59,631	953	2 %
Total costs and expenses	182,785	167,542	15,243	9 %
Loss from operations	(137,554)	(157,817)	20,263	(13)%
Other (expense) income, net	(7,053)	(23,291)	16,238	(70)%
Loss before income taxes	$ (144,607)	$ (181,108)	$ 36,501	(20)%

**Percentage not meaningful*

Product revenues, net

Product revenues, net amounted to $45.2 million and $9.7 million for the nine months ended September 30, 2019 and 2018, respectively. Revenues in the 2019 period relate to sales of Rhopressa® and Rocklatan®, which were launched in the United States in late April 2018 and in early May 2019, respectively. Rhopressa® was our first product to receive regulatory approval, and we did not generate any revenues prior to the second quarter of 2018.

Cost of goods sold

Cost of goods sold was $3.1 million for the nine months ended September 30, 2019, compared to $0.3 million in the prior year period. Our gross margin percentage of 93.0% and 97.3% for the nine months ended September 30, 2019 and 2018, respectively, were favorably impacted by product sales with certain materials produced prior to FDA approval and therefore expensed in prior periods. If inventory sold during the nine months ended September 30, 2019 and 2018 was valued at cost, our gross margin for the period then ended would have been 92.0% and 96.4%, respectively. Further, our gross margin percentage for thenine months ended September 30, 2019 was unfavorably impacted by approximately 2.4% primarily due to excess inventory write-off.

Selling, general and administrative expenses

Selling, general and administrative expenses increased by $14.2 million for the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018. This increase was primarily associated with the expansion of our employee base to support the growth of our operations, as well as sales and marketing expenses incurred in connection with our commercial launch of Rhopressa® and Rocklatan®.

Employee-related expenses increased by $9.0 million for the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018 primarily due to increased headcount, including the addition of our sales force in early 2018. Employee-related expenses also included an increase in stock-based compensation expense of $3.2 million. Selling and marketing expenses increased by $2.2 million for the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018 related to our commercialization of Rhopressa® and Rocklatan®, which launched in United States in late April 2018 and in early May 2019, respectively.

Pre-approval commercial manufacturing expenses

Pre-approval commercial manufacturing expenses decreased by $2.8 million for the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018. Expenses were lower due to the receipt of regulatory approval of our API and drug product contract manufacturers, which began to supply commercial API and product, respectively, in the second quarter of 2019, as the cost of commercial API and product, respectively, produced by these manufacturers following regulatory approval were capitalized as inventory. These costs were partially offset by an increase of costs related to our manufacturing plant in Ireland, of which we completed the build-out in the second quarter of 2019.

Research and development expenses

Research and development expenses increased by $1.0 million for the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018. This increase is primarily comprised of an increase of $4.2 million of employee-related expenses, including stock-based compensation, an increase in spend related to related to Rhopressa® and Rocklatan®, as well as an increase in spend for the development of AR-1105 and AR-13503. These increased expenses were partially offset by a decrease of $4.6 million related to our expanded collaboration agreement with DSM of which $6.0 million was paid to DSM upon execution of such agreement in July 2018.

Research and development expenses for Rhopressa® totaled $6.9 million and $6.5 million for the nine months ended September 30, 2019 and 2018, respectively. Expenses for Rhopressa® during the nine months ended September 30, 2019 primarily relate to costs incurred for our clinical trials to support regulatory submission of Rhopressa® in Japan. Research and development expenses for Rocklatan® totaled $5.7 million and $5.1 million for the nine months ended September 30, 2019 and 2018, respectively. Expenses for Rocklatan® during the nine months ended September 30, 2019 primarily include costs related to the Mercury 3 registration trial in Europe. Expenses for Rocklatan® during the nine months ended September 30, 2018 primarily include the NDA filing costs.

Other (expense) income, net

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

	NINE MONTHS ENDED SEPTEMBER 30,		
	2019	**2018**	**CHANGE**
		(in thousands)	
Interest income	$ 1,828	$ 2,533	$ (705)
Interest expense	(8,961)	(1,732)	(7,229)
Other income (expense)	80	(24,092)	24,172
Other (expense) income, net	$ (7,053)	$ (23,291)	$ 16,238

The change in other (expense) income, net by $16.2 million for the nine months ended September 30, 2019 as compared to the nine months ended September 30, 2018 primarily relates to the value of the additional 329,124 shares of Aerie common stock issued to Deerfield in the amount of $24.1 million, which was recorded as other expense during the third quarter of 2018 in connection with the induced conversion of the entire outstanding principal amount of the 2014 Convertible Notes in July 2018. In addition, interest expense increased by $7.2 million primarily due to the amortization of issuance costs and fees incurred on both the July 2018 tranche and May 2019 tranche of the credit facility which was terminated in September 2019 as well as the stated interest and amortization of debt discount and issuance costs related to the Convertible Notes. This increase in interest expense was partially offset by costs incurred in the prior year for debt discount and issuance costs related to our 2014 Convertible Notes through the date of conversion in July 2018 and amortization of issuance costs and fees incurred on the July 2018 tranche of the credit facility.

Liquidity and Capital Resources

Since our inception, we have funded operations primarily through the sale of equity securities and the issuance of convertible notes. We commenced generating product revenues related to sales of Rhopressa® in the second quarter of 2018 and Rocklatan® in the second quarter of 2019. We have incurred losses and experienced negative operating cash flows since our inception and anticipate that we will continue to incur losses until such a time when one or more of our products generates adequate commercial revenue to render Aerie profitable.

Sources of Liquidity

Our product revenue, net amounted to $45.2 million for the nine months ended September 30, 2019, which relate to sales of Rhopressa® and Rocklatan®. Accounts receivable, net amounted to $33.3 million as of September 30, 2019.

As of September 30, 2019, our principal sources of liquidity were our cash, cash equivalents and investments, which totaled approximately$345.8 million. In September 2019, we issued an aggregate principal amount of $316.25 million of 1.50% convertible senior notes due 2024 (the "Convertible Notes") and simultaneously terminated its $200 million senior delayed draw term loan facility (the "credit facility"). See Note10 to our condensed consolidated financial statements included in this report for additional information. We believe that our cash, cash equivalents and investments, and projected cash flows from revenues, will provide sufficient resources for at least the next twelve months, though there may be need for additional financing activity as we continue to grow. See "—*Operating Capital Requirements*."

Cash Flows

The following table summarizes our sources and uses of cash:

	NINE MONTHS ENDED SEPTEMBER 30,	
	2019	**2018**
	(in thousands)	
Net cash (used in) provided by:		
Operating activities	$ (123,306)	$ (121,062)
Investing activities	(105,179)	21,698
Financing activities	274,369	136,749
Net change in cash and cash equivalents	$ 45,884	$ 37,385

Operating Activities

During the nine months ended September 30, 2019, net cash used in operating activities of$123.3 million related to a net loss of $144.5 million, adjusted for non-cash items of $43.6 million primarily related to stock-based compensation expense, amortization and accretion and depreciation, offset by a net cash outflow of $22.4 million related to changes in operating assets and liabilities. During the nine months September 30, 2018, net cash used in operating activities of$121.1 million related to a net loss of $181.1 million, adjusted for non-cash items of$55.4 million primarily related to the induced conversion of the 2014 Convertible Notes in July 2018, stock-based compensation expense, depreciation, amortization and accretion and a net cash inflow of $4.6 million related to changes in operating assets and liabilities.

Investing Activities

During the nine months ended September 30, 2019, our investing activities used net cash of$105.2 million related to purchases of available-for sale investments of $97.3 million and purchases of property, plant and equipment of$7.9 million primarily related to the build-out of our manufacturing plant in Ireland. During the nine months ended September 30, 2018, our investing activities provided net cash of approximately$21.7 million primarily related to sales and maturities of available-for-sale investments of $107.3 million, partially offset by purchases of available-for-sale investments of$56.2 million and purchases of property, plant and equipment of $29.4 million.

Financing Activities

During the nine months ended September 30, 2019 and 2018, our financing activities provided net cash of$274.4 million and $136.7 million, respectively. The net cash provided by financing activities for nine months ended September 30, 2019 was primarily related to the $308.3 million of net proceeds from the issuance of Convertible Notes, partially offset by the $32.9 million payment in premiums for the capped call options.

The net cash provided by financing activities for the nine months ended September 30, 2018 was primarily related to the issuance and sale of common stock pursuant to our prior "at-the-market" sales agreement and underwriting agreement related to a registered public offering, from which we received total net proceeds of approximately $136.0 million, net of expenses paid during the period. In addition, we received net proceeds of$2.9 million from stock-based compensation arrangements, primarily from employee exercises of stock options and stock purchase rights under our employee stock purchase plan, partially offset by taxes paid on employees' behalf through withholding of shares on restricted stock awards and option exercises.

Operating Capital Requirements

We expect to incur ongoing operating losses until such a time when Rhopressa® and Rocklatan® or any other product, if approved in the future, generate adequate revenues to render Aerie profitable.

Our principal liquidity requirements are for: working capital; operating expenses, including for commercialization and manufacturing activities; expenses associated with developing our pipeline opportunities, including pursuing strategic growth opportunities; costs associated with executing our international expansion strategy, including clinical and potential commercialization activities in Europe and Japan; contractual obligations; and capital expenditures.

We believe that our cash, cash equivalents and investments, as well as projected cash flows from revenues, will provide sufficient resources for at least the next twelve months. We are required to make semi-annual interest payments in cash in arrears on the Convertible Notes at a rate of 1.50% per annum on April 1 and October 1 of each year, beginning on April 1, 2020.

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

- commercial performance of Rhopressa® and Rocklatan® or any current or future product candidates, if approved;
- costs of commercialization activities for Rhopressa® and Rocklatan® or any current or future product candidates, if approved;
- costs of building inventory to support sales growth and other associated working capital needs;
- costs, timing and outcome of seeking regulatory approval;
- timing and costs of our ongoing and future clinical trials and preclinical studies including those related to our international expansion;
- costs of any follow-on development or products, including the exploration and/or development of any additional indications or additional opportunities for new ophthalmic product candidates, delivery alternatives and new therapeutic areas;
- terms and timing of any acquisitions, collaborations, or other arrangements;
- costs related to the Convertible Notes; and
- costs related to filing and prosecuting patent applications, maintaining and protecting our intellectual property rights and defending against intellectual property related claims.

We based our projections on assumptions that may prove to be incorrect or unreliable or may change due to circumstances beyond our control, and as a result, we may consume our available capital resources earlier than we originally projected. Accordingly, we may be required to obtain further funding through public or private debt offerings, or other sources, or we may decide, based on various factors, that additional financings are desirable. If such funding is required, we cannot guarantee that it will be available to us on favorable terms, if at all.

Outstanding Indebtedness

In September 2019, we issued an aggregate principal amount of $316.25 million of Convertible Notes and simultaneously terminated the credit facility. No funds were drawn on the credit facility at the time of termination.

The Convertible Notes are senior, unsecured obligations with interest payable semi-annually in cash in arrears at a rate of 1.50% per annum on April 1 and October 1 of each year, beginning on April 1, 2020. The Convertible Notes will mature on October 1, 2024 unless they are redeemed, repurchased or converted prior to such date. Prior to April 1, 2024, the Convertible Notes will be convertible at the option of holders only during certain periods and upon satisfaction of certain conditions. On and after April 1, 2024, the Convertible Notes will be convertible at the option of the holders any time until the close of business on the second scheduled trading day immediately preceding the maturity date. Upon conversion, the Convertible Notes may be settled in shares of our common stock, cash or a combination, thereof, at our election. We currently intend to settle the principal and interest amounts of the Convertible Notes in cash.

See Note 10 to our condensed consolidated financial statements included in this report for additional information.

Contractual Obligations and Commitments

There have been no material changes to our contractual obligations and commitments as included in our 2018 Form 10-K.

Off-Balance Sheet Arrangements

None.

Recent Accounting Pronouncements

For a discussion of recently issued accounting standards, see Note2 to our condensed consolidated financial statements included in this report.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

We have market risk exposure to interest income sensitivity, which is affected by changes in the general level of U.S. interest rates. Our cash, cash equivalents and investments totaled $345.8 million and $202.8 million as of September 30, 2019 and December 31, 2018, respectively. Given the short-term nature of our cash, cash equivalents and investments, we do not believe that a change in market interest rates would have a material impact on our financial condition or results of operations. We do not currently engage in any hedging activities against changes in interest rates.

We face market risks attributable to fluctuations in foreign currency exchange rates and exposure on the remeasurement of foreign currency-denominated monetary assets or liabilities into U.S. dollars. In particular, our operations and subsidiary in Ireland may enter into certain obligations or transactions in Euros or other foreign currencies but has a U.S. dollar functional currency. We do not currently have a foreign currency hedging program. To date and during the nine months ended September 30, 2019, gains and/or losses associated with foreign currency exposure and foreign currency financial instruments have not been material.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15(d)-15(e)), as of the end of the period covered by this report. Based upon the evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of September 30, 2019, the disclosure controls and procedures were effective to provide reasonable assurance that information required to be disclosed in the reports we file or submit under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms and (ii) accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating our disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter endedSeptember 30, 2019 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

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

Item 1A. Risk Factors

You should consider carefully the risks set forth under “Risk Factors” in our 2018 Form 10-K, and other documents that we have filed or furnished with the SEC. Except as set forth below, there have been no material changes to these risk factors.

Our indebtedness and liabilities could limit the cash flow available for our operations, expose us to risks that could adversely affect our business, financial condition and results of operations and impair our ability to satisfy our obligations under the Convertible Notes.

As of September 30, 2019, we had $316.25 million in principal amount of indebtedness as a result of the issuance of the Convertible Notes. We may also incur additional indebtedness to meet future financing needs.

Interest payments, fees, covenants and restrictions under agreements governing our current or future indebtedness, including the indenture governing the Convertible Notes, could have important consequences, including the following:

- impairing our ability to successfully continue to commercialize Rhopressa® or Rocklatan® and commercialize any current or future product candidates, which would prevent us from generating a source of revenue and becoming profitable;
- limiting our ability to obtain additional financing on satisfactory terms to fund our working capital requirements, capital expenditures, potential acquisitions, debt obligations and other general corporate requirements, and making it more difficult for us to satisfy our obligations with respect to any such additional financing;
- increasing our vulnerability to general economic downturns, competition and industry conditions, which could place us at a competitive disadvantage compared to our competitors with no debt obligations or with debt obligations on more favorable terms;
- requiring the dedication of a substantial portion of our cash flow from operations to service our indebtedness, which will reduce the amount of cash available for other purposes;
- limiting our flexibility to plan for, or react to, changes in our business; and
- diluting the interests of our existing stockholders as a result of issuing shares of our common stock upon conversion of the Convertible Notes.

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

Our business may not generate sufficient funds, and we may otherwise be unable to maintain sufficient cash reserves, to pay amounts due under our indebtedness, including the Convertible Notes, and our cash needs may increase in the future. In addition, the agreements governing indebtedness that we may incur in the future may contain financial and other restrictive covenants that limit our ability to operate our business, raise capital or make payments under our other indebtedness. If we fail to comply with these covenants or to make payments under our indebtedness when due, then we would be in default under that indebtedness, which could, in turn, result in that and our other indebtedness becoming immediately payable in full.

We may be unable to raise the funds necessary to repurchase the Convertible Notes for cash following a fundamental change, or to pay any cash amounts due upon conversion, and the terms of our then-existing borrowing arrangements may limit our ability to repurchase the Convertible Notes or pay cash upon their conversion.

Noteholders may require us to repurchase their Convertible Notes following a fundamental change at a cash repurchase price generally equal to the principal amount of the Convertible Notes to be repurchased, plus accrued and unpaid interest, if any. In addition, upon conversion, we will satisfy part or all of our conversion obligation in cash unless we elect to settle conversions solely in shares of our common stock. We may not have enough available cash or be able to obtain financing at the time we are required to repurchase the Convertible Notes or pay the cash amounts due upon conversion. In addition, applicable law, regulatory authorities and the agreements governing any of our then-existing borrowing arrangements may restrict our ability to repurchase the Convertible Notes or pay the cash amounts due upon conversion. If we fail to repurchase Convertible Notes or to pay the cash amounts due upon conversion when required, we will be in default under the indenture governing the Convertible Notes and may be in default under any other then-existing borrowing arrangements. A default under the indenture governing the Convertible Notes or the fundamental change itself could also lead to a default under any of our then-existing agreements governing our other indebtedness, which may result in that other indebtedness becoming immediately payable in full. We may not have sufficient funds to satisfy all amounts due under the Convertible Notes and any other then-existing indebtedness.

The accounting method for the Convertible Notes could adversely affect our reported financial condition and results.

The accounting method for reflecting the Convertible Notes on our balance sheet, accruing interest expense for the Convertible Notes and reflecting the underlying shares of our common stock in our reported diluted earnings per share may adversely affect our reported earnings and financial condition.

In accordance with ASC Topic 470,*Debt*, the initial liability carrying amount of the Convertible Notes is the fair value of a similar debt instrument that does not have a conversion feature, valued using our cost of capital for straight, unconvertible debt. We reflect the difference of approximately $128 million between the net proceeds from the Convertible Notes and the initial carrying amount as a debt discount for accounting purposes, which will be amortized into interest expense over the term of the Convertible Notes. In addition, the debt issuance costs relating to the Convertible Notes were allocated to debt and equity components in proportion to the allocation of proceeds. Issuance costs of $5.5 million were recorded as debt issuance costs in the net carrying value of Convertible Notes. The debt issuance costs are amortized on an effective interest basis over the term of the Convertible Notes. The remaining issuance costs of $3.7 million were recorded as additional paid-in capital and such amounts are not subject to amortization. As a result of this amortization, the interest expense that we expect to recognize for the Convertible Notes for accounting purposes will be greater than the cash interest payments we will pay on the Convertible Notes, which will result in lower reported income or higher reported loss. The lower reported income or higher reported loss resulting from this accounting treatment could depress the trading price of our common stock.

In addition, because we intend to settle conversions by paying the conversion value in cash up to the principal amount being converted, with the potential of any excess in shares of common stock, we expect to be eligible to use the treasury stock method to reflect the shares underlying the Convertible Notes in our diluted earnings per share. Under this method, if the conversion value of the Convertible Notes exceeds their principal amount for a reporting period, then we will calculate our diluted earnings per share assuming that all the Convertible Notes were converted and that we issued shares of our common stock to settle the excess. However, if reflecting the Convertible Notes in diluted earnings per share in this manner is anti-dilutive, or if the conversion value of the Convertible Notes does not exceed their principal amount for a reporting period, then the shares of common stock underlying the Convertible Notes will not be reflected in our diluted earnings per share. We cannot be sure that the accounting standards in the future will continue to permit the use of the treasury stock method and/or under what conditions the treasury stock method would remain available for convertible debt instruments (such as the Convertible Notes). If we are unable or otherwise elect not to use the treasury stock method in accounting for the shares of common stock issuable upon conversion of the Convertible Notes, then our diluted earnings (net loss) per share of common stock could be adversely affected. For example, in July 2019, the Financial Accounting Standards Board published an exposure draft proposing to amend these accounting standards to eliminate the treasury stock method for convertible instruments and instead require application of the “if-converted” method. Under that method, if it is adopted, diluted earnings per share would generally be calculated assuming that all the Convertible Notes were converted solely into shares of common stock at the beginning of the reporting period, unless the result would be anti-dilutive. The application of the if-converted method may reduce our reported diluted earnings per share. Furthermore, if any of the conditions to the convertibility of the Convertible Notes is satisfied, then we may be required under applicable accounting standards to reclassify the liability carrying value of the Convertible Notes as a current, rather than a long-term, liability. This reclassification could be required even if no noteholders convert their Convertible Notes and could materially reduce our reported working capital.

The capped call transactions may affect the value of our common stock.

In connection with the issuance of the Convertible Notes, we entered into capped call transactions with certain option counterparties. The capped call transactions are expected generally to reduce the potential dilution upon conversion of the Convertible Notes and/or offset any cash payments we are required to make in excess of the aggregate principal amount of converted Convertible Notes, as the case may be, with such reduction and/or offset subject to a cap. The option counterparties or their respective affiliates are expected to modify their hedge positions from time to time by entering into or unwinding various derivatives with respect to our common stock and/or purchasing or selling our common stock, the Convertible Notes or other securities or instruments of ours (if any) in secondary market transactions prior to the maturity of the Convertible Notes (and are likely to do so during any observation period related to a conversion of Convertible Notes or following any issuance of a notice of redemption with respect to the Convertible Notes). Any of these activities could adversely affect the market price of our common stock.

We do not make any representation or prediction as to the direction or magnitude of any potential effect that the transactions described above may have on the market price of the shares of our common stock.

We are subject to counterparty risk with respect to the capped call transactions.

The counterparties to the capped call transactions are financial institutions, and we are subject to the risk that one or more of the counterparties may default or otherwise fail to perform, or may exercise certain rights to terminate, their obligations under the capped call transactions. Our exposure to the credit risk of the option counterparties is not secured by any collateral. Global economic conditions have in the past resulted in the actual or perceived failure or financial difficulties of many financial institutions. If any option counterparty becomes subject to proceedings, we will become an unsecured creditor in those proceedings with a claim equal to our exposure at the time under any capped call transactions with that option counterparty. Our exposure will depend on many factors but, generally, our exposure will increase if the market price or the volatility of our common stock increases. In addition, upon a default or other failure to perform, or a termination of obligations, by a counterparty, the counterparty may fail to deliver the shares of common stock required to be delivered to us under the capped call transactions and we may suffer adverse tax consequences or experience more dilution than we currently anticipate with respect to our common stock. We can provide no assurances as to the financial stability or viability of the counterparties.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

None.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

Item 6. Exhibits

4.1	Indenture, dated as of September 9, 2019, by and between Aerie Pharmaceuticals, Inc. and Wilmington Trust, National Association, as trustee (incorporated by reference to Exhibit 4.1 to Aerie Pharmaceuticals, Inc.'s Current Report on Form 8-K filed on September 10, 2019 (File No. 001-36152)).
4.2	Form of 1.50% Convertible Senior Note due 2024 (included within the Indenture filed as Exhibit 4.1 and incorporated by reference to Exhibit 4.2 to Aerie Pharmaceuticals, Inc.'s Current Report on Form 8-K filed on September 10, 2019 (File No. 001-36152)).
10.1	Form of Capped Call Transaction Confirmation (incorporated by reference to Exhibit 10.1 to Aerie Pharmaceuticals, Inc.'s Current report on Form 8-K filed on September 10, 2019 (File No. 001-36152)).
10.2	Form of Additional Capped Call Transaction Confirmation (incorporated by reference to Exhibit 10.1 to Aerie Pharmaceuticals, Inc.'s Current Report on Form 8-K filed on September 13, 2019 (File No. 001-36152)).
31.1*	Certification of Chief Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) promulgated under the Securities Exchange Act of 1934, as amended.
31.2*	Certification of Chief Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) promulgated under the Securities Exchange Act of 1934, as amended.
32.1**	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2**	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS***	XBRL Instance Document.
101.SCH***	XBRL Taxonomy Extension Schema Document.
101.CAL***	XBRL Taxonomy Extension Calculation Linkbase Document.
101.LAB***	XBRL Taxonomy Extension Label Linkbase Database.
101.PRE***	XBRL Taxonomy Extension Presentation Linkbase Document.
101.DEF***	XBRL Taxonomy Extension Definition Linkbase Document.

* Filed herewith.

** Furnished herewith.

*** Attached as Exhibit 101 to this report are the following formatted in XBRL (Extensible Business Reporting Language):

(i) Condensed Consolidated Balance Sheets at September 30, 2019 and December 31, 2018 (unaudited), (ii) Condensed Consolidated Statements of Operations and Comprehensive Loss for the three and nine months ended September 30, 2019 and 2018 (unaudited), (iii) Condensed Consolidated Statements of Stockholders' Equity for the three and nine months ended September 30, 2019 and 2018 (unaudited), (iv) Condensed Consolidated Statements of Cash Flows for the nine months ended September 30, 2019 and 2018 (unaudited) and (v) Notes to Condensed Consolidated Financial Statements (unaudited).

SIGNATURES

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

AERIE PHARMACEUTICALS, INC.

Date: November 7, 2019

/s/ RICHARD J. RUBINO

Richard J. Rubino
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 31.1

CERTIFICATION

I, Vicente Anido, Jr., Ph.D., certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Aerie Pharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 7, 2019

/s/ VICENTE ANIDO, JR., PH.D.

Vicente Anido, Jr., Ph.D.
Chief Executive Officer, Chairman of the Board
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION

I, Richard J. Rubino, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Aerie Pharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of the registrant’s board of directors (or persons performing the equivalent functions):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal control over financial reporting.

Date: November 7, 2019

/s/ RICHARD J. RUBINO

Richard J. Rubino
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the filing of the Quarterly Report on Form 10-Q of Aerie Pharmaceuticals, Inc., a Delaware corporation (the "Company"), for the period ended September 30, 2019 (the "Report"), the undersigned, Vicente Anido, Jr., Ph.D., Chief Executive Officer and Chairman of the Board of the Company, hereby certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to his knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 7, 2019

/s/ VICENTE ANIDO, JR., PH.D.

Vicente Anido, Jr., Ph.D.
Chief Executive Officer, Chairman of the Board
(Principal Executive Officer)

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the filing of the Quarterly Report on Form 10-Q of Aerie Pharmaceuticals, Inc., a Delaware corporation (the “Company”), for the period ended September 30, 2019 (the “Report”), the undersigned, Richard J. Rubino, Chief Financial Officer of the Company, hereby certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to his knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: November 7, 2019

/s/ RICHARD J. RUBINO

Richard J. Rubino
Chief Financial Officer
(Principal Financial and Accounting Officer)