
**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 March 31, 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: 001-37500

Chiasma, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

76-0722250
(I.R.S. Employer
Identification No.)

460 Totten Pond Road, Suite 530
Waltham, Massachusetts 02451
(Address of principal executive office) (Zip Code)

(617) 928-5300
(Registrant's telephone number, including area code)

Not Applicable
(Former name or former address, if changed since last report)

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

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

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

<u>Title of each class</u>	<u>Trading Symbol(s)</u>	<u>Name of each exchange on which registered</u>
Common Stock, \$0.01 par value	CHMA	NASDAQ Global Select Market

As of May 3, 2019, there were 31,767,915 shares of the registrant’s Common Stock, \$0.01 par value per share, outstanding.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements. These statements include all matters that are not related to present facts or current conditions or that are not historical facts, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans, objectives of management and expected market growth. The words “anticipate,” “believe,” “could,” “continue,” “should,” “predict,” “estimate,” “expect,” “intend,” “may,” “plan,” “potentially,” “will,” “would,” or the negative of these terms or other similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. These forward-looking statements include, but are not limited to, statements about:

- our development of octreotide capsules, conditionally trade-named MYCAPSSA, for the treatment of acromegaly;
- our efforts to potentially obtain regulatory approval in the United States by conducting the Phase 3 CHIASMA OPTIMAL clinical trial under a Special Protocol Assessment;
- our efforts to potentially obtain regulatory approval in the European Union by conducting the ongoing MPOWERED Phase 3 clinical trial;
- the timing of receipt and announcement of top-line and other clinical data and submission of regulatory filings and anticipated regulatory review and commercial launch timing in the United States, including our ability to release top-line data from the CHIASMA OPTIMAL trial in the third quarter of 2019, and if positive, to resubmit the New Drug Application by year-end 2019, and our ability to release top-line data from the MPOWERED trial during the second half of 2020;
- the therapeutic benefits, effectiveness and safety of octreotide capsules;
- our estimates of the size and characteristics of the markets that may be addressed by octreotide capsules;
- the commercial success and market acceptance of octreotide capsules or any future product candidates that are approved for marketing in the United States or other countries;
- our ability to generate future revenue;
- the number, designs, results and timing of our clinical trials of octreotide capsules and the timing of the commencement and availability of data from these trials;
- the safety and efficacy of therapeutics marketed by our competitors that are targeted to indications which octreotide capsules have been developed to treat;
- our ability to leverage our Transient Permeability Enhancer, or TPE, platform to develop and commercialize novel oral product candidates that are currently only available in injectable or other non-absorbable forms;
- the possibility that competing products or technologies may make octreotide capsules, other product candidates we may develop and commercialize or our TPE technology obsolete;
- our ability to manufacture sufficient amounts of octreotide capsules for clinical trials and commercialization activities;
- our ability to secure collaborators to license, manufacture, market and sell octreotide capsules or any products for which we receive regulatory approval in the future;
- our ability to protect our intellectual property and operate our business without infringing upon the intellectual property rights of others;
- our product development and operational plans generally; and
- our estimates and expectations regarding our capital requirements, cash and expense levels and liquidity sources.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements are subject to a number of risks, uncertainties and assumptions described in the section titled “Risk Factors” and elsewhere in this Quarterly Report on Form 10-Q and our prior filings with the U.S. Securities and Exchange Commission. Moreover, we operate in a very competitive and rapidly changing environment. New risk factors emerge from time to time, and it is not possible for our management to predict all risk factors nor can we assess the impact of all factors on our business or

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the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in, or implied by, any forward-looking statements. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Except as required by law, we assume no obligation to update or revise these forward-looking statements for any reason, even if new information becomes available in the future.

Unless the context requires otherwise, references in this Quarterly Report on Form 10-Q to “we,” “us,” “our” and “Chiasma” refer to Chiasma, Inc. and our subsidiaries. We own various U.S. federal trademark registrations and applications, and unregistered trademarks and service marks, including “Chiasma,” “TPE,” “MYCAPSSA” and our corporate logo. Other trademarks or service marks that may appear in this Quarterly Report on Form 10-Q are the property of their respective holders. For convenience, we do not use the ® and ™ symbols in each instance in which one of our trademarks appears throughout this Quarterly Report on Form 10-Q, but this should not be construed as any indication that we will not assert, to the fullest extent under applicable law, our rights thereto. We do not intend to use or display other companies’ trademarks and trade names to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

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Chiasma, Inc.

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PART I — FINANCIAL INFORMATION

Item 1. Financial Statements

Chiasma, Inc.
Condensed Consolidated Balance Sheets
(Unaudited)

	March 31, 2019	December 31, 2018
	(in thousands except share data)	
Assets		
Current assets		
Cash and cash equivalents	\$ 10,074	\$ 13,060
Marketable securities	23,783	28,602
Insurance recovery (Note 9)	18,288	18,288
Prepaid expenses and other current assets	1,364	2,237
Total current assets	53,509	62,187
Property and equipment, net	102	111
Other assets	1,262	958
Total assets	<u>\$ 54,873</u>	<u>\$ 63,256</u>
Liabilities and Stockholders' Equity		
Current liabilities		
Accounts payable	\$ 3,829	\$ 2,029
Estimated settlement liability (Note 9)	18,750	18,750
Accrued expenses	5,442	7,848
Other current liabilities	169	—
Total current liabilities	28,190	28,627
Long-term liabilities	650	505
Total liabilities	<u>28,840</u>	<u>29,132</u>
Commitments and contingencies (Note 9)		
Stockholders' equity:		
Common stock, \$0.01 par value; authorized 125,000,000 shares at March 31, 2019 and December 31, 2018; issued and outstanding 24,489,959 shares at March 31, 2019 and 24,456,120 shares at December 31, 2018	245	245
Preferred stock, \$0.01 par value; authorized 5,000,000 shares; none outstanding	—	—
Additional paid-in capital	271,150	270,509
Accumulated other comprehensive income (loss)	2	(16)
Accumulated deficit	(245,364)	(236,614)
Total stockholders' equity	<u>26,033</u>	<u>34,124</u>
Total liabilities and stockholders' equity	<u>\$ 54,873</u>	<u>\$ 63,256</u>

See accompanying notes to these unaudited condensed consolidated financial statements.

Chiasma, Inc.
Condensed Consolidated Statements of Operations
(Unaudited)

	For the Three Months Ended	
	March 31,	
	2019	2018
	(in thousands except share and per share data)	
Operating expenses:		
General and administrative	\$ 2,450	\$ 2,434
Research and development	6,471	4,863
Total operating expenses	<u>8,921</u>	<u>7,297</u>
Loss from operations	(8,921)	(7,297)
Other income, net	(184)	(230)
Loss before income taxes	(8,737)	(7,067)
Provision (benefit) for income taxes	13	(24)
Net loss	<u>(8,750)</u>	<u>(7,043)</u>
Earnings per share attributable to common stockholders		
Basic	<u>\$ (0.36)</u>	<u>\$ (0.29)</u>
Diluted	<u>\$ (0.36)</u>	<u>\$ (0.29)</u>
Weighted-average shares outstanding:		
Basic	<u>24,466,617</u>	<u>24,381,924</u>
Diluted	<u>24,466,617</u>	<u>24,381,924</u>

See accompanying notes to these unaudited condensed consolidated financial statements.

Chiasma, Inc.
Condensed Consolidated Statements of Comprehensive Loss
(Unaudited)

	For the Three Months Ended March 31,	
	2019	2018
	(in thousands)	
Net loss	\$(8,750)	\$(7,043)
Other comprehensive income (loss):		
Unrealized gain (loss) on available for sale securities, net	18	(36)
Total other comprehensive income (loss):	18	(36)
Comprehensive loss	<u>\$(8,732)</u>	<u>\$(7,079)</u>

See accompanying notes to these unaudited condensed consolidated financial statements.

Chiasma, Inc.
Condensed Consolidated Statements of Stockholders' Equity
(Unaudited)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
	(in thousands except share data)					
Balance, January 1, 2019	24,456,120	\$ 245	\$270,509	\$ (16)	\$ (236,614)	\$ 34,124
Stock-based compensation	—	—	622	—	—	622
Exercise of stock options	33,839	—	3	—	—	3
Additional paid in capital on account of vested portion of restricted stock	—	—	16	—	—	16
Other comprehensive income	—	—	—	18	—	18
Net loss	—	—	—	—	(8,750)	(8,750)
Balance, March 31, 2019	<u>24,489,959</u>	<u>\$ 245</u>	<u>\$271,150</u>	<u>\$ 2</u>	<u>\$ (245,364)</u>	<u>\$ 26,033</u>

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount				
	(in thousands except share data)					
Balance, January 1, 2018	24,381,605	\$ 244	\$267,642	\$ (59)	\$ (205,353)	\$ 62,474
Stock-based compensation	—	—	637	—	—	637
Exercise of stock options	2,389	—	—	—	—	—
Additional paid in capital on account of vested portion of restricted stock	—	—	25	—	—	25
Other comprehensive loss	—	—	—	(36)	—	(36)
Net loss	—	—	—	—	(7,043)	(7,043)
Balance, March 31, 2018	<u>24,383,994</u>	<u>\$ 244</u>	<u>\$268,304</u>	<u>\$ (95)</u>	<u>\$ (212,396)</u>	<u>\$ 56,057</u>

See accompanying notes to these unaudited condensed consolidated financial statements.

Chiasma, Inc.
Condensed Consolidated Statements of Cash Flows
(Unaudited)

	Three Months Ended	
	March 31,	
	2019	2018
	(in thousands)	
Operating Activities:		
Net loss	\$ (8,750)	\$ (7,043)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:		
Depreciation	16	23
Stock-based compensation	622	637
Accretion on marketable securities, net	(131)	(54)
Amortization of right-of-use asset	39	—
Non-cash interest expense	—	5
Benefit for deferred income taxes	(10)	—
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	1,015	80
Accounts payable and accrued expenses	(751)	1,654
Other assets	9	(3)
Other current and long-term liabilities	(9)	(53)
Net cash used in operating activities	(7,950)	(4,754)
Investing Activities:		
Purchases of marketable securities	(12,282)	(7,673)
Maturities of marketable securities	17,250	14,777
Purchases of property and equipment	(7)	(5)
Net cash provided by investing activities	4,961	7,099
Financing Activities:		
Payment under license termination agreement	—	(1,700)
Exercise of stock options	3	—
Net cash provided by (used in) financing activities	3	(1,700)
Net increase (decrease) in cash and cash equivalents	(2,986)	645
Cash and cash equivalents, beginning of period	13,060	14,603
Cash and cash equivalents, end of period	<u>\$ 10,074</u>	<u>\$15,248</u>

See accompanying notes to these unaudited condensed consolidated financial statements.

CHIASMA, INC.
Notes to Unaudited Condensed Consolidated Financial Statements
March 31, 2019

1. Description of Business and Summary of Significant Accounting Policies

Chiasma, Inc. is a clinical-stage biopharmaceutical company incorporated in 2001 under the laws of the State of Delaware. Chiasma, Inc. is headquartered in Massachusetts and has two wholly owned subsidiaries; Chiasma (Israel) Ltd., and Chiasma Securities Corp, collectively referred to as “the Company,” “we,” “us,” “our” or “Chiasma”. We are a clinical-stage biopharmaceutical company focused on improving the lives of patients who face challenges associated with their existing treatments for rare and serious chronic disease. Employing our proprietary Transient Permeability Enhancer (“TPE”) technology platform, we seek to develop oral medications that are currently available only as injections. We are currently developing oral octreotide capsules, conditionally trade-named “MYCAPSSA”, our sole TPE platform-based clinical product candidate, in two Phase 3 clinical trials in adult patients for the treatment of acromegaly to potentially support regulatory approval in the United States and European Union. Acromegaly is a rare and debilitating condition that results in the body’s production of excess growth hormone. Octreotide is an analog of somatostatin, a natural inhibitor of growth hormone secretion. Octreotide capsules have been granted orphan designation in the United States and the European Union for the treatment of acromegaly. We retain worldwide rights to develop and commercialize octreotide capsules with no royalty obligations to third parties.

In September 2017, we initiated a third Phase 3 clinical trial for oral octreotide capsules for the maintenance therapy of adult patients with acromegaly following our agreement with the United States Food and Drug Administration (“FDA”) on the design of the trial, reached through a Special Protocol Assessment in August 2017. The trial, referred to as CHIASMA OPTIMAL, is a randomized, double-blind, placebo-controlled, nine-month trial expected to enroll 50 adult acromegaly patients designed to support regulatory approval of octreotide capsules in the United States. In October 2018, we completed enrollment in the CHIASMA OPTIMAL trial randomizing a total of 56 patients.

We are also currently conducting an international Phase 3 clinical trial, referred to as MPOWERED, of oral octreotide capsules for the maintenance treatment of adult patients with acromegaly to support regulatory approval in the European Union by the European Medicines Agency (“EMA”). The MPOWERED trial is a global, randomized, open-label and active-controlled 15-month trial initially designed to enroll up to 150 patients. In July 2018, we completed the enrollment of 135 adult acromegaly patients into the run-in phase of the trial. The EMA requested that a minimum of at least 80 patients who are responders to octreotide capsules following the six-month run-in phase be randomized to either remain on octreotide capsules or return to injectable somatostatin receptor ligands (octreotide or lanreotide), and then followed for an additional nine months. In October 2018, 80 patients were randomized following the six-month run-in phase in the MPOWERED trial. Further, in October 2018, we elected to resume enrollment in the trial in an effort to enroll up to 15 additional patients exclusively located in the United States in order to gain further U.S. investigator and patient experience with octreotide capsules.

Liquidity

We have incurred significant losses from operations since our inception and expect losses to continue for at least the next several years. We are heavily dependent on the regulatory approval and subsequent commercial success of our product candidate, octreotide capsules for the treatment of acromegaly in the United States and European Union, both of which may never occur.

We expect to continue with our ongoing international Phase 3 CHIASMA OPTIMAL clinical trial of octreotide capsules in acromegaly to support potential regulatory approval in the United States and ongoing international Phase 3 MPOWERED clinical trial of octreotide capsules in acromegaly to support potential regulatory approval in the European Union. We continue to focus our resources on the development of octreotide capsules for the maintenance treatment of adult acromegaly patients. We currently expect our existing cash, cash equivalents and marketable securities to fund our operations for at least one year after the date these condensed consolidated financial statements are issued. We expect to continue to incur significant operating losses for the foreseeable future.

Successful transition to attaining profitable operations is dependent upon achieving a level of revenues adequate to support our cost structure. We plan to continue to fund our losses from operations and capital funding needs from existing balances of cash, cash equivalents and marketable securities and potentially through the issuance of debt and/or equity or through collaborations or license agreements with other companies. Debt or equity financing may not be available on a timely basis on terms acceptable to us, or at all. If we are not able to secure adequate additional funding, we may be forced to make further reductions in spending, extend payment terms with suppliers, liquidate assets where possible, suspend or curtail our planned development of octreotide capsules, or delay our commercial preparations or

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launch readiness even if the CHIASMA OPTIMAL trial achieves its primary endpoint or if octreotide capsules are approved by the FDA or EMA. Any of these actions could materially harm our business, results of operations and future prospects. Failure to obtain regulatory approval of octreotide capsules in acromegaly will prevent us from commercializing the product candidate, which could raise significant concerns about our continued viability as a business.

In November 2018, we entered into a Sales Agreement (“ATM Agreement”) for “at the market offerings” with Cowen and Company, LLC (“Cowen”), which allows us to offer and sell up to \$25.0 million in gross proceeds of common stock from time to time, at prevailing market prices at the time of the sale, through Cowen, acting as our sales agent. To date, we have not sold any common stock under the ATM Agreement.

On April 2, 2019, we completed a follow-on underwritten public offering of 6,315,790 shares of common stock at a public offering price of \$4.75 per share, before underwriting discounts and commissions, and on April 3, 2019, we closed on the sale of an additional 947,368 shares of common stock pursuant to the underwriters’ option at a public offering price of \$4.75 per share, before underwriting discounts and commissions, (collectively the “Offering”). Aggregate gross proceeds from the Offering were \$34.5 million while net proceeds received after underwriting fees and offering expenses were approximately \$32.2 million.

The Offering was made pursuant to a prospectus dated March 22, 2018 and a prospectus supplement dated March 29, 2019, in connection with a drawdown from our shelf registration statement on Form S-3, which the U.S. Securities and Exchange Commission (“SEC”) declared effective on May 3, 2018.

Basis of Presentation

We have prepared the accompanying unaudited condensed consolidated financial statements pursuant to the rules and regulations of the SEC regarding interim financial reporting. Accordingly, certain information and footnote disclosures required by accounting principles generally accepted in the United States (“U.S. GAAP”) for annual financial statements have been condensed or omitted. The information included in this quarterly report on Form 10-Q should be read in conjunction with our Annual Report on Form 10-K for the year ended December 31, 2018. The year-end condensed consolidated balance sheet data presented for comparative purposes was derived from our audited financial statements but does not include all disclosures required by U.S. GAAP. In the opinion of management, we have prepared the accompanying unaudited condensed consolidated financial statements on the same basis as our audited financial statements, and these financial statements include all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the results of the interim periods presented. Interim results are not necessarily indicative of results for a full year or for any other subsequent interim period.

Cash Equivalents

Cash equivalents consist of highly liquid instruments that mature within three months or less from the date of purchase.

Marketable Securities

Our investments primarily consist of commercial paper and corporate and government debt securities. These marketable securities are classified as available-for-sale, and as such, are reported at fair value on our condensed consolidated balance sheets. Unrealized holding gains and losses are reported within accumulated other comprehensive income (loss) as a separate component of stockholders’ equity. The amortized cost of debt securities is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization, together with interest on securities, are included in other income, net, on our condensed consolidated statements of operations.

If a decline in the fair value of a marketable security below our cost basis is determined to be other than temporary, such marketable security is written down to its estimated fair value as a new cost basis and the amount of the write-down is included in earnings as an impairment charge. The cost of securities sold is based on the specific identification method.

Concentrations of credit risk

Financial instruments that potentially subject us to significant concentration of credit risk consist primarily of cash, cash equivalents and marketable securities. We routinely maintain deposits in financial institutions in excess of government insured limits. Management believes that we are not exposed to significant credit risk as our deposits are held at financial institutions that management believes to be of high credit quality and we have not experienced any

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significant losses in these deposits. We regularly invest excess operating cash in deposits with major financial institutions and money market funds and in notes issued by the U.S. government, as well as in fixed income investments and U.S. bond funds, both of which can be readily purchased and sold using established markets. We believe that the market risk arising from our holdings of these financial instruments is mitigated based on the fact that many of these securities are either government backed or of high credit rating.

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, liabilities, revenue, and expenses, and the disclosure of contingent assets and liabilities as of and during the reporting period. We base these estimates and assumptions on historical experience when available, and on various factors that we believe to be reasonable under the specific circumstances. Significant estimates relied upon in preparing the accompanying condensed consolidated financial statements include, but are not limited to, accounting for stock-based compensation, income taxes, and accounting for certain accruals. We assess the above estimates on an ongoing basis; however, actual results could materially differ from those estimates.

Recently Issued Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board (“FASB”) issued new guidance which establishes a right-of-use model that requires a lessee to record an asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the income statement. A modified retrospective approach, which includes a number of optional practical expedients, is required for lessees for capital and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. On January 1, 2019, we adopted this standard using a modified retrospective approach. As of January 1, 2019, we recorded a right-of-use asset of \$0.3 million and an operating lease liability of \$0.3 million. For additional information regarding how we are accounting for leases under this standard refer to Note 10.

In June 2018, the FASB issued new guidance which changes certain aspects of the accounting for share-based payments granted to nonemployees. Under this guidance, most of the treatment for share-based payments granted to nonemployees would be aligned with the requirements for share-based payments granted to employees. The new standard is effective beginning January 1, 2019. We adopted this standard on January 1, 2019 and thus ceased the re-measurement of non-employee awards. The adoption of this standard did not have a material impact on our condensed consolidated financial statements.

2. Investments

Our investments consisted of the following as of March 31, 2019 and December 31, 2018:

	As of March 31, 2019			Estimated Fair Value
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	
	(\$ in thousands)			
Money market funds	\$ 7,970	\$ —	\$ —	\$ 7,970
Corporate notes	8,874	1	(1)	8,874
Commercial paper	14,907	2	—	14,909
Total	<u>\$ 31,751</u>	<u>\$ 3</u>	<u>\$ (1)</u>	<u>\$ 31,753</u>
	As of December 31, 2018			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
	(\$ in thousands)			
Money market funds	\$ 11,612	\$ —	\$ —	\$ 11,612
Corporate notes	7,234	—	(3)	7,231
Commercial paper	21,384	—	(13)	21,371
Total	<u>\$ 40,230</u>	<u>\$ —</u>	<u>\$ (16)</u>	<u>\$ 40,214</u>

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As of March 31, 2019, we do not consider those securities that are in an unrealized loss position to be other-than-temporarily impaired, as we have the ability to hold such investments until recovery of the fair value. We utilize the specific identification method in computing realized gains and losses. We had no realized gains and losses on our available-for-sale securities for the three months ended March 31, 2019 or 2018.

The fair values of our investments by classification in our condensed consolidated balance sheets as of March 31, 2019 and December 31, 2018 were as follows:

	March 31, 2019	December 31, 2018
	(\$ in thousands)	
Cash and cash equivalents	\$ 7,970	\$ 11,612
Marketable securities	23,783	28,602
Total	<u>\$ 31,753</u>	<u>\$ 40,214</u>

Cash and cash equivalents in the table above exclude cash of \$2.1 million and \$1.4 million as of March 31, 2019 and December 31, 2018, respectively. The contractual maturity dates of all of our investments are less than one year.

3. Fair Value Measurements of Financial Instruments

Certain assets and liabilities are reported at fair value on a recurring basis. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants at the measurement date. The fair value accounting guidance requires that assets and liabilities carried at fair value be classified and disclosed in one of the following three categories:

- *Level 1* — Quoted prices in active markets for identical assets or liabilities that we have the ability to access at the measurement date.
- *Level 2* — Inputs other than quoted prices in active markets that are observable for the asset or liability, either directly or indirectly.
- *Level 3* — Inputs that are unobservable for the asset or liability.

To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by us in determining fair value is greatest for instruments categorized in Level 3. A financial instrument's level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement.

The fair value measurements of our financial instruments are summarized in the table below:

	Fair Value Measurements at March 31, 2019			
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
	(\$ in thousands)			
Cash equivalents:				
Money market funds	\$ 7,970	\$ —	\$ —	\$ 7,970
Total cash equivalents	\$ 7,970	\$ —	\$ —	\$ 7,970
Marketable securities:				
Corporate notes	\$ —	\$ 8,874	\$ —	\$ 8,874
Commercial paper	—	14,909	—	14,909
Total marketable securities	—	23,783	—	23,783
Total	<u>\$ 7,970</u>	<u>\$ 23,783</u>	<u>\$ —</u>	<u>\$31,753</u>

Fair Value Measurements at December 31, 2018				
	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total
	(\$ in thousands)			
Cash equivalents:				
Money market funds	\$ 11,612	\$ —	\$ —	\$11,612
Total cash equivalents	\$ 11,612	\$ —	\$ —	\$11,612
Marketable securities:				
Corporate notes	\$ —	\$ 7,231	\$ —	\$ 7,231
Commercial paper	—	21,371	—	21,371
Total marketable securities	—	28,602	—	28,602
Total	\$ 11,612	\$ 28,602	\$ —	\$40,214

Our cash equivalents are classified as Level 1 assets under the fair value hierarchy as these assets have been valued using quoted market prices in active markets and do not have any restrictions on redemption. Our marketable securities are classified as Level 2 assets under the fair value hierarchy as these assets were primarily determined from independent pricing services, which normally derive security prices from recently reported trades for identical or similar securities, making adjustments based upon other significant observable market transactions. At the end of each reporting period, we perform quantitative and qualitative analysis of prices received from third parties to determine whether prices are reasonable estimates of fair value. After completing our analysis, we did not adjust or override any fair value measurements provided by our pricing services as of March 31, 2019 or December 31, 2018. We did not have any Level 3 assets being measured at fair value on a recurring basis as of March 31, 2019 and December 31, 2018.

4. Earnings per Share of Common Stock

All common stock warrants and stock options have been excluded from the computation of diluted weighted-average shares outstanding because such securities would have an anti-dilutive impact due to net losses reported during the three months ended March 31, 2019 and 2018.

5. Accrued Expenses

As of March 31, 2019 and December 31, 2018, accrued expenses consisted of the following:

	March 31, 2019	December 31, 2018
	(\$ in thousands)	
Accrued general and administrative expenses	\$ 814	\$ 2,120
Accrued research and development expenses	4,060	4,557
Accrued payroll and employee benefits	568	1,171
Total accrued expenses	\$ 5,442	\$ 7,848

6. License Agreement

In December 2012, we signed a license agreement with F. Hoffmann-La Roche Ltd. and Hoffmann-La Roche Inc. (collectively “Roche”), which was effective in January 2013, and granted Roche an exclusive, non-transferable license to our intellectual property related to octreotide capsules. In July 2014, Roche terminated the license agreement. Subsequent to the termination, we purchased from Roche active pharmaceutical ingredient supplies to continue the development and manufacturing of octreotide capsules as well as Roche’s proposed trade name for octreotide capsules for an aggregate amount of \$5.1 million payable in three equal annual installments of \$1.7 million beginning in 2016. We made the final \$1.7 million annual payment in March 2018. Roche has no remaining rights to octreotide capsules and we retain all rights to octreotide capsules and all related intellectual property. We have no further financial or operational obligations to Roche.

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7. Warrants

As of December 31, 2018, there were 3,567,015 common stock warrants outstanding with exercise prices ranging from \$0.09 per share to \$9.13 per share. Such warrants were issued between October 2012 and February 2015 with expiration dates ranging from March 2022 through December 2024. There were no warrants issued or exercised during the three months ended March 31, 2019. There were 3,567,015 outstanding warrants as of March 31, 2019.

8. Stock Incentive Plans

In 2008, our board of directors adopted the 2008 Stock Incentive Plan (the “2008 Plan”), which provided for the grant of incentive stock options, nonqualified stock options, and restricted stock to employees, directors, and nonemployees of the Company up to 3,547,741 shares of common stock. Option awards expire 10 years from the grant date and generally vest over four years, but vesting conditions can vary at the discretion of our board of directors.

In July 2015, the Company approved the 2015 Stock Option and Incentive Plan (the “2015 Plan”), which became effective upon our initial public offering. The 2015 Plan allows the grant of incentive stock options, nonqualified stock options, and restricted stock to employees, directors, and nonemployees of the Company up to 3,566,296 shares of common stock. In connection with the adoption of the 2015 Plan, no further option grants are permitted under the 2008 Plan and any expirations, cancellations, or terminations under the 2008 Plan are available for issuance under the 2015 Plan. On January 1, 2019, the number of shares reserved and available for issuance under the 2015 Stock Plan increased by 978,245 shares of common stock pursuant to a provision in the 2015 Stock Plan that provides that the number of shares reserved and available for issuance will automatically increase each January 1, beginning on January 1, 2016, by 4% of the number of shares of common stock issued and outstanding on the immediately preceding December 31 or such lesser number as determined by the compensation committee of the board of directors. The compensation committee of the board of directors determined there would be no increase to the shares reserved and available under the 2015 Stock Plan on January 1, 2018. As of March 31, 2019, the total number of shares authorized for stock award plans is 8,092,282 of which 2,838,208 remain available for grant. There are 4,831,464 stock options outstanding as of March 31, 2019.

Stock-based compensation for the three months ended March 31, 2019 and 2018 consisted of the following:

	Three Months Ended March 31,	
	2019	2018
	(\$ in thousands)	
General and administrative	\$311	\$323
Research and development	311	314
Total	<u>\$622</u>	<u>\$637</u>

The fair value of each stock option issued was estimated at the date of grant using the Black-Scholes option model with the following weighted-average assumptions:

	Three Months Ended March 31,	
	2019	2018
Expected volatility	101%	77%
Expected term (years)	6.0	6.3
Risk-free interest rate	2.52%	2.71%
Expected dividend yield	0%	0%

We issued approximately 492,000 stock option grants in the three months ended March 31, 2019. The weighted-average grant date fair value per share of stock options granted during the three months ended March 31, 2019 was \$2.99. We issued approximately 749,000 stock option grants in the three months ended March 31, 2018. The weighted-average grant date fair value per share of options granted during the three months ended March 31, 2018 was \$1.05.

9. Commitments and Contingencies

Legal Proceedings

On June 9, 2016, Chiasma, Inc. and certain of our current and former officers were named as defendants in a purported federal securities class action lawsuit filed in the United States District Court for the District of Massachusetts, styled *Gerneth v. Chiasma, Inc., et al.* An amended complaint was filed by the lead plaintiff on February 10, 2017.

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challenging our statements regarding the Phase 3 clinical trial methodology and results, and our ability to obtain FDA approval for octreotide capsules, in violation of Sections 11 and 15 of the Securities Act of 1933. The amended complaint adds as defendants current and former members of our board of directors, as well as the investment banks that underwrote our initial public offering on July 15, 2015. The plaintiff is seeking an unspecified amount of compensatory damages on behalf of himself and members of a putative shareholder class, including interest and reasonable costs and expenses incurred in litigating the action, and any other relief the court determines is appropriate. The defendants filed a motion to dismiss the amended complaint on March 27, 2017 and on February 15, 2018, the court denied defendants' motion to dismiss. The defendants filed an answer to the amended complaint on March 30, 2018. On February 27, 2019, the parties agreed to a settlement of all legal claims in which defendants expressly denied that they have committed any act or omission giving rise to any liability under Sections 11 or 15 of the Securities Act of 1933. On March 14, 2019, the court issued an order of preliminary approval of the settlement. As a result of this settlement agreement, we have recorded a litigation settlement liability of \$18.8 million as of December 31, 2018. Additionally, we have recorded a litigation insurance settlement recovery receivable of \$18.3 million as of December 31, 2018 which represents the estimated insurance claim proceeds from our insurance carriers. We continue to believe this lawsuit is meritless and, to the extent the court does not approve a settlement, we intend to vigorously defend against it.

10. Leases

We adopted the lease standard on January 1, 2019. We elected a package of practical expedients, which include: (i) an entity need not reassess whether any expired or existing contracts are or contain leases; (ii) an entity need not reassess the lease classification for any expired or existing leases; and (iii) an entity need not reassess any initial direct costs for any existing leases. Another practical expedient allows us to use hindsight in determining the lease term when considering lessee options to extend or terminate the lease and to purchase the underlying asset. We have elected to utilize this package of practical expedients and have not elected the hindsight methodology in its implementation of the lease standard. We elected to adopt this standard using the optional modified retrospective transition method and therefore comparative periods have not been restated. We have elected to not recognize right-of-use assets and lease liabilities arising from short-term leases, which are leases that, at the commencement date, have a lease term of 12 months or less and do not include an option to purchase the underlying asset that the lessee is reasonably certain to exercise.

We determine if an arrangement is a lease at inception. We have operating leases for our office spaces and certain automobiles. Operating lease right-of-use assets and operating lease liabilities are recognized based on the present value of the future minimum lease payments over the lease term at the commencement date. The operating lease right-of-use asset also includes direct costs incurred and is reduced by lease incentives. Lease agreements with lease and non-lease components are accounted for separately. As our leases do not provide an implicit rate, we use an estimated incremental borrowing rate based on the information available at the commencement date in determining the present value of future payments. We recognize lease expense on a straight-line basis over the lease term.

	March 31, 2019
	(\$ in thousands)
The components of lease expense were as follows:	
Operating lease expense	\$ 47
Supplemental cash flow information related to leases was as follows:	
Cash paid for amounts included in the measurement of lease liabilities:	
Operating cash flows from operating leases	\$ 45
Right-of-use assets obtained in exchange for lease obligations:	
Operating leases	\$ 27

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	March 31, 2019 (\$ in thousands)
Supplemental balance sheet information related to leases was as follows:	
Operating lease right-of-use assets	\$ 303
Other current liabilities	\$ 169
Long-term liabilities	126
Total operating lease liabilities	<u>\$ 295</u>
Weighted average remaining lease term - operating leases	21 Months
Weighted average discount rate - operating leases	8.3%

Our operating lease right-of-use assets are recorded within other assets on our condensed consolidated balance sheets.

Future lease payments under noncancelable leases as of March 31, 2019 are as follows:

	(\$ in thousands)
Remainder of 2019	\$ 139
2020	167
2021	10
2022	1
Total future minimum lease payments	317
Less: imputed interest	<u>(22)</u>
Total	<u>\$ 295</u>

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

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with our unaudited condensed consolidated financial statements and the accompanying notes thereto included elsewhere in this Quarterly Report on Form 10-Q and the audited financial information and the notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2018. Some of the information contained in this discussion and analysis or set forth elsewhere in this Quarterly Report on Form 10-Q, including information with respect to our plans and strategy for our business and related financing, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the “Risk Factors” section of this Quarterly Report on Form 10-Q and our prior filings with the SEC, our actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a clinical-stage biopharmaceutical company focused on improving the lives of patients who face challenges associated with their existing treatments for rare and serious chronic disease. Employing our proprietary Transient Permeability Enhancer, or TPE, technology platform, we seek to develop oral medications that are currently available only as injections. We are currently evaluating oral octreotide capsules, conditionally trade-named “MYCAPSSA”, our sole TPE platform-based clinical product candidate, in two Phase 3 clinical trials in adult patients for the treatment of acromegaly to potentially support regulatory approval in the United States and European Union. Acromegaly is a rare and debilitating condition that results in the body’s production of excess growth hormone. Octreotide is an analog of somatostatin, a natural inhibitor of growth hormone secretion. The current standard of care for patients diagnosed with acromegaly and not otherwise cured by surgical removal of the pituitary tumor consists of lifelong, once-monthly injections of an extended release somatostatin analog. We believe that octreotide capsules, if approved by regulatory authorities, will be the first somatostatin analog available for oral administration. Octreotide capsules have been granted orphan designation in the United States and the European Union for the treatment of acromegaly. The worldwide market for injectable somatostatin analogs is approximately \$2.7 billion annually, of which we estimate approximately \$810 million represents annual sales for the treatment of acromegaly. We retain worldwide rights to develop and commercialize octreotide capsules with no royalty obligations to third parties.

In September 2017, we initiated a third Phase 3 clinical trial for oral octreotide capsules for the maintenance therapy of adult patients with acromegaly following our agreement with the United States Food and Drug Administration, or the FDA, on the design of the trial, reached through a Special Protocol Assessment, or SPA, in August 2017. The trial, referred to as CHIASMA OPTIMAL, is a randomized, double-blind, placebo-controlled, nine-month trial expected to enroll 50 adult acromegaly patients designed to support regulatory approval of octreotide capsules in the United States. In October 2018, we completed enrollment in the CHIASMA OPTIMAL trial, randomizing a total of 56 patients. We expect to release top-line data from this trial in the third quarter of 2019. If the data from CHIASMA OPTIMAL is positive, we plan to resubmit our New Drug Application, or NDA, by year-end 2019. We expect the FDA will aim to complete its review of our anticipated NDA, if accepted for filing, within six months based on our expectation that the NDA will be designated a Class 2 resubmission by the FDA to address its April 2016 complete response letter, or CRL, to our original NDA.

We are also conducting an international Phase 3 clinical trial, referred to as MPOWERED, of oral octreotide capsules for the maintenance treatment of adult patients with acromegaly to support regulatory approval in the European Union. The MPOWERED trial is a randomized, open-label and active-controlled 15-month trial initially designed to enroll up to 150 patients. In July 2018, we completed the enrollment of 135 adult acromegaly patients into the run-in phase of the trial. The European Medicines Agency, or EMA, requested that a minimum of at least 80 patients who are responders to octreotide capsules following the six-month run-in phase be randomized to either remain on octreotide capsules or return to injectable somatostatin receptor ligands (octreotide or lanreotide), and then followed for an additional nine months. In October 2018, 80 patients were randomized following the six-month run-in phase in the MPOWERED trial. In October 2018, we also elected to resume enrollment in the trial in an effort to enroll up to 15 additional patients exclusively located in the United States in order to gain further U.S. investigator and patient experience with octreotide capsules. We expect to complete enrollment in MPOWERED in the second quarter of 2019 and to release top-line data from the MPOWERED trial in the second half of 2020.

In order to prepare for our planned NDA resubmission following our anticipated successful completion of the CHIASMA OPTIMAL trial, we believe we have reached an understanding with the FDA on the required NDA content including the integrated summaries of safety and efficacy data from our three Phase 3 clinical trials of oral octreotide capsules. We continue to believe that the data from the CHIASMA OPTIMAL trial alone is designed to address the efficacy concerns raised by the FDA in its CRL to our first NDA submission and that the FDA only expects to review safety data from the

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MPOWERED trial as part of its review of our planned NDA resubmission. We anticipate that our planned NDA resubmission will be classified by the FDA for a six-month review period. Any future requirement by the FDA to submit additional data including the efficacy data from our MPOWERED clinical trial as part of our planned NDA resubmission may delay or prevent the filing, review or approval of our NDA.

We were incorporated in 2001 and commenced active operations in the same year. Our operations to date have been limited to organizing and staffing our company, business planning, raising capital, developing our TPE technology, identifying potential drug candidates, undertaking nonclinical studies and, beginning in 2010, conducting clinical trials and preparing for regulatory submissions. In July 2015, we completed our initial public offering, or IPO, in which we raised \$106.5 million. In April 2019, we completed a follow-on public offering of common stock in which we raised an additional \$32.2 million to finance our operations. As of March 31, 2019, our consolidated cash, cash equivalents and marketable securities were \$33.9 million, of which \$0.1 million was held by Chiasma (Israel) Ltd., our wholly owned Israeli subsidiary.

We have incurred significant operating losses since our inception. Our net loss was \$8.8 million for the three months ended March 31, 2019 and \$31.3 million for the year ended December 31, 2018. As of March 31, 2019, we had an accumulated deficit of \$245.4 million. We expect to incur significant operating losses over the next several years. These losses, combined with prior losses will continue to have an adverse effect on our cash resources, stockholders' equity and working capital. We expect to continue our Phase 3 CHIASMA OPTIMAL clinical trial of octreotide capsules in acromegaly to support potential regulatory approval in the United States and to continue to conduct our international Phase 3 MPOWERED clinical trial of octreotide capsules in acromegaly to support potential regulatory approval in the European Union. We expect the release of top-line CHIASMA OPTIMAL data in the third quarter of 2019 and we expect the release of top-line MPOWERED data in the second half of 2020. Clinical development timelines, the probability of success and development costs can differ materially from expectations.

In June and August 2016, we announced two separate corporate restructuring plans intended to focus our resources on the continued development of octreotide capsules for the maintenance treatment of adult acromegaly patients. As a result of the August 2016 reduction in workforce, we eliminated our research and discovery functions and are currently not materially investing in those areas. We are making substantial investments in our two ongoing Phase 3 clinical trials of octreotide capsules. Because of the numerous risks and uncertainties facing our company and associated with developing and commercializing pharmaceutical products generally, we are unable to predict the extent of any future losses or when we will become profitable, if at all.

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of equity offerings and debt financings, and we may also opportunistically consider license and collaboration agreements with potential partners. We may be unable to raise capital when needed or on attractive terms, or to enter into collaboration agreements, which could force us to delay, limit, reduce or terminate our product development or future commercialization efforts. We will need to generate significant revenues to achieve profitability, which we may not be able to achieve.

Roche License Agreement

In December 2012, we signed a license agreement with F. Hoffmann-La Roche Ltd. and Hoffmann-La Roche Inc. (collectively "Roche"), which was effective in January 2013, and granted Roche an exclusive, non-transferable license to our intellectual property related to octreotide capsules. In July 2014, Roche terminated the license agreement. Subsequent to the termination, we purchased from Roche active pharmaceutical ingredient supplies to continue the development and manufacturing of octreotide capsules as well as Roche's proposed trade name for octreotide capsules for an aggregate amount of \$5.1 million payable in three equal annual installments of \$1.7 million beginning in 2016. We made the final \$1.7 million annual payment in March 2018. Roche has no remaining rights to octreotide capsules and we retain all rights to octreotide capsules and all related intellectual property. We have no further financial or operational obligations to Roche.

Financial Overview

Research and Development

Research and development expenses consist of expenses incurred in performing research and development activities, including compensation and benefits for full-time research and development employees, an allocation of facilities expenses, overhead expenses, nonclinical pharmacology studies, manufacturing process-development and scale-up activities, clinical trial and related clinical manufacturing expenses, fees paid to contract research organizations, or

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CROs, investigative sites, and other external expenses. In the early phases of development, our research and development costs included expanding our technology platform as well as early development of specific product candidates. The majority of our research and development expenses has been spent on the development of octreotide capsules, including the manufacturing of clinical trial material, manufacturing process development and validation, regulatory and clinical activities, and our TPE platform. We expense research and development costs as incurred.

As a result of the August 2016 reduction in workforce, we eliminated our research and discovery functions and are currently not investing in those areas. Since then, we have continued to invest in the clinical development of octreotide capsules, including our two international phase 3 trials, CHIASMA OPTIMAL and MPOWERED. Product candidates in late stages of development generally have higher development costs than those in earlier stages of development, primarily due to the increased size and duration of late-stage clinical trials. We plan to continue our international Phase 3 CHIASMA OPTIMAL clinical trial of octreotide capsules in acromegaly to support potential regulatory approval in the United States. We also expect to continue to conduct our international Phase 3 MPOWERED clinical trial of octreotide capsules in acromegaly to support potential regulatory approval in the European Union. The successful development of octreotide capsules is highly uncertain.

General and Administrative

General and administrative expenses consist primarily of salaries and related benefits, including stock-based compensation, related to our executive, finance, legal, marketing and support functions. Other general and administrative expenses include facility-related costs not otherwise allocated to research and development expenses, travel expenses for our general and administrative personnel and professional fees for auditing, tax, and corporate, litigation and intellectual property-related legal services.

Marketing expenses consist of professional fees related to preparation for the potential commercialization of octreotide capsules as well as salaries and related benefits for commercial employees. In anticipation of marketing approval of our NDA, and prior to the receipt of the CRL in April 2016, we accelerated our preparation for commercialization of octreotide capsules. Following the June 2016 restructuring plan and the termination of primarily all of our commercial personnel, these expenses were significantly reduced throughout 2016. Our marketing expenses in the three months ended March 31, 2019 and the year ended December 31, 2018 were immaterial and are expected to continue to be immaterial prior to the release of top-line data from our CHIASMA OPTIMAL clinical trial which we expect to occur in the third quarter of 2019. If the top-line data from our CHIASMA OPTIMAL trial is positive and we resubmit our planned NDA, we expect our sales and marketing related expenses to substantially increase as we prepare for the potential commercialization of octreotide capsules in the United States.

Other Income, Net

Other income, net consists primarily of interest income earned on our investments.

Provision (Benefit) for Income Taxes

We are subject to federal and state income taxes for earnings generated in the United States, and foreign taxes on earnings of our wholly-owned Israeli subsidiary. Our consolidated tax expense is primarily affected by the mix of our foreign subsidiary permanent items, discrete items, and unrecognized tax benefits and to a lesser extent our taxable income (loss) in the United States.

Critical Accounting Policies and Use of Estimates

We have adopted various accounting policies to prepare our consolidated financial statements in accordance with accounting principles generally accepted in the United States, or U.S. GAAP. Our most significant accounting policies are described in Note 1 to our consolidated financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018. For information on new accounting pronouncements adopted in the current period and recently issued standards, see Note 1 to our condensed consolidated financial statements. The preparation of our consolidated financial statements in conformity with U.S. GAAP requires us to make estimates and assumptions that affect the amounts reported in our consolidated financial statements and accompanying notes. Our estimates and assumptions include those related to the accounting for stock-based compensation, income taxes, and accounting for certain accruals. We assess the above estimates on an ongoing basis; however, actual results could materially differ from those estimates.

[Table of Contents](#)**Results of Operations for the Three Months ended March 31, 2019 and 2018****Research and Development**

The following is a comparison of research and development expenses for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,			
	2019	2018	\$ Change	% Change
	(\$ in thousands)			
Research and development	\$6,471	\$4,863	\$ 1,608	33%

For the three months ended March 31, 2019, our total research and development expenses increased by \$1.6 million to \$6.5 million, primarily due to an increase in manufacturing costs.

General and Administrative

The following is a comparison of general and administrative expenses for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,			
	2019	2018	\$ Change	% Change
	(\$ in thousands)			
General and administrative	\$2,450	\$2,434	\$ 16	1%

For the three months ended March 31, 2019, our general and administrative expenses were \$2.5 million and were relatively consistent with the prior year period with increased professional services costs offset by decreased legal costs.

Other Income, net

Other income totaled \$0.2 million for the three months ended March 31, 2019 compared to other income of \$0.2 million for the same period in 2018, a decrease of approximately \$46,000. This decrease in our interest income was driven by a decrease in our cash equivalents and marketable securities.

Provision for Income Taxes

Our total tax provision was approximately \$13,000 for the three months ended March 31, 2019, representing an effective tax rate of (0.1%), as compared to a tax benefit of \$24,000 for the three months ended March 31, 2018, representing an effective tax rate of 0.3%.

Our effective tax rate differs from the statutory rate each year mainly due to a full valuation allowance maintained against U.S. deferred tax assets and due to lower tax rates applied to income of our Israeli subsidiary.

Liquidity and Capital Resources

In July 2015, we completed our IPO in which we raised \$106.5 million by selling shares of common stock. In April 2019, we completed a follow-on public offering of common stock in which we raised an additional \$32.2 million to finance our operations. As of March 31, 2019, our cash and cash equivalents were \$10.1 million, of which \$0.1 million was held by our Israeli subsidiary. In addition, as of March 31, 2019, we have \$23.8 million invested in short-term marketable securities.

Plan of Operations and Future Funding Requirements

We expect that our primary uses of capital will be associated with seeking regulatory approval of octreotide capsules in the United States and European Union, including clinical trial costs (including our international Phase 3 CHIASMA OPTIMAL clinical trial that we initiated in September 2017 to support regulatory approval of octreotide capsules in the United States and our international Phase 3 MPOWERED clinical trial that we initiated in March 2016 to support

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regulatory approval of octreotide capsules in the European Union), manufacturing of octreotide capsules for market consumption, if approved, legal and regulatory expenses related to seeking regulatory approval of octreotide capsules in the United States and European Union, compensation and related expenses, third-party clinical development services, regulatory expenses, preparation for potential commercialization in the United States, and other general operating costs.

We currently expect our existing cash, cash equivalents and marketable securities will be at least sufficient to fund our operations through the anticipated release of top-line data from our Phase 3 CHIASMA OPTIMAL trial in the third quarter of 2019 and, if positive, through our anticipated mid-2020 PDUFA date and into late 2020. We cannot estimate the actual amounts necessary to successfully complete the development and commercialization of octreotide capsules, if at all, or whether, or when, we may achieve profitability. Our future capital requirements will depend on many factors, including, but not limited to:

- the costs, timing and outcome of the development and regulatory review of octreotide capsules;
- the progress and results of our ongoing clinical trials of octreotide capsules or any future clinical trials or studies we may conduct;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for octreotide capsules and any other future product candidates for which we receive marketing approval;
- proceeds, if any, received from commercial sales of octreotide capsules and any future product candidates for which we receive marketing approval;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims; and
- the extent to which we develop, acquire or in-license other product candidates and technologies or explore or consummate other strategic transactions.

Until such time, if ever, as we can generate substantial product sales, we expect to finance our cash needs through a combination of equity offerings and debt financings and we may opportunistically consider license and collaboration arrangements. We filed a shelf registration statement on Form S-3 with the SEC in March 2018, which was declared effective in May 2018. In November 2018, we entered into a sales agreement with Cowen and Company, LLC, or Cowen, pursuant to which we may issue and sell shares of our common stock for which we included a prospectus to our shelf registration statement on Form S-3, having aggregate sales proceeds of up to \$25.0 million, from time to time, through an “at the market” equity program under which Cowen acts as the sales agent. No shares of common stock have been sold under this program. In April 2019, we completed a follow-on public offering of common stock pursuant to the shelf registration statement on Form S-3 filed in March 2018, and a prospectus supplement filed in March 2019, in which we raised \$34.5 million in gross proceeds, or \$32.2 million net proceeds after underwriting fees and offering expenses. As of May 8, 2019, \$65.5 million of securities remain available for issuance under this shelf registration statement.

To the extent that we raise additional capital through future issuance of equity or debt, the ownership interest of our stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our existing common stockholders. If we raise additional funds through collaboration arrangements, we may have to relinquish valuable rights to our current or future product candidates, exploratory programs, technologies or future revenue streams on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts of octreotide capsules or grant rights to develop and market future potential product candidates that we would otherwise prefer to develop and market ourselves.

Cash Flows

The following is a summary of cash flows for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,	
	2019	2018
	(\$ in thousands)	
Cash flows provided by (used in):		
Operating activities	\$(7,950)	\$(4,754)
Investing activities	4,961	7,099
Financing activities	3	(1,700)

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Operating Activities

Net cash used in operating activities was \$8.0 million for the three months ended March 31, 2019, and primarily consisted of \$8.8 million in net loss, adjusted for non-cash items of \$0.5 million (primarily stock-based compensation) and working capital increases of \$0.3 million (primarily due to the decrease in prepaid expenses and other current assets and partially offset by the decrease in accounts payable and accrued expenses). Net cash used in operating activities was \$4.8 million for the three months ended March 31, 2018, and primarily consisted of \$7.0 million in net loss, adjusted for non-cash items of \$0.6 million (primarily stock-based compensation) and working capital increases of \$1.7 million (primarily due to the increase in accounts payable and accrued expenses). The primary driver for the increase in our cash used in our operating activities during the three months ended March 31, 2019 compared to the three months ended March 31, 2018 was the timing of clinical trial and clinical supply related payments.

Investing Activities

Net cash provided by investing activities was \$5.0 million for the three months ended March 31, 2019, primarily related to the net maturities of marketable securities, compared to \$7.1 million in cash provided by investing activities for the three months ended March 31, 2018, primarily related to the net maturities of marketable securities.

Financing Activities

Net cash provided by financing activities was \$3,000 during the three months ended March 31, 2019, primarily related to the exercise of stock options. For the three months ended March 31, 2018, net cash used in financing activities was \$1.7 million, related to the final \$1.7 million installment payment related to the termination of the Roche license agreement.

Off-Balance Sheet Arrangements

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

JOBS Act

In April 2012, the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, was enacted. Section 107 of the JOBS Act provides that an “emerging growth company” can take advantage of an extended transition period for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this extended transition period, and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for public companies.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

The market risk inherent in our financial instruments and in our financial position represents the potential loss arising from adverse changes in interest rates. As of March 31, 2019, we had \$10.1 million in cash and cash equivalents, consisting of cash in checking accounts at U.S. and Israeli banking institutions as well as money market funds. In addition, as of March 31, 2019, we had \$23.8 million of marketable securities. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates. An immediate 100 basis point increase in interest rates would cause a decrease in the value of our short-term investments of \$0.1 million. As of March 31, 2019, we did not have any outstanding borrowings, and as a result we are not exposed to interest rate risk associated with credit facilities.

In addition, we are subject to currency risk for balances held, or denominated, in currencies other than U.S. dollars. We work to maintain all balances in U.S. dollars until payment in other currencies is required to minimize this currency risk. Fluctuations in the exchange rate between the U.S. dollar and each of the Euro, GBP and NIS over the past 24 months have been approximately 5%, 4%, and 0%, respectively. As of March 31, 2019, we held \$0.1 million in Israeli banks and petty cash funds to support our Israeli operations, the majority of which is denominated in U.S. dollars. We contract with CROs internationally, primarily for the execution of clinical trials and manufacturing activities. Transactions with these providers are settled in U.S. dollars, Euros or GBP and, therefore, we believe that we have only minimal exposure to foreign currency exchange risks. We do not hedge against foreign currency risks.

We do not believe that inflation and changing prices had a significant impact on our results of operations for any periods presented herein.

Item 4. Controls and Procedures

Management's Evaluation of our Disclosure Controls and Procedures

We maintain disclosure controls and procedures (as defined in Rules 13a-15(e) or 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act) that are designed to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is (1) recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms and (2) accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

Based on this evaluation, our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report. In designing and evaluating our disclosure controls and procedures, our 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 cost-benefit relationship of possible controls and procedures. Our principal executive officer and principal financial officer has concluded based upon the evaluation described above that, as of March 31, 2019, our disclosure controls and procedures were effective at the reasonable assurance level.

We continue to review and document our disclosure controls and procedures, including our internal controls and procedures for financial reporting, and may from time to time make changes aimed at enhancing their effectiveness and to ensure that our systems evolve with our business.

Changes in Internal Control Over Financial Reporting

During the three months ended March 31, 2019, there have been no changes in our internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15(d)-15(f) promulgated under the Exchange Act, 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

On June 9, 2016, Chiasma, Inc. and certain of our current and former officers were named as defendants in a purported federal securities class action lawsuit filed in the United States District Court for the District of Massachusetts, styled *Gerneth v. Chiasma, Inc., et al.* An amended complaint was filed by the lead plaintiff on February 10, 2017 challenging our statements regarding the Phase 3 clinical trial methodology and results, and our ability to obtain FDA approval for octreotide capsules, in violation of Sections 11 and 15 of the Securities Act of 1933. The amended complaint adds as defendants current and former members of our board of directors, as well as the investment banks that underwrote our initial public offering on July 15, 2015. The plaintiff is seeking an unspecified amount of compensatory damages on behalf of himself and members of a putative shareholder class, including interest and reasonable costs and expenses incurred in litigating the action, and any other relief the court determines is appropriate. The defendants filed a motion to dismiss the amended complaint on March 27, 2017 and on February 15, 2018, the court denied defendants' motion to dismiss. The defendants filed an answer to the amended complaint on March 30, 2018. On February 27, 2019, the parties agreed to a settlement of all legal claims in which defendants expressly denied that they have committed any act or omission giving rise to any liability under Sections 11 or 15 of the Securities Act of 1933. On March 14, 2019, the court issued an order of preliminary approval of the settlement. As a result of this settlement agreement, we have recorded a litigation settlement liability of \$18.8 million as of December 31, 2018. Additionally, we have recorded a litigation insurance settlement recovery receivable of \$18.3 million as of December 31, 2018 which represents the estimated insurance claim proceeds from our insurance carriers. We continue to believe this lawsuit is meritless and, to the extent the court does not approve a settlement, we intend to vigorously defend against it.

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Item 1A. Risk Factors

We operate in a rapidly changing environment that involves a number of risks that could materially affect our business, financial condition or future results, some of which are beyond our control. In addition to the other information set forth in this Quarterly Report on Form 10-Q, you should carefully consider the factors discussed in Part I, “Item 1A. Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2018, as filed with the SEC, which could materially affect our business, financial condition or future results. During the period covered by this Quarterly Report on Form 10-Q, there were no material changes to the risk factors described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018.

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

Recent Sales of Unregistered Securities

None.

Issuer Purchases of Equity Securities

In the quarter ended March 31, 2019, we did not repurchase any shares of our common stock.

Use of Proceeds from Public Offerings of Common Stock

On July 21, 2015, we completed the sale of 7,319,750 shares of our common stock (inclusive of 954,750 shares of common stock sold by us pursuant to the full exercise of an option granted to the underwriters) in our IPO at a price to the public of \$16.00 per share. The offer and sale of the shares in our IPO was registered under the Securities Act pursuant to registration statements on Form S-1 (File No. 333-204949), which was filed with the SEC on June 15, 2015 and amended subsequently and declared effective by the SEC on July 15, 2015, and Form S-1MEF (File No. 333-205691), which was filed with the SEC on July 15, 2015 and automatically effective upon filing. Following the sale of the shares in connection with the closing of our IPO, the offering terminated. The offering did not terminate before all the securities registered in the registration statements were sold. Barclays Capital Inc. and Cowen and Company, LLC acted as joint book-running managers for the offering. William Blair & Company, L.L.C. and Oppenheimer & Co. Inc. acted as co-managers.

On April 3, 2019, we completed the sale of 7,263,158 shares of our common stock (inclusive of 947,368 shares of common stock sold by us pursuant to the full exercise of an option granted to the underwriters) in a follow-on public offering of our common stock, at a public offering price of \$4.75 per share, before underwriting discounts and commissions. The offering was made pursuant to a prospectus dated March 22, 2018 and a prospectus supplement dated March 29, 2019, in connection with a takedown from the Company's shelf registration statement on Form S-3 (File No. 333-223850), which the SEC declared effective on May 3, 2018. Cantor Fitzgerald & Co. acted as sole book-running manager for the offering. H.C. Wainwright & Co., Roth Capital Partners, Brookline Capital Markets, a division of CIM Securities, LLC and LifeSci Capital LLC acted as co-managers for the offering.

We raised approximately \$106.5 million in net proceeds after deducting underwriting discounts and commissions and offering expenses payable by us in our IPO. In the April 2019 follow-on public offering of common stock, we raised approximately \$32.2 million in net proceeds after deducting underwriting discounts and commissions and offering expenses payable by us. We invested the funds received in cash equivalents and other short-term investments in accordance with our investment policy.

We expect that our primary uses of capital will be associated with seeking regulatory approval of octreotide capsules in the United States and European Union, including clinical trial costs (including our international Phase 3 CHIASMA OPTIMAL clinical trial that we initiated in September 2017 to support United States regulatory approval of octreotide capsules and our international Phase 3 MPOWERED clinical trial to support European Union regulatory approval of octreotide capsules), manufacturing of octreotide capsules for market consumption, if approved, legal and regulatory expenses related to seeking regulatory approval of octreotide capsules in the United States and European Union, compensation and related expenses, third-party clinical development services, regulatory expenses, preparation for potential commercialization in the United States, and other general operating costs.

Item 6. Exhibits

The following exhibits are filed as part of this Quarterly Report on Form 10-Q:

<u>Exhibit No.</u>	<u>Description</u>
31.1*	Certification of Principal Executive Officer and Principal Financial Officer pursuant to Exchange Act rules 13a-14 or 15d-14, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1+	Certification of Principal Executive Officer and Principal Financial Officer pursuant 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

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<u>Exhibit No.</u>	<u>Description</u>
101.INS*	XBRL Instance Document.
101.SCH*	XBRL Taxonomy Extension Schema Document.
101.CAL*	XBRL Taxonomy Extension Calculation Document.
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document.
101.LAB*	XBRL Taxonomy Extension Labels Linkbase Document.
101.PRE*	XBRL Taxonomy Extension Presentation Link Document.

* Filed herewith.

+ The certification furnished in Exhibit 32.1 hereto is deemed to be furnished with this Quarterly Report on Form 10-Q and will not be deemed to be “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, except to the extent that the Registrant specifically incorporates it by reference.

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.

May 9, 2019

CHIASMA, INC.

By: /s/ Mark J. Fitzpatrick

Mark J. Fitzpatrick
President, Chief Executive Officer and Director
(Principal Executive Officer and Principal Financial Officer)

Certification

I, Mark J. Fitzpatrick, certify that:

1. I have reviewed this quarterly report on Form 10-Q for the period ended March 31, 2019 of Chiasma, 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. I am 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. I have disclosed, based on my 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: May 9, 2019

/s/ Mark J. Fitzpatrick

Mark J. Fitzpatrick
President, Chief Executive Officer and Director
(Principal Executive Officer and Principal Financial Officer)

**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 quarterly report on Form 10-Q of Chiasma, Inc. (the "Company") for the period ended March 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), Mark J. Fitzpatrick, President, Chief Executive Officer and Director (Principal Executive Officer and Principal Financial Officer) of the Company, hereby certifies, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that to his knowledge:

- 1) the Report which this statement accompanies 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 at the dates and for the periods indicated in the Report.

Date: May 9, 2019

/s/ Mark J. Fitzpatrick

Mark J. Fitzpatrick

President, Chief Executive Officer and Director

(Principal Executive Officer and Principal Financial Officer)