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, 2018
OR

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

Commission file number 001-38129

Mersana Therapeutics, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**04-3562403**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

840 Memorial Drive Cambridge, MA 02139
(Address of principal executive offices)
(Zip Code)

(617) 498-0020
(Registrant's telephone number, including area code)

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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 ☒.

There were 22,901,853 shares of Common Stock ($0.0001 par value per share) outstanding as of May 10, 2018.

Unless otherwise stated or the context requires otherwise, all references to "us," "our," "Mersana," "Mersana Therapeutics," "we," the "Company" and similar designations in this Quarterly Report on Form 10-Q refer to Mersana Therapeutics, Inc. and its consolidated subsidiary, Mersana Securities Corp.

FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, our clinical results and other future conditions. The words "anticipate," "believe," "estimate," "expect," "goal," "intend," "may," "seek," "plan," "predict," "project," "target," "potential," "will," "would," "possible," "could," "should," "continue," "contemplate" 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, among other things, statements about:

- the initiation, cost, timing, progress and results of our current and future research and development activities, preclinical studies and clinical trials;
- the potential benefits of strategic partnership agreements and our ability to enter into selective strategic partnership arrangements;
- the timing of, and our ability to obtain and maintain, regulatory approvals for our product candidates;
- our ability to quickly and efficiently identify and develop additional product candidates;
- our ability to advance any product candidate into, and successfully complete, clinical trials;
- our intellectual property position, including with respect to our trade secrets; and
- our estimates regarding expenses, future revenues, capital requirements, the sufficiency of our current and expected cash resources and our need for additional financing.

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. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make. We have included important factors in the cautionary statements included in this Quarterly Report on Form 10-Q, particularly in the "Risk factors" section, that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.

The forward-looking statements contained herein represent our views as of the date of this Quarterly Report on Form 10-Q. We anticipate that subsequent events and developments may cause our views to change. However, although we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so, except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this Quarterly Report on Form 10-Q.

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PART I – FINANCIAL INFORMATION

Item 1. Financial Statements

Mersana Therapeutics, Inc.
Condensed Consolidated Balance Sheets
(unaudited)
(in thousands, except share and per share data)

	March 31, 2018	December 31, 2017
Assets		
Current assets:		
Cash and cash equivalents	$ 32,354	$ 26,591
Short-term marketable securities	75,605	88,143
Accounts receivable	288	784
Prepaid expenses and other current assets	3,111	2,025
Total current assets	111,358	117,543
Property and equipment, net	2,593	2,319
Long-term marketable securities	—	10,482
Other assets	1,804	371
Total assets	$ 115,755	$ 130,715
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 2,522	$ 3,070
Accrued expenses	5,912	6,944
Deferred rent	—	232
Deferred revenue	20,903	21,635
Total current liabilities	29,337	31,881
Deferred rent, net of current portion	312	67
Deferred revenue, net of current portion	29,559	28,773
Commitments (Note 9)		
Stockholders' equity		
Preferred stock, $0.0001 par value; 25,000,000 shares authorized; 0 shares issued and outstanding at March 31, 2018 and December 31, 2017, respectively	—	—
Common stock, $0.0001 par value; 175,000,000 shares authorized; 22,869,962 and 22,765,017 shares issued and outstanding at March 31, 2018 and December 31, 2017, respectively	3	3
Additional paid-in capital	169,018	168,018
Accumulated other comprehensive loss	(162)	(149)
Accumulated deficit	(112,312)	(97,878)
Total stockholders' equity	56,547	69,994
Total liabilities and stockholders' equity	$ 115,755	$ 130,715

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

Mersana Therapeutics, Inc.
Condensed Consolidated Statements of Operations and Comprehensive Loss
(unaudited)
(in thousands, except share and per share data)

	Three months ended March 31, 2018	Three months ended March 31, 2017
Collaboration revenue	$ 3,064	$ 4,290
Operating expenses:		
Research and development	12,256	10,106
General and administrative	3,571	2,296
Total operating expenses	15,827	12,402
Other income:		
Interest income	360	51
Total other income	360	51
Net loss	$ (12,403)	$ (8,061)
Other comprehensive loss:		
Unrealized loss on marketable securities	(13)	—
Comprehensive loss	$ (12,416)	$ (8,061)
Net loss attributable to common stockholders — basic and diluted	$ (12,403)	$ (8,061)
Net loss per share attributable to common stockholders — basic and diluted	$ (0.54)	$ (6.02)
Weighted-average number of common shares used in net loss per share attributable to common stockholders — basic and diluted	22,816,521	1,338,475

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

Mersana Therapeutics, Inc.
Condensed Consolidated Statements of Cash Flows
(unaudited)
(in thousands)

	Three months ended March 31, 2018	Three months ended March 31, 2017
Cash flows from operating activities		
Net loss	$ (12,403)	$ (8,061)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	258	209
Loss on disposal of fixed assets	20	—
Net amortization of premiums and discounts on investments	(157)	—
Stock-based compensation	745	264
Change in deferred rent	13	(28)
Changes in operating assets and liabilities:		
Accounts receivable	496	339
Prepaid expenses and other current assets	(1,086)	(509)
Other assets	(1,433)	(1,025)
Accounts payable	(617)	(53)
Accrued expenses	(1,249)	589
Deferred revenue	(1,977)	(2,635)
Net cash used in operating activities	(17,390)	(10,910)
Cash flows from investing activities		
Maturities of marketable securities	23,165	—
Purchase of property and equipment	(267)	(471)
Net cash provided by (used in) investing activities	22,898	(471)
Cash flows from financing activities		
Proceeds from exercise of stock options	255	104
Payments of initial public offering costs	—	(505)
Net cash provided by (used in) financing activities	255	(401)
Increase (decrease) in cash, cash equivalents and restricted cash	5,763	(11,782)
Cash, cash equivalents and restricted cash, beginning of period	26,962	100,668
Cash, cash equivalents and restricted cash, end of period	$ 32,725	$ 88,886
Supplemental disclosures of non-cash activities:		
Purchases of property and equipment included in accounts payable and accrued expenses	$ 320	$ 154
Adjustment to accumulated deficit and deferred revenue upon adoption of Topic 606	$ 2,031	$ —

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

Mersana Therapeutics, Inc.
Notes to condensed consolidated financial statements
(unaudited)
(in thousands, except share and per share data)

1. Nature of business and basis of presentation

Mersana Therapeutics, Inc. is a clinical stage company located in Cambridge, Massachusetts. The Company is advancing a proprietary pipeline of targeted oncology therapeutics leveraging its Dolaflexin® antibody drug conjugate (ADC) platform. The Company's first product candidate, XMT-1522, an ADC designed to address a much broader population of patients with HER2-expressing tumors than served by currently approved HER2 therapies, is currently in a Phase 1 dose escalation study. The Company's second product candidate, XMT-1536, an ADC targeting NaPi2b, an antigen broadly expressed in certain types of cancer, is also in a Phase 1 dose escalation study. In addition, the Company has established a strategic partnership with Takeda Pharmaceutical Company Limited (Takeda) under which Takeda obtained rights to XMT-1522 outside of the United States and Canada. The Company has also established strategic research and development partnerships with Takeda and Merck KGaA for the development and commercialization of additional ADC product candidates against a limited number of targets selected by the Company's partners based on the Company's Dolaflexin platform.

The Company is subject to risks common to companies in the biotechnology industry, including but not limited to, risks of failure of preclinical studies and clinical trials, the need to obtain marketing approval for any drug product candidate that it may identify and develop, the need to successfully commercialize and gain market acceptance of its product candidates, dependence on key personnel, protection of proprietary technology, compliance with government regulations, development of technological innovations by competitors, reliance on third party manufacturers and the ability to transition from pilot-scale production to large-scale manufacturing of products.

On July 3, 2017, the Company completed an initial public offering (IPO), in which the Company issued and sold 5,000,000 shares of its common stock at a public offering price of $15.00 per share, for aggregate gross proceeds of $75,000. The Company received $67,420 in net proceeds after deducting $7,580 of underwriting discounts and commissions and offering costs. On August 2, 2017, the Company issued and sold 51,977 shares of common stock at $15.00 per share for gross proceeds of $780 upon the partial exercise of the underwriters' overallotment option. The Company received net proceeds of $725 after deducting $55 in underwriting discounts and commissions.

In connection with preparing for the IPO, the Company effected a 1-for-4.5 reverse stock split of the Company's common stock. The reverse stock split became effective on June 15, 2017. The par value and authorized shares of common stock and convertible preferred stock were not adjusted as a result of the reverse stock split. All share and per share amounts in the financial statements and the notes thereto have been retroactively adjusted for all periods presented to give effect to this reverse stock split, including reclassifying an amount equal to the reduction in par value of common stock to additional paid-in capital.

The Company has incurred net losses since inception. The Company's net loss was $12,403 for the three months ended March 31, 2018 and $38,707 for the year ended December 31, 2017. The Company expects to continue to incur operating losses for at least the next several years. As of March 31, 2018, the Company had an accumulated deficit of $112,312. The future success of the Company is dependent on its ability to identify and develop its product candidates, and ultimately upon its ability to attain profitable operations. The Company has devoted substantially all of its financial resources and efforts to research and development and general and administrative expense to support such research and development. The Company's net losses may fluctuate significantly from quarter to quarter and year to year. Net losses and negative cash flows have had, and will continue to have, an adverse effect on the Company's stockholders' deficit and working capital. The Company believes that its existing cash, cash equivalents and marketable securities as of March 31, 2018, will enable it to fund its operating plan into the second half of 2019, which the Company expects will allow it to achieve initial clinical data readouts for its two lead development programs.

The Company's unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States (U.S. GAAP) and the rules and regulations of the Securities and Exchange Commission (SEC). Any reference in these notes to applicable guidance is meant to refer to the authoritative United States generally accepted accounting principles as found in the Accounting Standards Codification (ASC) and Accounting Standards Updates (ASU) of the Financial Accounting Standards Board (FASB). Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. GAAP

Mersana Therapeutics, Inc.
Notes to condensed consolidated financial statements (continued)
(unaudited)
(in thousands, except share and per share data)

have been condensed or omitted from this report, as is permitted by such rules and regulations. Accordingly, these financial statements should be read in conjunction with the audited financial statements as of and for the year ended December 31, 2017 and the notes thereto, included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2017 filed with the SEC on March 28, 2018.

The unaudited condensed consolidated financial statements have been prepared on the same basis as the audited financial statements. In the opinion of the Company’s management, the accompanying unaudited condensed consolidated financial statements contain all adjustments which are necessary to present fairly the Company’s financial position as of March 31, 2018, the results of its operations for the three months ended March 31, 2018 and 2017 and cash flows for the three months ended March 31, 2018 and 2017. Such adjustments are of a normal and recurring nature, other than the adjustments associated with the adoption of ASC Topic 606, *Revenue from Contracts with Customers (Topic 606)*. The results for the three months ended March 31, 2018 are not necessarily indicative of the results for the year ending December 31, 2018, or for any future period.

Effective January 1, 2018, the Company adopted the requirements of Topic 606 using the modified retrospective method as discussed below in Note 2: Summary of Significant Accounting Policies. All 2018 amounts and disclosures set forth in this Form 10-Q reflect these changes.

2. Summary of Significant Accounting Policies

Principles of Consolidation

The accompanying condensed consolidated financial statements include those of the Company and its subsidiary, Mersana Securities Corp. All intercompany balances and transactions have been eliminated.

Use of Estimates

The preparation of the Company’s 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, equity, revenue, expenses and related disclosure of contingent assets and liabilities at the date of the financial statements and reported amounts of revenue and expenses during the reporting period. On an ongoing basis, the Company's management evaluates its estimates, which include, but are not limited to, management's judgments with respect to the performance obligations and estimated selling prices within its revenue arrangements, accrued expenses, valuation of stock-based awards and income taxes. Actual results could differ from those estimates.

The Company utilized significant estimates and assumptions in determining the fair value of its common stock prior to the Company’s IPO. The Company has utilized various valuation methodologies in accordance with the framework of the American Institute of Certified Public Accountants Technical Practice Aid, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*, to estimate the fair value of its common stock. Each valuation methodology includes estimates and assumptions that require the Company’s judgment. These estimates and assumptions include a number of objective and subjective factors, including external market conditions, the prices at which the Company sold shares of preferred stock, the superior rights and preferences of securities senior to the Company’s common stock at the time of, and the likelihood of, achieving a liquidity event, such as an initial public offering or sale. Significant changes to the key assumptions used in the valuations could result in different fair values of common stock at each valuation date.

Segment Information

Operating segments are defined as components of an enterprise about which separate discrete information is available for evaluation by the chief operating decision-maker in deciding how to allocate resources and assess performance. The Company and the Company's chief operating decision-maker, the Company's chief executive officer, view the Company's operations and manage its business as a single operating segment, which is the business of discovering and developing ADCs.

Mersana Therapeutics, Inc.
Notes to condensed consolidated financial statements (continued)
(unaudited)
(in thousands, except share and per share data)

Research and Development

The Company expenses all costs incurred in performing research and development activities. Research and development expenses include salaries and benefits, materials and supplies, preclinical expenses, manufacturing expenses, stock-based compensation expense, depreciation of equipment, contract services and other outside expenses. Costs of certain development activities, such as manufacturing, are recognized based on an evaluation of the progress to completion of specific tasks. Payments for these activities are based on the terms of the individual arrangements, which may differ from the pattern of costs incurred, and are reflected in the financial statements as prepaid or accrued research and development costs. Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are deferred and capitalized. The capitalized amounts are expensed as the related goods are delivered or the services are performed. Costs associated with collaboration agreements are included in research and development expense.

Revenue Recognition

Effective January 1, 2018, the Company adopted the provisions of Topic 606, using the modified retrospective transition method. Under this method, the Company recorded the cumulative effect of initially applying the new standard to all contracts in process as of the date of adoption. This standard applies to all contracts with customers, except for contracts that are within the scope of other standards, such as leases, insurance, collaboration arrangements and financial instruments.

The adoption of the new revenue recognition guidance results in increases of $2,031 in deferred revenue and accumulated deficit as of January 1, 2018. For the three months ended March 31, 2018, revenue decreased by $897, net loss increased by $897 and basic and diluted net loss per share increased by $0.04 per share based on revenue recognition under Topic 606 as compared to the Company's prior revenue recognition methodology under ASC 605 *Revenue Recognition*. These changes were primarily caused by the differences in determining and allocating transaction price under Topic 606.

The Company enters into collaboration agreements which are within the scope of Topic 606, under which the Company licenses rights to its technology and certain of the Company's product candidates and performs research and development services for third parties. The terms of these arrangements typically include payment of one or more of the following: non-refundable, up-front fees; reimbursement of research and development costs; development, regulatory and commercial milestone payments; and royalties on net sales of licensed products.

Under Topic 606, an entity recognizes revenue when its customer obtains control of promised goods or services, in an amount that reflects the consideration which the entity expects to receive in exchange for those goods or services. To determine the appropriate amount of revenue to be recognized for arrangements determined to be within the scope of Topic 606, the Company performs the following five steps: (i) identification of the promised goods or services in the contract; (ii) determination of whether the promised goods or services are performance obligations; (iii) measurement of the transaction price, including the constraint on variable consideration; (iv) allocation of the transaction price to the performance obligations; and (v) recognition of revenue when (or as) the Company satisfies each performance obligation. The Company only applies the five-step model to contracts when it is probable that the entity will collect consideration it is entitled to in exchange for the goods or services it transfers to the customer.

The promised good or services in the Company's arrangement typically consist of license rights to the Company's intellectual property and research and development services. The Company also has optional additional items in contracts, which are considered marketing offers and are accounted for as separate contracts with the customer if such option is elected by the customer, unless the option provides a material right which would not be provided without entering into the contract. Performance obligations are promised goods or services in a contract to transfer a distinct good or service to the customer. Promised goods or services are considered distinct when (i) the customer can benefit from the good or service on its own or together with other readily available resources or (ii) the promised good or service is separately identifiable from other promises in the contract. In assessing whether promised good or services are distinct, the Company considers factors such as the stage of development of the underlying intellectual property, the capabilities of the customer to develop the intellectual property on their own or whether the required expertise is readily available.

The Company estimates the transaction price based on the amount expected to be received for transferring the promised goods or services in the contract. The consideration may include both fixed consideration or variable consideration. At the inception of each arrangement that includes variable consideration and at each reporting period, the Company evaluates the amount of potential payment and the likelihood that the payments will be received. The Company utilizes either the most likely amount method or expected amount method to estimate the amount expected to be received based on which method better predicts the amount expected to be received. If it is probable that a significant revenue reversal would not occur, the variable consideration is included in the transaction price. We assessed each of our revenue generating arrangements in order to determine whether a significant financing component exists and concluded that a significant financing component does not exist in any of our arrangements because: (a) the promised consideration approximates the cash selling price of the promised goods and services or any significant difference is due to factors other than financing; and (b) timing of payment approximates the transfer of goods and services and performance is over a relatively short period of time within the context of the entire term of the contract.

The Company's contracts often include development and regulatory milestone payments. At contract inception and at each reporting period, the Company evaluates whether the milestones are considered probable of being reached and estimates the amount to be included in the transaction price using the most likely amount method. If it is not probable that a significant revenue reversal would not occur, the associated milestone value is included in the transaction price. Milestone payments that are not within the Company's control or the licensee's control, such as regulatory approvals, are not included in the transaction price. At the end of each subsequent reporting period, the Company re-evaluates the probability of achievement of such development milestones and any related constraint, and if necessary, adjusts its estimate of the overall transaction price. Any such adjustments are recorded on a cumulative catch-up basis, which would affect license, collaboration and other revenues and earnings in the period of adjustment.

For arrangements that include sales-based royalties, including milestone payments based on the level of sales, and the license is deemed to be the predominant item to which the royalties relate, the Company recognizes revenue at the later of (i) when the related sales occur, or (ii) when the performance obligation to which some or all of the royalty has been allocated has been satisfied (or partially satisfied). To date, the Company has not recognized any royalty revenue resulting from any of the Company's collaboration arrangements.

The Company allocates the transaction price based on the estimated standalone selling price of the underlying performance obligations or in the case of certain variable consideration to one or more performance obligations. The Company must develop assumptions that require judgment to determine the stand-alone selling price for each performance obligation identified in the contract. The Company utilizes key assumptions to determine the stand-alone selling price, which may include other comparable transactions, pricing considered in negotiating the transaction and the estimated costs to complete the respective performance obligation. Certain variable consideration is allocated specifically to one or more performance obligations in a contract when the terms of the variable consideration relate to the satisfaction of the performance obligation and the resulting amounts allocated to each performance obligation are consistent with the amounts the Company would expect to receive for each performance obligation.

For performance obligations consisting of licenses and other promises, the Company utilizes judgment to assess the nature of the combined performance obligation to determine whether the combined performance obligation is satisfied over time or at a point in time and, if over time, the appropriate method of measuring progress for purposes of recognizing revenue from non-refundable, up-front fees. The Company evaluates the measure of progress each reporting period and, if necessary, adjusts the measure of performance and related revenue recognition. If the license to the Company's intellectual property is determined to be distinct from the other performance obligations identified in the arrangement, the Company will recognize revenue from non-refundable, up-front fees allocated to the license when the license is transferred to the customer and the customer is able to use and benefit from the license.

The Company receives payments from its customers based on billing schedules established in each contract. Such billings generally have 30 day terms. Up-front payments and fees are recorded as deferred revenue upon receipt or when

Mersana Therapeutics, Inc.
Notes to condensed consolidated financial statements (continued)
(unaudited)
(in thousands, except share and per share data)

due until the Company performs its obligations under these arrangements. Amounts are recorded as accounts receivable when the right to consideration is unconditional.

Collaborative Arrangements

The Company records the elements of its collaboration agreements that represent joint operating activities in accordance with ASC Topic 808, *Collaborative Arrangements* (ASC 808). Accordingly, the elements of the collaboration agreements that represent activities in which both parties are active participants and to which both parties are exposed to the significant risks and rewards that are dependent on the commercial success of the activities, are recorded as collaborative arrangements. The Company considers the guidance in ASC Topic 606 in determining the appropriate treatment for the transactions between the Company and its collaborative partner and the transactions between the Company and third parties. Generally, the classification of transactions under the collaborative arrangements is determined based on the nature and contractual terms of the arrangement along with the nature of the operations of the participants. To the extent revenue is generated from a collaboration, the Company will recognize its share of the net sales on a gross basis if it is deemed to be the principal in the transactions with customers, or on a net basis if it is instead deemed to be the agent in the transactions with customers, consistent with the guidance in Topic 606.

Fair Value Measurements

Fair value is defined as the price that would be received upon sale of an asset or paid to transfer a liability between market participants at measurement dates. ASC Topic 820 *Fair Value Measurement* (ASC 820), establishes a three-level valuation hierarchy for instruments measured at fair value. The hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows:

Level 1—Inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2—Inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.

Level 3—Inputs to the valuation methodology are unobservable and significant to the fair value measurement.

Cash and Cash Equivalents

The Company considers all highly liquid investments with an original maturity, or a remaining maturity at the time of purchase, of three months or less to be cash equivalents. The Company invests excess cash primarily in money market funds, commercial paper and government agency securities, which are highly liquid and have strong credit ratings. These investments are subject to minimal credit and market risks. Cash and cash equivalents are stated at cost, which approximates market value.

The following amounts were presented as cash, cash equivalents and restricted cash:

	Three months ended March 31, 2018		Three months ended March 31, 2017	
	Beginning of period	End of period	Beginning of period	End of period
Cash and cash equivalents	$ 26,591	$ 32,354	$ 100,297	$ 88,515
Restricted cash included in other assets	371	371	371	371
Total cash, cash equivalents and restricted cash per statement of cash flows	$ 26,962	$ 32,725	$ 100,668	$ 88,886

Mersana Therapeutics, Inc.
Notes to condensed consolidated financial statements (continued)
(unaudited)
(in thousands, except share and per share data)

Marketable Securities

Short-term marketable securities consist of investments with maturities greater than three months and less than one year from the balance sheet date. Long-term marketable securities consist of investments with maturities greater than one year that are not expected to be used to fund current operations. The Company classifies all of its marketable securities as available-for-sale. Accordingly, these investments are recorded at fair value. Amortization and accretion of discounts and premiums are recorded as interest income within other income. Unrealized gains and losses on available-for-sale securities are included in other comprehensive loss as a component of stockholders’ equity until realized.

Other Assets

The Company has recorded other assets of $1,804 and $371 as of March 31, 2018 and December 31, 2017, respectively. The March 31, 2018 amount is comprised of restricted cash of $371 held as security deposits for a standby letter of credit related to a facility lease and a corporate credit card program and $1,433 held by a service provider. The December 31, 2017 amount is comprised of restricted cash.

Accounting for Stock-based Compensation

The Company accounts for its stock-based compensation in accordance with ASC Topic 718 Compensation—*Stock Compensation* (ASC 718). ASC 718 requires all stock-based payments to employees and directors to be recognized as expense in the statements of operations based on their grant date fair values. Expense related to stock awards to non-employees is required to be recognized in the statement of operations based on the awards' vesting date fair values. The Company estimates the fair value of options granted using the Black-Scholes option pricing model.

The Black-Scholes option pricing model requires inputs based on certain subjective assumptions, including (i) the expected stock price volatility, (ii) the calculation of expected term of the award, (iii) the risk-free interest rate and (iv) the expected dividends. Due to the lack of a public market for the Company's common stock prior to completion of the IPO and a lack of company-specific historical and implied volatility data, the Company has based its estimate of expected volatility on the historical volatility of a group of similar companies that are publicly traded. The historical volatility is calculated based on a period of time commensurate with the expected term assumption. The computation of expected volatility is based on the historical volatility of a representative group of companies with similar characteristics to the Company, including stage of product development and life science industry focus. The Company uses the simplified method as prescribed by the SEC Staff Accounting Bulletin No. 107, *Share-Based Payment*, to calculate the expected term for options granted to employees as it does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term. For options granted to non-employees, the Company utilizes the contractual term of the arrangement as the basis for the expected term assumption. The risk-free interest rate is based on a treasury instrument whose term is consistent with the expected term of the stock options. The expected dividend yield is assumed to be zero as the Company has never paid dividends and has no current plans to do so.

There were significant judgments and estimates inherent in the determination of the fair value of our common stock prior to the closing of the IPO. These estimates and assumptions include a number of objective and subjective factors, including external market conditions, the prices at which the Company sold shares of preferred stock, the superior rights and preferences of securities senior to its common stock at the time of, and the likelihood of, achieving a liquidity event, such as an IPO or sale.

In the first quarter of 2017, the Company made an accounting policy election to recognize forfeitures as they occur upon adoption of guidance per ASU No. 2016-09. The adoption of this ASU did not have a material impact on the Company's financial statements.

Mersana Therapeutics, Inc.
Notes to condensed consolidated financial statements (continued)
(unaudited)
(in thousands, except share and per share data)

Net Loss per Share

Basic net loss per common share is calculated by dividing the net loss attributable to common stockholders by the weighted-average number of common shares outstanding during the period, without consideration for potentially dilutive securities. Diluted net loss per share is computed by dividing the net loss attributable to common stockholders by the weighted-average number of common shares and potentially dilutive securities outstanding for the period determined using the treasury stock and if-converted methods.

For purposes of the diluted net loss per share calculation, convertible preferred stock, warrants to purchase common stock and options to purchase common stock are considered to be potentially dilutive securities, but are excluded from the calculation of diluted net loss per share because their effect would be anti-dilutive and therefore, basic and diluted net loss per share were the same for all periods presented.

The following table sets forth the outstanding potentially dilutive securities that have been excluded from the calculation of diluted net loss per share because to include them would be anti-dilutive (in common stock equivalent shares):

	Three months ended March 31,	
	2018	2017
Series A-1 convertible preferred stock	—	5,574,467
Series B-1 convertible preferred stock	—	7,319,307
Series C-1 convertible preferred stock	—	3,260,897
Warrants	110,365	129,491
Stock options	3,905,845	3,282,849
	4,016,210	19,567,011

Patent Costs

The Company expenses patent application and related legal costs as incurred and classifies such costs as general and administrative expenses in the accompanying unaudited condensed consolidated statements of operations.

Income Taxes

The Company accounts for income taxes using the liability method. The difference between the financial statement and tax basis of the assets and liabilities is determined annually. Deferred income tax assets and liabilities are computed using the tax laws and rates that are expected to apply for periods in which such differences reverse. Valuation allowances are established, if necessary, to reduce the deferred tax asset to the amount that will more likely than not be realized.

The Company recognizes the effect of income tax positions only if those positions are more likely than not of being sustained. Recognized income tax positions are measured at the largest amount that is greater than 50% likely of being realized. Changes in recognition or measurement are reflected in the period in which the change in judgment occurs.

Comprehensive Income (Loss)

Comprehensive income (loss) is comprised of net loss and other comprehensive loss. For the three months ended March 31, 2018, other comprehensive loss consisted of unrealized loss on marketable securities. For the three months ended March 31, 2017, comprehensive loss equaled the net loss.

Concentration of Credit Risk and Off-Balance Sheet Risk

The Company has no financial instruments with off-balance sheet risk, such as foreign exchange contracts, option contracts, or other foreign hedging arrangements. Financial instruments that potentially subject the Company to

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concentrations of credit risk primarily consist of cash equivalents and marketable securities. Under its investment policy, the Company limits amounts invested in such securities by credit rating, maturity, industry group, investment type and issuer, except for securities issued by the U.S. government. The Company is not exposed to any significant concentrations of credit risk from these financial instruments.

Recently Issued Accounting Pronouncements

In January 2016, the FASB issued ASU No. 2016-01 *Financial Instruments* (ASU No. 2016-01) related to the recording of financial assets and financial liabilities. Under the amended guidance, equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) are to be measured at fair value with changes in fair value recognized in net income (loss). However, an entity has the option to measure equity investments without readily determinable fair values either (i) at fair value or (ii) at cost, adjusted for changes in observable prices minus impairment. Changes in measurement under either alternative will be recognized in net income (loss). The amended guidance became effective January 1, 2018. The Company adopted the new standard effective January 1, 2018. Based on the Company’s current investment holdings, the adoption of this new standard did not have a material impact on its consolidated financial position or results of operations.

In February 2016, the FASB issued ASU No. 2016-02, *Leases* (ASU No. 2016-02), which will replace the existing guidance in ASC 840, Leases. The updated standard aims to increase transparency and comparability among organizations by requiring lessees to recognize lease assets and lease liabilities on the balance sheet and requiring disclosure of key information about leasing arrangements. This standard is effective for the Company in the fiscal year beginning after December 15, 2018, but early adoption is permissible. The Company is currently evaluating the potential impact that ASU No. 2016-02 may have on its financial position and results of operations.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows: Classification of Certain Cash Receipts and Cash Payments*. The new standard clarifies certain aspects of the statement of cash flows, including the classification of contingent consideration payments made after a business combination and several other clarifications not currently applicable to the Company. The new standard also clarifies that an entity should determine each separately identifiable source or use within cash receipts and cash payments on the basis of the nature of the underlying cash flows. In situations in which cash receipts and payments have aspects of more than one class of cash flows and cannot be separated by source or use, the appropriate classification should depend on the activity that is likely to be the predominant source or use of cash flows for the item. The Company adopted the new standard effective January 1, 2018. The adoption of this standard did not have a material impact on the Company’s consolidated statement of cash flows.

In November 2016, the FASB issued ASU No. 2016-18, *Statement of Cash Flows: Restricted Cash* (ASU No. 2016-18). The amendments in this update require that amounts generally described as restricted cash and restricted cash equivalents be included within cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. The Company adopted the new standard effective January 1, 2018. The adoption of this standard did not have a material impact on the Company’s consolidated statement of cash flows.

In May 2017, the FASB issued ASU No. 2017-09, *Compensation—Stock Compensation (Topic 718): Scope of Modification Accounting*. This guidance is intended to provide clarity and reduce diversity in practice as to when changes to the terms or conditions of share-based payments are accounted for as modifications. Under this new guidance, entities will apply modification accounting if the fair value, vesting conditions or classification of the award changes. This guidance will be effective for annual reporting periods beginning after December 15, 2017, including interim periods within those annual reporting periods, and early adoption is permitted. The guidance per ASU 2017-09 is to be adopted prospectively to an award modified on or after the adoption date. The Company adopted the new standard effective January 1, 2018. The adoption of this standard did not have a material impact on the Company’s consolidated statement of cash flows.

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3. Collaboration agreements

Takeda XMT-1522 strategic partnership

In January 2016, the Company entered into a Development Collaboration and Commercial License Agreement with Takeda through its wholly owned subsidiary, Millennium Pharmaceuticals, Inc. for the development and commercialization of XMT-1522 (the XMT-1522 Agreement). Under the XMT-1522 Agreement, Takeda was granted the exclusive right to commercialize XMT-1522 outside of the United States and Canada. Under the XMT-1522 Agreement, the Company is responsible for conducting certain Phase 1 development activities for XMT-1522, including the ongoing Phase 1 clinical study, at its own expense. Takeda has the option to conduct Phase 1 development activities at its own expense within its territory. The parties will collaborate on the further development of XMT-1522 in accordance with a global development plan (Post-Phase 1 Development). The parties will share equally all clinical stage manufacturing costs and any Post-Phase 1 Development costs incurred in the performance of activities for the purpose of obtaining regulatory approval in either the United States or Canada and in certain other major markets in the rest of the world. Each party will be responsible for all Post-Phase 1 Development costs incurred in the performance of activities solely for the purpose of obtaining regulatory approval in such party's territory. Each party may conduct independent development of XMT-1522, subject to certain restrictions.

The Company received an upfront payment of $26,500 upon execution of the XMT-1522 Agreement. In addition, the Company was entitled to a milestone payment of $20,000 upon achievement of the IND Clearance Date (as defined therein). The Company achieved the IND Clearance Date in October 2016.

In addition to the milestone payment upon achievement of the IND Clearance Date, the Company is entitled to receive future development, regulatory and commercial milestones of up to $288,000 consisting of $87,000 of development milestones, $128,000 of regulatory milestones and $73,000 of commercial milestones, as well as royalties in the low to mid teens on net sales of XMT-1522 in Takeda's territory during the applicable royalty term. There are development milestones payable upon the achievement of nine separate events: the initiation of Phase 2 clinical trials and Phase 3 clinical trials for four separate specified patient populations and the initiation of a Phase 3 clinical trial for one additional unspecified patient population. There are 14 regulatory milestones, which are payable upon regulatory submissions, regulatory approvals and pricing approvals, as applicable, for the U.S., European Union and Japanese markets for up to four separate patient populations and multiple label indications. In addition, a regulatory milestone is payable upon the receipt of regulatory and pricing approval in two specified markets other than the United States, the European Union or Japan. There are three individual commercial milestones, which are payable upon the attainment of certain thresholds for annual net sales. The next potential milestone the Company will be eligible to receive is a development milestone of $12,000 related to the initiation of a Phase 2 clinical trial.

The XMT-1522 Agreement expires upon the expiration of the royalty term for XMT-1522, after which time, Takeda will have a perpetual, royalty-free license. However, Takeda may terminate the XMT-1522 Agreement in its entirety for convenience upon 30 days' prior written notice at any time up to the initiation of the first Phase 2 clinical study of XMT-1522 or upon 90 days' prior written notice following the initiation of the first Phase 2 clinical study of XMT-1522. Each party may terminate the XMT-1522 Agreement in its entirety upon bankruptcy or similar proceedings of the other party and in its entirety or on a country-by-country basis upon an uncured material breach of the agreement by the other party. Following termination, XMT-1522 will revert to the Company for further development and commercialization.

Takeda strategic research and development partnership

In March 2014, the Company entered into a Research Collaboration and Commercial License Agreement with Takeda through Takeda’s wholly owned subsidiary, Millennium Pharmaceuticals, Inc. (the 2014 Agreement). The 2014 Agreement was amended in January 2015 and amended and restated in January 2016 (the 2016 Restated Agreement). The agreements provide Takeda with the right to develop ADCs directed to a total of seven exclusive targets, designated by Takeda, over a specified period of time. Takeda will be responsible for the product development and marketing of any products resulting from this collaboration. To date, the Company has received $24,800 in non-refundable upfront fees, technology access fees or option exercise fees.

For the two targets initially under the 2014 Agreement, the Company initially grants a research license upon designation of a target. To receive a development and commercialization license for these designated targets, Takeda is required to pay an additional option exercise fee of $1,300. For remaining five targets, the Company grants a research, development and commercialization license upon the designation of a target.

For each designated target, the Company and Takeda develop research plans to evaluate Takeda's antibodies as ADCs incorporating the Company's technology. The Company receives service fees for its efforts under the research plans. The goal of the research plans is to provide Takeda with sufficient information to formally nominate a development candidate and begin Investigational New Drug Application (IND), enabling studies or cease development on the designated target.

As of March 31, 2018, Takeda had designated four targets and received development and commercialization licenses for the first, third and fourth designated targets and a research license for the second designated target. Takeda has limited replacement rights for two designated targets, subject to certain contractual restrictions. Takeda is required to pay $500 to utilize the second limited replacement right.

As of March 31, 2018, if products are successfully developed and commercialized, the Company is entitled to receive aggregate milestones of up to $769,000 for all eligible designated targets consisting of $79,000 in development milestones, $239,000 in regulatory milestones, and $451,000 in commercial milestones. The total milestones payable on the first designated targets is $136,000 and the total milestones payable on each of the third, fifth, sixth and seventh designated target are $158,250. There are four individual development milestones per target, which are payable upon either the initiation of a GLP toxicology study or the filing of an IND application (depending upon the designated target), and the initiation of Phase 1 through Phase 3 clinical trials. There are six or eight individual regulatory milestones per target, depending on the target. These are payable upon regulatory submissions, regulatory approvals and pricing approvals, as applicable, for the U.S., European Union and Japanese markets and regulatory approvals for both a second and third indication. There are six individual commercial milestones, which are payable upon the first commercial sale in each of the U.S., European Union and Japanese markets and upon the attainment of three separate defined thresholds for annual net sales. The next potential milestone payment the Company will be eligible to receive is either a development milestone of $500 related to a GLP toxicology study or a development milestone of $750 related to the filing of an IND, depending upon the designated target. The Company is also entitled to receive royalties on product sales, if any, during the applicable royalty term. Royalties payable on the first and second designated targets are in the mid single digits and royalties payable on the third, fourth, fifth, sixth and seventh designated target are in the mid to high single digits.

The Company may elect to exercise an option to co-develop and co-commercialize one product incorporating either Takeda's third, fourth, fifth, sixth or seventh target in the United States for a payment of $15,000. If the Company elects to exercise the option to co-develop and co-commercialize a product, the Company will share in 50% of the profits related to United States. The Company will be responsible for 50% of costs incurred specifically for the United States and 30% of global development costs. Any costs incurred specifically for a foreign country will be borne 100% by Takeda. If the Company elects to co-develop and co-commercialize a product, certain regulatory milestones and royalties related to the United States for that target would not be paid by Takeda.

Unless earlier terminated, the 2016 Restated Agreement will expire upon the expiration of the last royalty term for a product under the agreement, after which time, Takeda will have a perpetual, royalty-free license. Except with respect to the target antigen of a product for which the Company exercised its option to co-develop and co-commercialize in the United States, Takeda may terminate the 2016 Restated Agreement in its entirety or with respect to any target for convenience upon 45 days' prior written notice. Each party may terminate the 2016 Restated Agreement in its entirety upon bankruptcy or similar proceedings of the other party or upon an uncured material breach of the agreement by the

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other party. However, if such breach only relates to one target, the agreement may only be terminated with respect to such target.

Accounting Analysis

For periods prior to January 1, 2018, the Company applied the provisions of ASC 605 in accounting for these arrangements. Refer to the Company's Annual Report on Form 10-K for the year ended December 31, 2017 filed with the Securities and Exchange Commission on March 28, 2018 for the accounting analysis under these provisions.

Under ASC 605 and Topic 606, the Company has concluded that the 2016 Restated Agreement and the XMT-1522 Agreement should be accounted for as one arrangement due in part because the agreements are with the same party and were negotiated and executed contemporaneously. Further, in applying the contract modification practical expedient, the Company has aggregated the effect of all modifications through the initial date of application of Topic 606 for the purposes of (i) identifying the satisfied and unsatisfied performance obligations, (ii) determining the transaction price and (iii) allocating the transaction price to the satisfied and unsatisfied performance obligations.

The performance obligations and the allocated transaction price as of the date of initial application of Topic 606 are as follows:

Performance obligations	**Allocated Transaction Price**
XMT-1522 license and research services	$ 49,828
Joint research committee services for XMT-1522	449
Exclusive license to the first designated target and research services	6,611
Research license to the second designated target and research services	1,017
Material right related to the exclusive license to the second designated target	526
Exclusive license to the third designated target and research services	4,974
Exclusive license to the fourth designated target and research services	3,678
Material right related to the license to the fifth designated target and research services	3,506
Material right related to the license to the sixth designated target and research services	3,506
Material right to license to the seventh designated target and research services	3,506
Material right related to first replacement right for a designated target	3,506
Material right related to the second replacement right to a designated target	3,116
Rights to future technological improvements	1,750
Joint research committee services	150
	$ 86,123

The Company has concluded the license related to each of the designated targets is not distinct from the research services performed related to each of the designated targets as Takeda cannot obtain the benefit of the license without the related research services. Each license to a designated target and the related services performance obligation is considered distinct from every other license to a designated target and related services performance obligation as each research plan is pursued independent of the any other research plans for other designated targets. Further, the material rights provided in the agreement provide Takeda incremental rights for either no additional consideration or for additional fees that contain a significant discount. The material rights are distinct from the other performance obligations in the arrangement as they are options in the contract and are not required for Takeda to obtain the benefit of the other promised goods or services in the arrangement.

Similarly, the Company concluded that the XMT-1522 license and the related research and development services, including the Phase 1 development and the transfer certain materials and know how related to the Company's manufacturing processes are one performance obligation. The license to the Company's intellectual property is not

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distinct from the research and related development services that the Company is obligated to perform. Takeda would not have the ability to realize the value of the license without the Company performing the related services.

The Company has concluded that the Post-Phase 1 Development activities under the XMT-1522 Agreement represent joint operating activities in which both parties are active participants and of which both parties are exposed to significant risks and rewards that are dependent on the commercial success of the activities. Accordingly, the Company is accounting for the Post-Phase 1 Development activities in accordance with ASC 808 and they are not considered revenue elements under Topic 606. For the three months ended March 31, 2018 and 2017, the Company was billed approximately $1,723 and $294, respectively, from Takeda representing the Company's share of Post-Phase 1 Development costs incurred by Takeda. These amounts have been reflected as research and development costs in the consolidated statement of operations. The Company did not perform any Post-Phase 1 Development activities or incur any associated costs prior to January 1, 2018. During the three months ended March 31, 2018, the Company billed Takeda $740 related to ASC 808 costs.

As of the date of initial application of Topic 606, the total transaction price for the 2016 Restated Agreement and the XMT-1522 Agreement was $86,123, which includes approximately $14,023 of fees associated with research and development activities which have been or are expected to be received. The Company utilizes the expected value approach to estimate the amount of consideration related to the fees associated with development and research services. The Company utilizes the most likely amount approach to estimate any development and regulatory milestone payments to be received. As of the date of initial application of Topic 606, there were no milestone payments, which had not been received, included in the estimated transaction price. The Company considered the stage of development and the remaining risks associated with the remaining development required to achieve the milestone, as well as whether the achievement of the milestone is outside the control of the Company or Takeda. The milestone payment amounts were fully constrained, as a result of the uncertainty whether any of the associated milestones would be achieved. The Company has determined that any commercial milestones and sales based royalties will be recognized when the related sales occur as they were determined to relate predominantly to the license granted and therefore have also been excluded from the transaction price. The Company will re-evaluate the transaction price in each reporting period and as uncertain events are resolved or other changes in circumstances occur. There were no changes to the transaction price during the quarter ended March 31, 2018.

The transaction price was allocated to the performance obligations based on the relative estimated standalone selling prices of each performance obligation or, in the case of certain variable consideration, to one or more performance obligations. The estimated standalone selling prices for performance obligations which include a license and research services, was developed using the estimated selling price of the license and an estimate of the overall effort to perform the research service and an estimated market rate for research services. The estimated standalone selling price of the licenses was established based on comparable transactions. The estimated standalone selling price for the material rights and rights to future technological improvements were developed based on the estimated selling prices of a license or rights received and any fees payable upon exercise of the associated option, as well as considering the probability that additional technology would be made available or the probability the counterpart would utilize the technology or exercise the option. The estimated standalone selling price for the joint research committee services was developed using an estimate of the time and costs incurred to participate in the committees.

The Company will recognize revenue related to the performance obligations, which include research licenses or an exclusive development and commercialization license and the related research services, over the estimated period of the research and development services using a proportional performance model. The Company measures proportional performance based on the costs incurred relative to the total estimated costs of the research. To the extent that the Company receives fees for the research services as they are performed, these amounts are recorded as deferred revenue. Revenue related to material rights will be recognized when the option is exercised, unless there are additional research services that the Company is required to perform related to the designated target (in which case revenue will be recognized based on the proportional performance model) or at the time the option right lapses. To the extent that the company receives a fee upon exercise of the option, such amounts are recorded as deferred revenue. Revenue related to the material rights related to replacement rights will be recognized over the research term of the replacement target once

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the replacement right is exercised or at the time the right lapses unused. To the extent that the Company receives a fee upon exercise of the replacement right, such amounts are recorded as deferred revenue. Revenue related to future technological improvements and joint research committee services will be recognized ratably over the performance period (which in the case of the joint research committee services approximates the time and cost incurred), which is expected to be ten years and six years, respectively. The Company will reassess the estimated remaining term at each subsequent reporting period.

For the three months ended March 31, 2018 and 2017, the Company recorded total revenue of $2,536 and $3,530, respectively, related to its efforts under the 2016 Restated Agreement and the XMT-1522 Agreement. Included in accounts receivable as of December 31, 2017 was $454 related to the Takeda agreements. Included in accounts payable as of March 31, 2018 was $175 related to the Takeda agreements.

As of March 31, 2018, the Company had $42,877 of deferred revenue related to the Takeda agreements that will be recognized over the remaining performance periods for the applicable obligations.

Takeda invested $10,000 as part of the Company's IPO.

Merck KGaA

In June 2014, the Company entered into a Collaboration and Commercial License Agreement with Merck KGaA (the Merck KGaA Agreement). Upon the execution of the agreement, Merck KGaA paid the Company a nonrefundable technology access fee of $12,000 for the right to develop ADCs directed to six exclusive targets over a specified period of time. No additional fees are due when a target is designated and the commercial license to the target is granted. Merck KGaA will be responsible for the product development and marketing of any products resulting from this collaboration. All six targets were designated prior to 2018.

Under the terms of the agreement, the Company and Merck KGaA develop research plans to evaluate Merck KGaA's antibodies as ADCs incorporating the Company's technology. The Company receives fees for its efforts under the research plans. The goal of the research plans is to provide Merck KGaA with sufficient information to formally nominate a development candidate and begin IND-enabling studies or cease development on the designated target.

In addition to the payments received for research and development activities performed on behalf of Merck KGaA, the Company is also eligible to receive up to a total of $780,000 in future milestones related to all targets under the agreement, plus low to mid single digit royalties on the commercial sales of any resulting products during the applicable royalty term. The total milestones are categorized as follows: development milestones—$84,000; regulatory milestones—$264,000; and sales milestones—$432,000. There are six individual development milestones per target, payable upon the completion of various activities from the delivery of ADCs meeting defined specifications, through the dosing in a Phase 3 clinical trial. There are five regulatory milestones, which are payable upon regulatory approvals for a first indication in each of the U.S., European Union and Japanese markets and regulatory approvals for both a second and a third indication in the United States. There are three individual commercial milestones, which are payable upon the attainment of certain defined thresholds for annual net sales.

Prior to 2018, the Company had received $3,000 related to development milestones under the agreement. There have been no additional milestone payments in the quarter ended March 31, 2018. The next potential milestone payment the Company will be eligible to receive will be a development milestone of $500 on Merck KGaA's designation of a preclinical development candidate for any target. Revenue will be recognized upon achievement of the milestone. The Company and Merck KGaA may also enter into a future supply agreement to provide clinical study material should Merck KGaA pursue clinical development of any candidates nominated under the agreement.

Unless earlier terminated, the agreement will expire upon the expiration of the last royalty term for a product under the agreement, after which time, Merck KGaA will have a perpetual, royalty-free license, or if Merck KGaA does not designate any ADC product candidates produced by the Company under the agreement as preclinical development candidates, upon the expiration of the last to expire research program. Merck KGaA may terminate the agreement in its entirety or with respect to any target for convenience upon 60 days' prior written notice. Each party may terminate the Merck KGaA Agreement in its entirety upon bankruptcy or similar proceedings of the other party or upon an uncured material breach of the agreement by the other party. However, if such breach only relates to one target, the agreement may only be terminated with respect to such target.

Accounting Analysis

For periods prior to January 1, 2018, the Company applied the provisions of ASC 605 in accounting for this arrangement. Refer to the Company's Annual Report on Form 10-K for the year ended December 31, 2017 filed with the Securities and Exchange Commission on March 28, 2018 for the accounting analysis under these provisions.

By applying the contract modification practical expedient, the Company has aggregated the effect of all modifications through the initial date of application of Topic 606 for the purposes of (i) identifying the satisfied and unsatisfied performance obligations, (ii) determining the transaction price and (iii) allocating the transaction price to the satisfied and unsatisfied performance obligations.

The Company identified the following performance obligations under the agreement: (i) exclusive license and research services for six designated targets, (ii) rights to future technological improvements and (iii) participation of project team leaders and providing joint research committee services.

The Company has concluded that each license for a designated target is not distinct from the research services performed related to the designated target as Merck KGaA cannot obtain the benefit of the license without the related research services. Each license for a designated target and the related services performance obligation is considered distinct from every other license for a designated target and related services performance obligation as each research plan is pursued independent of every other research plans for other designated targets.

As of the date of initial application of Topic 606, the total transaction price for the Merck KGaA Agreement was $22,875, which includes approximately $7,875 fees for research and development activities which have been or are expected to be received and $3 million of milestone payments previously earned. The Company utilizes the expected value approach to estimate the amount of consideration related to the payment of fees associated with development and research services. The Company utilizes the most likely amount approach to estimate any development and regulatory milestone payments to be received. As of the date of initial application of Topic 606, there were no milestones payments, which had not already been received, included in the estimated transaction price. The Company considered the stage of development and the remaining risks associated with the remaining development required to achieve the milestone, as well as whether the achievement of the milestone is outside the control of the Company or Merck KGaA. The milestone payment amounts were fully constrained, as a result of the uncertainty whether any of the associated milestones would be achieved. The Company has determined that any commercial milestones and sales based royalties will be recognized when the related sales occur as they were determined to relate predominantly to the license granted and therefore have also been excluded from the transaction price. The Company will re-evaluate the transaction price in each reporting period and as uncertain events are resolved or other changes in circumstances occur. There were no changes to the transaction price during the quarter ended March 31, 2018.

The transaction price was allocated to the performance obligations based on the relative estimated standalone selling prices of each performance obligation or in the case of certain variable consideration to one or more performance obligations. The estimated standalone selling prices for performance obligations, that include a license and research services, were developed using the estimated selling price of the license and an estimate of the overall effort to perform the research service and an estimated market rate for research services. The estimated standalone selling price of the licenses was established based on comparable transactions. The estimated standalone selling price for the rights to future technological improvements was developed based on the estimated selling prices of a license or rights received, as well as considering the probability that additional technology would be made available or the probability the counterpart

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would utilize the technology. The estimated standalone selling price for the joint research committee services was developed using an estimate of the time and costs incurred to participate in the committees.

The transaction price of $22,875 was allocated to the performance obligations as follows: approximately $4,226 for each of the license and corresponding research and development services units of account for the first and second designated targets; $3,439 for each of the license and corresponding research and development services units of account for the third, fourth, fifth and sixth designated target; $425 for rights to future technological improvements; and $242 for joint research committee services.

The Company is recognizing revenue related to the exclusive license and research and development services performance obligation over the estimated period of the research and development services using a proportional performance model. The Company measures proportional performance based on the costs incurred relative to the total costs expected to be incurred. To the extent that the Company receives fees for the research services as they are preformed, these amounts are recorded as deferred revenue. Revenue related to future technological improvements and joint research committee services will be recognized ratably over the performance period (which in the case of the joint research committee services approximate the time and cost incurred each period), which are 10 and 5 years, respectively. The Company is continuing to reassess the estimated remaining term at each subsequent reporting period.

During the three months ended March 31, 2018 and 2017, the Company recorded revenue of $332, and $697, respectively, related to its efforts under the collaboration agreement. Included in accounts receivable as of March 31, 2018 and December 31, 2017 was $94 and $330, respectively, related to the Merck KGaA Agreement.

As of March 31, 2018, the Company had recorded $7,389 in deferred revenue related to the Merck KGaA agreement that will be recognized over the remaining performance period.

Summary of Contract Assets and Liabilities

The following table presents changes in the balances of our contract assets and liabilities during the three months ended March 31, 2018:

	Balance at Beginning of Period	Additions	Deductions	Balance at End of Period
Three months ended March 31, 2018				
Contract assets	$ —	$ —	$ —	$ —
Contract liabilities:				
Deferred revenue	$ 52,439	$ 1,087	$ 3,064	$ 50,462

The impact of the adoption of the new revenue recognition guidance is reflected within the beginning of period balance.

During the three months ended March 31, 2018, the Company recognized the following revenues as a result of changes in the contract asset and the contract liability balances in the respective periods:

	Three months ended March 31, 2018
Revenue recognized in the period from:	
Amounts included in the contract liability at the beginning of the period	$ 3,064
Performance obligations satisfied in previous periods	$ —

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Other Revenue

The Company has provided limited services for Asana BioSciences. For the three months ended March 31, 2018 and 2017, the Company recorded revenue of $195 and $63, respectively, related to these services.

4. Fair value measurements

The following table presents information about the Company's assets and liabilities regularly measured and carried at a fair value and indicates the level within fair value hierarchy of the valuation techniques utilized to determine such value as of March 31, 2018 and December 31, 2017:

	Fair Value	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
March 31, 2018				
Cash and cash equivalents	$ 32,354	$ 32,354	$ —	$ —
Marketable securities:				
U.S. Treasuries	59,225	59,225	—	—
Commercial paper	9,989	—	9,989	—
Corporate bonds	6,391	—	6,391	—
	$ 107,959	$ 91,579	$ 16,380	$ —

	Fair Value	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
December 31, 2017				
Cash and cash equivalents	$ 26,591	$ 26,591	$ —	$ —
Marketable securities:				
U.S. Treasuries	62,640	62,640	—	—
Commercial paper	24,931	—	24,931	—
Corporate bonds	11,054	—	11,054	—
	$ 125,216	$ 89,231	$ 35,985	$ —

There were no changes in valuation techniques or transfers between fair value measurement levels during the three months ended March 31, 2018 and 2017. As of March 31, 2018 and December 31, 2017, cash and cash equivalents were comprised of cash and money market funds.

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Notes to condensed consolidated financial statements (continued)
(unaudited)
(in thousands, except share and per share data)

5. Marketable securities

The following table summarizes marketable securities held at March 31, 2018 and December 31, 2017:

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
March 31, 2018				
U.S. Treasuries	$ 59,378	$ —	$ (153)	$ 59,225
Commercial paper	9,989	—	—	9,989
Corporate bonds	6,400	—	(9)	6,391
	$ 75,767	$ —	$ (162)	$ 75,605

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
December 31, 2017				
U.S. Treasuries	$ 62,777	$ —	$ (137)	$ 62,640
Commercial paper	24,931	—	—	24,931
Corporate bonds	11,066	—	(12)	11,054
	$ 98,774	$ —	$ (149)	$ 98,625

As of March 31, 2018, the Company held 19 securities that were in an unrealized loss position. The aggregate fair value of securities held by the Company in an unrealized loss position for less than 12 months at March 31, 2018 was $65,617 and there were no securities held by the Company in an unrealized loss position for more than 12 months. As of March 31, 2018, the Company did not intend to sell, and would not be more likely than not required to sell, the securities in an unrealized loss position before recovery of their amortized cost basis. Furthermore, the Company has determined that there was no material change in the credit risk of these securities. As a result, the Company determined it did not hold any securities with any other-than-temporary impairment as of March 31, 2018.

There were no realized gains or losses on available-for-sale securities during the three month periods ended March 31, 2018 and 2017.

6. Accrued expenses

Accrued expenses consist of the following:

	March 31, 2018	December 31, 2017
Accrued payroll and related expenses	$ 1,103	$ 3,041
Accrued preclinical, manufacturing and clinical expenses	3,808	3,183
Accrued professional fees	418	492
Accrued other	583	228
	$ 5,912	$ 6,944

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7. Stockholders' equity

The following table presents the changes in the separate accounts comprising stockholders' equity for the year ended December 31, 2017 and the three months ended March 31 2018, respectively.

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Stockholders' Equity (Deficit)
Balance at December 31, 2016	1,294,352	$ 1	$ 3,551	$ —	$ (59,171)	$ (55,619)
Change	21,470,665	2	164,467	(149)	(38,707)	125,613
Balance at December 31, 2017	22,765,017	3	168,018	(149)	$ (97,878)	69,994
Change	104,945	—	1,000	(13)	(14,434)	(13,447)
Balance at March 31, 2018	22,869,962	$ 3	$ 169,018	$ (162)	$ (112,312)	$ 56,547

Preferred stock

As of March 31, 2018, the Company has 25,000,000 shares of authorized preferred stock. No shares of preferred stock have been issued.

Common stock

The holders of the common stock are entitled to one vote for each share held. Common stockholders are not entitled to receive dividends, unless declared by the Board of Directors (the Board).

At March 31, 2018, and December 31, 2017, there were 4,016,210 and 3,315,850, respectively, shares of common stock reserved for the exercise of outstanding stock options and warrants (in common stock equivalent shares).

	March 31, 2018	December 31, 2017
Warrants	110,365	110,365
Stock options	3,905,845	3,205,485
	4,016,210	3,315,850

Warrants

In connection with a 2013 Series A-1 Preferred Stock issuance, the Company granted to certain investors warrants to purchase 129,491 shares of common stock. The warrants have a $0.05 per share exercise price and a contractual life of 10 years. The fair value of these warrants was recorded as a component of equity at the time of issuance. As of March 31, 2018, warrants to purchase 110,365 shares of common stock were outstanding.

8. Stock options

Stock option plans

As of June 30, 2017, there were 3,141,625 options outstanding under the Company's 2007 Stock Incentive Plan. The 2007 Plan expired in June 2017 and there will be no future grants under this plan.

In June 2017 the Company's shareholders approved the 2017 Stock Incentive Plan (the 2017 Plan or the Plan). Under the 2017 Plan, up to 2,255,000 shares of common stock may be granted to the Company's employees, officers, directors, consultants and advisors in the form of options, restricted stock awards or other stock-based awards. The number of shares of common stock issuable under the Plan will be cumulatively increased annually by 4% of the outstanding shares or such lesser amount specified by the Board. The terms of the awards are determined by the Board, subject to the provisions of the Plan. Any cancellations under the 2007 Plan would increase the number of shares that could be granted

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under the 2017 Plan. On January 1, 2018, the number of shares of common stock issuable under the Plan was increased by 910,600 shares. As of March 31, 2018 there were 1,343,975 shares available for future issuance under the Plan.

With respect to incentive stock options, the option price per share will equal the fair market value of the common stock on the date of grant, as determined by the Board, and the vesting period is generally four years. Nonqualified stock options will be granted at an exercise price established by the Board at its sole discretion (which has not been less than fair market value on the date of grant) and the vesting periods may vary. Options granted under the Plan expire no later than 10 years from the date of grant. The Board may accelerate vesting or extend the expiration of granted options in the case of a merger, consolidation, dissolution, or liquidation of the Company.

A summary of the activity under the Plans is as follows:

	Number of Shares	Weighted-Average Exercise Price	Remaining Contractual Life (in years)	Aggregate Intrinsic Value
Options outstanding at January 1, 2018	3,205,485	$ 3.44	7.8	$ 41,709
Granted	984,274	14.37		
Exercised	(104,945)	2.43		
Cancelled	(178,969)	7.71		
Options outstanding at March 31, 2018	3,905,845	$ 6.02	7.7	$ 38,254
Options exercisable at March 31, 2018	1,693,746	$ 2.25	6.2	$ 22,908

The weighted-average grant date fair value of options granted during the three months ended March 31, 2018 and 2017, was $9.47 and $4.22 per share, respectively.

Cash received from the exercise of stock options was $255 and $104 for the three months ended March 31, 2018 and 2017, respectively.

Stock-based compensation

The Company uses the provisions of ASC 718, *Stock Compensation*, to account for stock-based awards.

The measurement date for employee awards is generally the date of grant. Stock-based compensation expense is recognized over the requisite service period, which is generally the vesting period, using the straight-line method.

For the three months ended March 31, 2018 and 2017, the Company recorded stock-based compensation expense of $745 and $264, respectively. The Company has an aggregate of $12,197 of unrecognized stock compensation cost as of March 31, 2018 remaining to be amortized over the weighted-average period of 3.4 years. The fair value of each option award is estimated on the date of grant using the Black-Scholes option pricing model with the following weighted average assumptions:

	Three months ended March 31,	
	2018	2017
Risk-free interest rate	2.7 %	2.3 %
Expected dividend yield	— %	— %
Expected term (years)	6.08	6.25
Expected stock price volatility	73 %	67 %

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Employee Stock Purchase Plan

In connection with the IPO, the Board adopted and the Company's stockholders approved the 2017 employee stock purchase plan (the 2017 ESPP), which became effective upon the closing of the IPO in July 2017. The Company has reserved 225,000 shares of common stock for issuance under the 2017 ESPP. The Company has not issued any shares under the 2017 ESPP.

9. Commitments

Operating leases

The Company leases office space in Cambridge, MA under an operating lease, which was last amended in January 2018, which is effective through March 2021. The lease also provided the Company with a tenant improvement allowance of up to $356. The Company fully utilized the allowance and recorded the assets acquired with the allowance as leasehold improvements. The Company recorded the tenant improvement allowance as a deferred lease incentive and is amortizing the deferred lease incentive through a reduction of rent expense ratably over the lease term.

In connection with the office lease, the Company has a letter of credit agreement for the benefit of its landlord in the amount of $321 as of each of March 31, 2018 and December 31, 2017, respectively, collateralized by a money market account. The Company classified this amount as restricted cash in the accompanying unaudited condensed consolidated balance sheets.

For the three months ended March 31, 2018 and 2017, rent expense was $466 and $447, respectively.

The Company is recording rent expense on a straight-line basis over the term of the lease and has recorded deferred rent in the condensed consolidated balance sheets, accordingly.

License agreements

Through March 31, 2018, the Company has licensed intellectual property from two biotechnology companies. The consideration included upfront payments and a commitment to pay annual license fees, milestone payments, and, upon product commercialization, royalties on revenue generated from the sale of products covered by the licenses. The Company recorded milestone payments of $0 and $1,500 during the three months ended March 31, 2018 and 2017, respectively.

10. Subsequent events

For the purposes of the unaudited financial statements as of March 31, 2018 and the period then ended, the Company has evaluated subsequent events through May 14, 2018, the date the unaudited interim financial statements were issued. There were no items requiring adjustment or disclosure in the consolidated financial statements.

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 notes thereto appearing 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, 2017 filed with the Securities and Exchange Commission (SEC) on March 28, 2018.

Our actual results and the timing of certain events may differ materially from the results discussed, projected, anticipated, or indicated in any forward-looking statements. 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 Quarterly Report on Form 10-Q. In addition, even if our results of operations, financial condition and liquidity, and the development of the industry in which we operate are consistent with the forward-looking statements contained in this Quarterly Report on Form 10-Q, they may not be predictive of results or developments in future periods.

The following information and any forward-looking statements should be considered in light of factors discussed elsewhere in this Quarterly Report on Form 10-Q, including those risks identified under Part II, Item 1A. Risk Factors.

We caution readers not to place undue reliance on any forward-looking statements made by us, which speak only as of the date they are made. We disclaim any obligation, except as specifically required by law and the rules of the SEC, to publicly update or revise any such statements to reflect any change in our expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements.

Overview

We are a clinical stage biopharmaceutical company focused on developing antibody drug conjugates (ADCs), that offer a clinically meaningful benefit for cancer patients with significant unmet need. We have leveraged 20 years of industry learning in the ADC field to develop proprietary technologies that enable us to design ADCs to have improved efficacy, safety and tolerability relative to existing ADC therapies. Our most advanced platform, Dolaflexin, has been used to generate a pipeline of proprietary ADC product candidates to address patient populations that are not currently amenable to treatment with traditional ADC-based therapies. Our lead product candidate, XMT-1522, is a HER2-targeted ADC currently in a Phase 1 dose escalation study primarily in breast cancer patients as well as non-small cell lung cancer (NSCLC) and gastric cancer. Upon the completion of dose escalation, we plan to expand clinical development of XMT-1522 into additional breast cancer, NSCLC, and gastric cancer patient populations, all of which are not addressed by existing HER2 therapies. Our second product candidate, XMT-1536, is an ADC targeting NaPi2b, an antigen broadly expressed in ovarian cancer and NSCLC. XMT-1536 entered clinical development in late 2017 and is currently in a Phase 1 dose escalation study. Beyond our two lead product candidates, we continue to invest in our earlier stage product candidates and in our ADC technologies. In addition, we have established a strategic partnership with Takeda Pharmaceutical Company Limited (Takeda) under which they obtained rights to XMT-1522 outside of the United States and Canada. We have also established strategic research and development partnerships with Takeda and Merck KGaA for the development and commercialization of additional ADC product candidates against a limited number of targets selected by our partners based on our Dolaflexin platform. We believe the potential of our ADC technologies, supported by our world-class management team and protected by our robust intellectual property portfolio, will allow us to develop targeted and highly tailored therapies to help cancer patients become cancer survivors.

On July 3, 2017 we closed our IPO of 5,000,000 shares at a price of $15.00 per share for gross proceeds of $75.0 million. We received approximately $67.4 million after deducting underwriting discounts and commissions and offering costs of approximately $7.6 million. On August 2, 2017, we issued and sold 51,977 shares of common stock at $15.00 per share for gross proceeds of $0.78 million upon the partial exercise of the underwriters' overallotment option. We received net proceeds of $0.73 million after deducting $0.05 million in underwriting discounts and commissions.

Since inception, our operations have focused on building our platform, identifying potential product candidates, producing drug substance and drug product material for use in preclinical studies, conducting preclinical studies, including Good Laboratory Practice (GLP), toxicology studies, manufacturing clinical trial material and conducting clinical trials, establishing and protecting our intellectual property, staffing our company and raising capital. We do not have any products approved for sale and have not generated any revenue from product sales. We have funded our operations primarily through our strategic partnerships, private placements of our convertible preferred stock and the IPO.

Since inception, we have incurred significant operating losses. Our net losses were $12.4 million and $8.1 million for the three months ended March 31, 2018 and 2017, respectively. As of March 31, 2018, we had an accumulated deficit of $112.3 million. We expect to continue to incur significant expenses and operating losses over the next several years. We anticipate that our expenses will increase significantly in connection with our ongoing activities, as we:

- continue clinical development activities for our lead product candidate XMT-1522;
- continue clinical development activities for our second product candidate XMT-1536;
- continue activities to discover, validate and develop additional product candidates;
- maintain, expand and protect our intellectual property portfolio;
- hire additional research, development and general and administrative personnel; and
- continue to incur additional costs associated with operating as a public company.

Financial operations overview

Revenue

Effective January 1, 2018, the Company adopted the requirements of Accounting Standards Update (ASU) 2014-09, *Revenue from Contracts with Customers (Topic 606)* using the modified retrospective method as discussed above in Note 2 to our unaudited condensed consolidated financial statements. All amounts and disclosures set forth in this Quarterly Report on Form 10-Q reflect these changes.

To date, all of our revenue has been generated from strategic partnerships. We have not generated any revenue from product sales, and we do not expect to generate any revenue from product sales for the foreseeable future.

In March 2014, we entered into a collaboration agreement with Takeda for the development and commercialization of ADC product candidates utilizing Fleximer. Under this agreement, as amended, Takeda may select up to seven target antigens and has selected four target antigens to date. Takeda is responsible for generating antibodies against the target antigens and we are responsible for generating Fleximer and our proprietary payloads and conjugating this to the antibody to create the ADC product candidates. Takeda then has the exclusive right to and is responsible for the further development, manufacture and commercialization of these ADC product candidates, except that we have an option to co-develop and co-commercialize one product targeting one of Takeda's third through seventh target antigens and may exercise such option with respect to an applicable product no later than 30 days after initiation of a Phase 2 clinical study for such product or at an earlier time if Takeda intends to grant rights to such product to a third party.

In addition, in January 2016, we entered into a collaboration agreement with Takeda for the development and commercialization of XMT-1522. Under this agreement, Takeda is granted the exclusive right and responsibility to commercialize XMT-1522 outside the United States and Canada.

For the three months ended March 31, 2018 and 2017, we recognized revenue of $2.5 million and $3.5 million, respectively, related to the Takeda agreements.

In June 2014, we entered into a collaboration agreement with Merck KGaA for the development and commercialization of ADC product candidates utilizing Fleximer for up to six target antigens. Merck KGaA is responsible for generating antibodies against the target antigens and we are responsible for generating Fleximer and our proprietary payloads and conjugating this to the antibody to create the ADC product candidates. Merck KGaA then has the exclusive right to and is responsible for the further development and commercialization of these ADC product candidates.

For the three months ended March 31, 2018 and 2017, we recognized revenue of $0.3 million and $0.7 million, respectively, related to the Merck KGaA agreement.

For the foreseeable future, we expect substantially all of our revenue to be generated from our collaboration agreements with Takeda and Merck KGaA and any other collaboration agreements we may enter into. Given the schedule of potential milestone payments and the uncertain nature and timing of clinical development, we cannot predict when or whether we will receive further milestone payments or any royalty payments under these collaborations.

For information about our revenue recognition policy, see the Note 2 to condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Operating expenses

Research and development expenses

Research and development expenses consist primarily of costs incurred for our research and development activities, including our drug discovery efforts, and the development of our product candidates, which include:

- employee-related expenses, including salaries, benefits, and stock-based compensation expense;
- costs of funding research and development performed by third parties that conduct research, preclinical activities, manufacturing and clinical trials on our behalf;
- laboratory supplies;
- facility costs, including rent, depreciation and maintenance expenses; and
- upfront and milestone payments under our third-party licensing agreements.

Research and development costs are expensed as incurred. Costs of certain activities, such as manufacturing, preclinical studies and clinical trials, are generally recognized based on an evaluation of the progress to completion of specific tasks. Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are deferred and capitalized. The capitalized amounts are expensed as the related goods are delivered or the services are performed.

We expect research and development costs to increase significantly for the foreseeable future as our product candidate development programs progress. There are numerous factors associated with the successful development and commercialization of any of our product candidates, including future trial design and various regulatory requirements, many of which cannot be determined with accuracy at our current stage of development. Additionally, future commercial and regulatory factors beyond our control may impact our clinical development programs and plans.

A significant portion of our research and development costs have been external costs, which we track on a program-by-program basis following nomination as a product candidate. Our internal research and development costs are primarily personnel-related costs, facility costs, including depreciation and lab consumables. We have not historically tracked all of our internal research and development expenses on a program-by-program basis as they are deployed across multiple projects under development. The following table summarizes our external research and development expenses, by program following nomination as a development candidate. Pre-development candidate expenses, unallocated costs and internal research and development costs have been stated separately.

	Three months ended March 31,	
(in thousands)	**2018**	**2017**
XMT-1522 external costs	$ 3,486	$ 3,402
XMT-1536 external costs	1,817	1,443
External costs for discovery stage programs and platform development	1,126	507
Internal research and development costs	5,827	4,754
Total research and development costs	$ 12,256	$ 10,106

The successful development of our product candidates is highly uncertain. As such, we cannot reasonably estimate or know the nature, timing and estimated costs of the efforts that will be necessary to complete the remainder of the development of our product candidates. We are also unable to predict when, if ever, material net cash inflows will commence from the development efforts associated with our product candidates. This is due to the numerous risks and uncertainties associated with developing drugs, including the uncertainty of:

- successful completion of preclinical studies and IND-enabling studies;
- successful enrollment in and completion of clinical trials;
- receipt of marketing approvals from applicable regulatory authorities;
- establishing commercial manufacturing capabilities or making arrangements with third-party manufacturers;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity for our product candidates;
- commercializing the product candidates, if and when approved, whether alone or in collaboration with others; and
- continued acceptable safety profile of the drugs following approval.

A change in the outcome of any of these variables with respect to the development, manufacture or commercialization of any of our product candidates would significantly change the costs, timing and viability associated with the development of that product candidate.

General and administrative expenses

General and administrative expenses consist primarily of salaries and other related costs, including stock-based compensation, for personnel in executive, finance, accounting, business development, legal and human resources functions. Other significant costs include facility costs not otherwise included in research and development expenses, legal fees relating to patent and corporate matters and fees for accounting and consulting services.

We anticipate that our general and administrative expenses will increase in the future to support continued research and development activities. This will likely include increased costs related to the hiring of additional personnel, fees to outside consultants and patent costs, among other expenses. We also anticipate increased expenses associated with being a public company, including costs for audit, legal, regulatory and tax-related services, director and officer insurance premiums and investor relations costs.

Other income

Other income consists primarily of interest income earned on cash equivalents and marketable securities.

Critical accounting policies and estimates

Our management's discussion and analysis of our financial condition and results of operations are based on our financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these financial statements requires us to make judgments and estimates that affect the reported amounts of assets, liabilities, revenues, and expenses and the disclosure of contingent assets and liabilities in our financial statements. We base our estimates on historical experience, known trends and events, and various other factors that are believed to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions. On an ongoing basis, we evaluate our judgments and estimates in light of changes in circumstances, facts and experience. The effects of material revisions in estimates, if any, will be reflected in the financial statements prospectively from the date of change in estimates.

We believe that our most critical accounting policies are those relating to revenue recognition, accrued research and development expenses and stock-based compensation, discussed in the notes to condensed consolidated financial statements included in this Quarterly Report on Form 10-Q.

Results of Operations

Comparison of the three months ended March 31, 2018 and 2017

The following table summarizes our results of operations for the three months ended March 31, 2018 and 2017:

	Three months ended March 31,		
(in thousands)	**2018**	**2017**	**Dollar Change**
Collaboration revenue	$ 3,064	$ 4,290	$ (1,226)
Operating expenses:			
Research and development	12,256	10,106	2,150
General and administrative	3,571	2,296	1,275
Total operating expenses	15,827	12,402	3,425
Other income:			
Interest income	360	51	309
Total other income	360	51	309
Net loss	$ (12,403)	$ (8,061)	$ (4,342)

Collaboration Revenue

Collaboration revenue was $3.1 million during the three months ended March 31, 2018, compared to $4.3 million during the three months ended March 31, 2017, a decrease of $1.2 million. The decrease was primarily due to a reduction in efforts required to support collaboration activities.

Research and Development Expense

Research and development expense increased by $2.2 million from $10.1 million for the three months ended March 31, 2017 to $12.3 million for the three months ended March 31, 2018, an increase of 22%. The increase in research and development expense was primarily attributable to the following:

- approximately $1.0 million in increased employee compensation primarily due to an increase in headcount as our programs progress in clinical and preclinical studies;

- approximately $1.6 million in increased external research and development expenses related to our platform development, target evaluation and manufacturing activities for our two lead programs; and

- approximately $1.1 million due to in increased external clinical and regulatory expenses due to the progress of XMT-1522 and XMT-1536, partially offset by;

- approximately $1.5 million due to milestone payment made in the comparable quarter of 2017.

We expect our research and development expenses to increase as we continue our clinical development of XMT-1522 and XMT-1536 and continue to advance our preclinical product candidate pipeline and invest in improvements in our ADC technologies.

General and Administrative Expense

General and administrative expense increased by $1.3 million from $2.3 million during the three months ended March 31, 2017 to $3.6 million for the three months ended March 31, 2018, an increase of 55%. The increase in general and administrative expense was primarily attributable to the following:

- approximately $0.6 million in increased employee compensation primarily due to additional headcount as we build the infrastructure to support the growth of the research and development organization;

- approximately $0.3 million in increased consulting and professional fees, including external legal fees, corporate communications and public relations costs; and

- approximately $0.4 million in increased other costs, including taxes, insurance and software.

We expect that our general and administrative expense will increase in future periods as we expand our operations and continue to incur additional costs in connection with being a public company. These increases will likely include legal, auditing and filing fees, additional insurance premiums and general compliance and consulting expenses.

Other Income

Other income was $0.4 million for the three months ended March 31, 2018, compared to $0.1 million for the three months ended March 31, 2017. The increase in other income was primarily related to the recognition of interest income during the period ended March 31, 2018 due to higher cash, cash equivalents and marketable securities balances.

Liquidity and Capital Resources

Sources of Liquidity

Prior to our IPO, we financed our operations primarily through private placements of our convertible preferred stock and strategic partnerships.

On July 3, 2017, we closed our IPO of 5,000,000 shares at $15.00 per share with gross proceeds of $75.0 million and net proceeds $67.4 million after deducting offering costs of $7.6 million. On August 2, 2017, we issued and sold 51,977 shares of common stock at $15.00 per share for gross proceeds of $0.78 upon the partial exercise of the underwriters' overallotment option. We received net proceeds of $0.73 after deducting $0.05 in underwriting discounts and commissions.

As of March 31, 2018, we had cash, cash equivalents and short-term marketable securities of $108.0 million.

Cash Flows

The following table provides information regarding our cash flows for the three months ended March 31,2018 and 2017:

	Three months ended March 31,	
(in thousands)	**2018**	**2017**
Net cash used in operating activities	$ (17,390)	$ (10,910)
Net cash provided by (used in) investing activities	22,898	(471)
Net cash provided by (used in) financing activities	255	(401)
Increase (decrease) in cash, cash equivalents and restricted cash	$ 5,763	$ (11,782)

Net Cash Used in Operating Activities

Net cash used in operating activities for the three months ended March 31, 2018 was $17.4 million as compared to $10.9 million during the three months ended March 31, 2017. The increase was due primarily to an increase in operating expenses for 2018 and timing of payments made to vendors.

Net Cash Provided by (Used in) Investing Activities

Net cash provided by investing activities was $22.9 million during the three months ended March 31, 2018 and consisted primarily of maturities of marketable securities. Net cash used in investing activities was $0.5 million during the three months ended March 31, 2017 and consisted primarily of purchases of property and equipment.

Net Cash Provided by (Used in) Financing Activities

Net cash provided by financing activities was $0.3 million during the three months ended March 31, 2018 as compared to net cash used in financing activities of $0.4 million during the three months ended March 31, 2017. During the three month ended March 31, 2018 cash provided by financing activities consisted primarily of the proceeds from exercises of stock options. During the three months ended March 31, 2017 cash used in financing activities resulted from the payment of IPO costs, partially offset by the proceeds from exercises of stock options.

Funding Requirements

We expect our cash expenditures to increase in connection with our ongoing activities, particularly as we continue the research and development of, initiate clinical trials of, and seek marketing approval for, our product candidates. In addition, if we obtain marketing approval for any of our product candidates, we expect to incur significant commercialization expenses related to drug sales, marketing, manufacturing and distribution to the extent that such sales, marketing and distribution are not the responsibility of potential collaborators. Furthermore, we expect to continue to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we would be forced to delay, reduce or eliminate our research and development programs or future commercialization efforts.

We expect that our existing cash, cash equivalents and marketable securities will enable us to fund our operating plan into the second half of 2019. Our future capital requirements will depend on many factors, including:

- the scope, progress, results and costs of drug discovery, preclinical development, laboratory testing and clinical trials for our product candidates;
- the scope, prioritization and number of our research and development programs;
- the costs, timing and outcome of regulatory review of our product candidates;
- our ability to establish and maintain collaborations on favorable terms, if at all;
- the achievement of milestones or occurrence of other developments that trigger payments under any collaboration agreements we obtain;
- the extent to which we are obligated to reimburse, or entitled to reimbursement of, clinical trial costs under future collaboration agreements, if any;
- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims;
- the extent to which we acquire or in-license other product candidates and technologies;
- the costs of securing manufacturing arrangements for clinical and commercial production; and
- the costs of establishing or contracting for sales and marketing capabilities if we obtain regulatory approvals to market our product candidates.

Identifying potential product candidates and conducting preclinical testing and clinical trials is a time-consuming, expensive and uncertain process that takes many years to complete, and we may never generate the necessary data or results required to obtain marketing approval and achieve drug sales. In addition, our product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of drugs that we do not expect to be commercially available for many years, if at all. Accordingly, we will need to continue to rely on additional financing to achieve our business objectives. Adequate additional financing may not be available to us on acceptable terms, or 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, debt financings, strategic partnerships and licensing arrangements. We do not have any committed external source of funds outside of those to be earned in connection with our agreements with Merck KGaA and Takeda, if development activities are successful under those agreements. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

If we raise funds through additional strategic partnerships or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or to grant licenses 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 drug development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Off-Balance Sheet Arrangements

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

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risk related to changes in interest rates. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates, particularly because our investments, including cash and cash equivalents and, short-term marketable securities are in a money market fund that invests in U.S. Treasury obligations. Due to the short-term duration of our investment portfolio and the low risk profile of our investments, an immediate 100 basis point change in interest rates would not have a material effect on the fair market value of our portfolio.

We are currently not exposed to market risk related to changes in foreign currency exchange rates, but we may contract with vendors that are located Asia and Europe and may be subject to fluctuations in foreign currency rates at that time.

Inflation generally affects us by increasing our cost of labor and clinical trial costs. We do not believe that inflation had a material effect on our business, financial condition or results of operations during the three months ended March 31, 2018 and 2017.

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) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (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 (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 principal executive and principal financial officer, as appropriate to allow timely decisions regarding required disclosure. 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 our management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Our disclosure controls and procedures are designed to provide reasonable assurance of achieving their control objectives.

Our management, with the participation of our principal executive officer and principal financial officer, has evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2018, the end of the period covered by this

Quarterly Report on Form 10-Q. Based upon such evaluation, our principal executive officer and principal financial officer have concluded that our disclosure controls and procedures were effective at the reasonable assurance level as of such date.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting that occurred during the period covered by this Quarterly Report on Form 10-Q that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1. Legal Proceedings

From time to time, we may be subject to various legal proceedings and claims that arise in the ordinary course of our business activities. Although the results of litigation and claims cannot be predicted with certainty, as of the end of the period covered by this report, we did not believe we were party to any claim or litigation, the outcome of which, if determined adversely to us, would individually or in the aggregate be reasonably expected to have a material adverse effect on our business. Regardless of the outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

Item 1A. Risk Factors

Risk Factors

An investment in shares of our common stock involves a high degree of risk. The risk factors below are the only ones that have changed materially since disclosed in Part I, Item 1A of our Annual Report on Form 10-K for fiscal year 2017, as filed with the SEC on March 28, 2018. You should carefully consider the risk factors below as well as the other risk factors included in our Annual Report on Form 10-K for fiscal year 2017, together with the other information appearing elsewhere in this Quarterly Report on Form 10-Q, including our condensed consolidated financial statements and related notes hereto, before deciding to invest in our common stock. The occurrence of any of these risks could have a material adverse effect on our business, financial condition, results of operations and future growth prospects. In these circumstances, the market price of our common stock could decline, and you may lose all or part of your investment.

There have been no material changes from the risk factors set forth in the Company’s Annual Report on Form 10-K, as filed with the SEC on March 28, 2018.

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

Use of Proceeds from the Sale of Registered Securities

On July 3, 2017, we closed our IPO, in which we issued and sold 5,000,000 shares of our common stock at a public offering price of $15.00 per share, for aggregate gross proceeds of $75.0 million. On August 2, 2017, we issued and sold an additional 51,977 shares of common stock at $15.00 per share for gross proceeds of $0.78 million. All of the shares issued and sold in the IPO were registered under the Securities Act pursuant to a Registration Statement on Form S-1 (File No. 333-218412), which was declared effective by the SEC on June 29, 2017.

The net offering proceeds to us upon the initial closing were, after deducting underwriting discounts and offering costs payable by us totaling $7.5 million, were approximately $67.5 million. Upon the exercise of the overallotment option by the underwriters, we received an additional $0.73 million after $0.05 million of underwriting discounts. No material offering expenses were paid directly or indirectly to any of our directors or officers (or their associates) or persons owning 10.0% or more of any class of our equity securities or to any other affiliates.

As of March 31, 2018, we estimate that we have used approximately $29.0 million of the net proceeds from the IPO to fund manufacturing and clinical development activities for XMT-1522 and XMT-1536 and other research activities in support of our preclinical programs, and for working capital and other general corporate purposes. We have invested the unused proceeds from the offering in marketable securities and money market accounts. There has been no material change in our planned use of the net proceeds from our IPO as described in our final prospectus filed with the SEC pursuant to Rule 424(b)(4) on June 29, 2017.

Item 6. Exhibits.

EXHIBIT 3.1	-	Fifth Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K, filed on July 10, 2017).
EXHIBIT 3.2	-	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to the Company's Current Report on Form 8-K, filed on July 10, 2017).
EXHIBIT 10.1	-	Sixth Lease Extension and Modification Agreement, dated January 17, 2018, by and between Mersana Therapeutics, Inc. and Rivertech Associates II LLC.
EXHIBIT 31.1	-	Rule 13a—14(a) / 15d—14(a) Certifications — Chief Executive Officer.
EXHIBIT 31.2	-	Rule 13a—14(a) / 15d—14(a) Certifications — Chief Financial Officer.
EXHIBIT 32.1	-	Section 1350 Certifications.
EXHIBIT 101.INS	-	XBRL Instance Document.
EXHIBIT 101.SCH	-	XBRL Taxonomy Extension Schema Document.
EXHIBIT 101.CAL	-	XBRL Taxonomy Extension Calculation Linkbase Document.
EXHIBIT 101.DEF	-	XBRL Taxonomy Extension Definition Linkbase Document.
EXHIBIT 101.LAB	-	XBRL Taxonomy Extension Label Linkbase Document.
EXHIBIT 101.PRE	-	XBRL Taxonomy Extension Presentation Linkbase Document.

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.

	Mersana Therapeutics, Inc.
Dated: May 14, 2018	By: /s/ Anna Protopapas Anna Protopapas President and Chief Executive Officer
Dated: May 14, 2018	By: /s/ David A. Spellman David A. Spellman Chief Financial Officer

RIVERSIDE TECHNOLOGY CENTER

SIXTH LEASE EXTENSION AND MODIFICATION AGREEMENT

TO THE LEASE BETWEEN

RIVERTECH ASSOCIATES II LLC AND MERSANA THERAPEUTICS, INC.

This Sixth Lease Extension and Modification Agreement entered into this 17 day of January, 2018 (the "Sixth Lease Amendment") by and between **Rivertech Associates II LLC,** a Massachusetts limited liability company with a principal address c/o The Abbey Group, 177 Huntington Avenue 24th Floor Boston, Massachusetts 02115, (the "Lessor"); and **Mersana Therapeutics, Inc.**, with a business address at 840 Memorial Drive Cambridge, Massachusetts (the "Lessee"); relative to a certain Lease between Lessor and Lessee dated February 24, 2009, as modified by a certain Lease Extension and Modification Agreement dated July 27, 2010 (the "First Lease Amendment"); as further modified by a Second Lease Extension and Modification Agreement dated May 29, 2012 (the "Second Lease Amendment"); and as further modified by a Third Lease Extension and Modification Agreement dated February 7, 2013 (the "Third Lease Amendment"); as further modified by a Fourth Lease Extension and Modification Agreement dated April 30, 2014 (the "Fourth Lease Amendment"); as further modified by a Fifth Lease Extension and Modification Agreement dated November 30, 2015 (the "Fifth Lease Amendment"); all collectively referred to herein as of the date hereof as the "Existing Lease"; for certain office and laboratory space in the building at 840 Memorial Drive Cambridge, Massachusetts as identified in the Existing Lease. The Existing Lease, as modified by this Sixth Lease Extension and Modification Amendment, (the "Sixth Lease Amendment"); from the execution hereof shall be referred to herein as the "Lease" (as the context so permits).

WHEREAS, the Lessee desires to extend the current stated Term of the Existing Lease, set to expire on March 31, 2019 as called for in the aforesaid Fifth Lease Amendment, on terms and conditions agreeable to both Lessor and Lessee as a modification to the Existing Lease, and Lessor assents to such extension of the Term by the Lessee on this basis;

THEREFORE, in consideration of One ($1.00) Dollar and the other good and valuable consideration recited herein, effective and irrevocable as of the date hereof the Lessor and Lessee hereby agree as follows:

1. Additional Defined Terms

The following terms as used herein are defined as follows:

"2019 Termination Date" means March 31, 2019.

"2021 Termination Date" means March 31, 2021.

“Existing Leased Premises” means that space in the Building currently leased by the Lessee which presently consists of a total of approximately 34,324 rentable square feet of office and laboratory space, comprised of approximately: 20,090 rentable square feet of space on the second (2nd) floor of the Building; 14,168 rentable square feet of space on the fifth (5th) floor of the Building; and 66 rentable square feet of space on the fourth (4th) floor of the Building.

“Term”, as of the execution of this Sixth Lease Amendment, means the period up to the 2021 Termination Date.

2. The Existing Leased Premises - Extension of Lease Term

Lessee agrees to extend its lease and occupancy of the Existing Leased Premises, which is presently set to expire on the 2019 Termination Date, for a period of twenty four (24) consecutive months such that the Lease will now expire on the 2021 Termination Date (unless the Term is further extended as contemplated herein).

This Lease Extension is to be considered a valid and binding obligation of the parties effective as of the date of execution of this Sixth Lease Amendment by the parties, with the provisions of the Existing Lease (that are not superseded hereby) to continue to govern the Lessee’s use and occupancy of the Existing Leased Premises through and up the 2021 Termination Date (as the Term may be further extended beyond the 2021 Termination Date as contemplated herein).

The Existing Leased Premises shall be leased for the extension period in the same “AS/IS” condition as of the execution of this Sixth Lease Amendment, and Lessee acknowledges Lessor is under no obligation to make any improvements or modifications thereto, in any manner.
Lessee hereby acknowledges it is currently in possession of the Existing Leased Premises and accordingly accepts the same for the extension period in the same “AS/IS” condition without representation or warranty of any kind or nature as of the execution of this Sixth Lease Amendment, and Lessee acknowledges Lessor is under no obligation to make any improvements or modifications thereto, in any manner. Lessor and Lessee each acknowledge that to the best of each of their respective knowledge, there are no material defaults by either presently existing under the Existing Lease.

3. Annual Base Rent and Additional Rent Obligations

Lessee’s Annual Base Rent obligations and other payments under the Lease up to March 31, 2019 (i.e. the 2019 Termination Date) shall be governed under the Existing Lease.

Commencing as of April 1, 2019, and running up to March 31, 2021 (i.e. the 2021 Termination Date), Lessee’s Annual Base Rent obligations and other payments under the Lease shall be governed under the Existing Lease as amended by this Sixth Lease Amendment.

Specifically, Annual Base Rent for the corresponding periods set forth below shall be as follows:

April 1, 2019 through March 31, 2020

$ 2,231,060.00 per annum / $ 185,921.67 per month

April 1, 2020 through March 31, 2021

$ 2,299,708.00 per annum / $ 191,642.33 per month

Lessee's Additional Rent obligations and payments (i.e. Additional Rent – Operating Expenses, and Additional Rent – Taxes, utility reimbursements, etc.) up to March 31, 2021 (i.e. the 2021 Termination Date, as it may be further extended hereunder beyond the 2021 Termination Date) shall continue to be governed under the Existing Lease, as amended by this Sixth Lease Amendment.

All other costs and expenses for utilities and services and attendant to operation of the Existing Leased Premises shall be borne by the respective parties for the remainder of the Term (as it may be further extended hereunder beyond the 2021 Termination Date) as set forth under the Existing Lease as modified by this Sixth Lease Amendment.

4. Security Deposit

The Security Deposit currently held by the Lessor is in the amount of Three Hundred Twenty One Thousand Three Hundred Twenty One ($ 321,321.00) Dollars, and it shall remain in place and shall continue to be held by Lessor as the Security Deposit under the Lease through to the 2021 Termination Date (and through any further extensions of the Term beyond that date as contemplated herein). To the extent the Security Deposit remains posted in the form of an irrevocable standby letter of credit (as it currently exists), then Lessee shall be responsible to renew or replace it prior to its stated expiration (which is currently April 30, 2019) and maintain it throughout the entire Term (and any Term extensions).

5. Permitted Uses

The Permitted Uses under the Existing Lease and all conditions attached thereto are hereby restated and affirmed and shall govern the use and occupancy of the entire Leased Premises.

6. Brokers

The parties hereby agree there are no brokerage or other third party fees or costs involved in this transaction and each agrees to indemnify, defend and hold harmless the other from and against any claims for brokerage fees, commissions or other such payments arising from this transaction; except for Transwestern RBJ who represents the Lessee in this extension and expansion transaction and to whom a commission shall be paid by Lessor under a separate agreement; with fifty (50%) percent of said fee due upon execution of this Sixth Lease Amendment, and the remaining fifty (50%) percent due on April 1, 2019.

7.Parking

Lessee's rights to parking shall be as expressly set forth in Section 9 of the Fifth Lease Amendment, and in addition thereto, Lessee may elect parking rights for an additional 3 motor vehicles on the unassigned and unreserved basis, at will, from month to month on the same terms as appear in said Section 9.

8. Additional Rights Extended

Lessee's rights to use of the acid neutralization system as set forth in Section 10 of the Fifth Lease Amendment, rights to locate install and use certain equipment and systems as set forth in Section 11 of the Fifth Lease Amendment, and rights to use of the existing emergency generator as set forth in Section 11 of the Fifth Lease Amendment, shall continue through the Term as defined herein.

9. Lessee's Rights of First Offer

A. Contiguous Fifth (5th) Floor Space

Lessee shall maintain its rights to elect expansion into the 5th Floor ROFO Space on the terms and conditions set forth in Section 13 of the Fifth Lease Amendment through the Term as defined herein. The Lessor's proposed "term" for the 5th Floor ROFO Space shall not exceed five (5) years, unless a longer "term" therefor is requested by Lessee and agreed by Lessor.

B. Contiguous Second (2nd) Floor Space

Lessee shall maintain its rights to elect expansion into the 2nd Floor ROFO Space on the terms and conditions as set forth in Section 9 of the Fourth Lease Amendment through the Term as defined herein. The Lessor's proposed "term" for the 2nd Floor ROFO Space shall not exceed five (5) years, unless a longer "term" therefor is requested by Lessee and agreed by Lessor

10. Lessee's Option to Extend

Lessee, provided it is not then in default after notice and the expiration of any applicable grace or cure periods, and further provided it shall not have defaulted beyond any applicable notice, grace and cure periods during the remaining Lease Term after execution of this Sixth Lease Amendment, shall have the option to further extend the Term of this Lease beyond the 2021 Termination Date, as to the then entire Existing Leased Premises (as it may be supplemented by the exercise of Lessee's rights under Section 9 hereof), on the terms and conditions set forth herein (the "2021 Extension Option").

The extension shall be for one (1) additional period of sixty (60) months (herein, the "2026 Extension Period") at the then current Market Rent as contemplated below.

The 2021 Extension Option must be exercised by Lessee by notice in writing to the Lessor, prior to March 31, 2020, time being of the essence. Once so exercised, the option to extend is irrevocable, notwithstanding the later determination of Market Rent as contemplated below.

"<u>Market Rent</u>" as used herein, shall be that rent charged for comparable research laboratory and office space of similar age and condition in laboratory buildings in the mid-Cambridge submarket as of the commencement of applicable lease period (including annual escalations thereon for each year based on increases in the Consumer Price Index or fixed increases, as the case may be, as determined by then prevailing market forces).

If, after good faith attempts the Lessor and Lessee cannot agree on a figure representing Market Rent for the applicable space and lease timeframe, then either party, upon written notice to the other, may request appraisal and arbitration of the issue as provided in this Section. Within fourteen (14) days of the request for appraisal, each party shall submit to the other the name of one unrelated individual or entity with proven expertise in the leasing of commercial real estate in greater Boston/Cambridge to serve as that party's appraiser. Each appraiser shall be paid by the party selecting him or it. The two appraisers shall each submit their final reports to the parties within thirty (30) days of their selection making their determination as to Market Rent; however, in no event shall Market Rent be determined to be less than the Annual Base Rent as in effect as of the final year of the Term (i.e. as of the 2021 Termination Date). The two appraisers shall meet within the next fourteen (14) days to reconcile their reports and collaboratively determine the Market Rent. They shall each make their determination in writing (subject however, to the Applicable Rent Floor), including a statement if such is the case, that they are at an impasse. Such a statement of impasse shall be submitted to the parties along with the Market Rent figure which each appraiser has selected and his reasons and substantiation therefor. The appraisers, in case of an impasse, shall also agree on one unrelated individual or entity with expertise in commercial real estate in greater Boston, who shall evaluate the reports of the two original appraisers and within fourteen (14) days of submission of the issue to him, make his own determination as to a figure representing Market Rent (subject however, to the Applicable Rent Floor). The determination of this individual or entity (i.e. arbitrator) absent, fraud, bias or undue prejudice shall be binding upon the parties.

Lessee, in addition to the sums payable annually to Lessor as Annual Base Rent, shall pay to Lessor for each year of the 2021 Extension Period Lessee's Allocable Percentage (as determined by the approximate total rentable space so leased) for Operating Expenses, Real Estate Taxes and utilities, as contemplated in the Lease.

Annual Base Rent and Additional Rent shall be payable in advance, in equal monthly installments on the first day of each calendar month.

11. Subordination

The Lease as amended hereby shall be subject and subordinate to the lien of any and all mortgages and related documents placed on the Building, Leased Premises or the real property in existence as of the date hereof or coming into existence at any time hereafter, without necessity for any confirming documentation. Lessee shall use commercially reasonable efforts (which shall not be deemed to include the payment or expenditure of any sums whatsoever) to obtain a Subordination, Non-Disturbance and Attornment Agreement from its present and future mortgagees, in form and substance set forth in the Fourth Lease Amendment; but Lessor shall not be liable to Lessee in any manner (nor shall any of Lessee's full and timely performance under this Lease be conditioned, waived, excused or altered in any manner whatsoever) if no SNDA is forthcoming, or if any of the terms and conditions of the same are not deemed acceptable. This provision supersedes any contrary provisions of the Existing Lease.

12. Integration of Documents; Supremacy; Miscellaneous

This Sixth Lease Amendment contains the full understanding and agreement between the parties. The parties hereto intend that this Sixth Lease Amendment operates to amend and modify the Existing Lease, and that those two documents shall be interpreted conjunctively; with any express conflict between the two to be resolved in favor of the stated terms of this Sixth Lease Amendment. Except as modified hereby, all other terms and conditions of the Existing Lease shall remain unchanged and enforceable in a manner consistent with this Sixth Lease Amendment.

This Agreement shall be governed by the laws of the Commonwealth of Massachusetts. Any provisions deemed unenforceable shall be severable, and the remainder of this Sixth Lease Amendment and the Existing Lease shall be enforceable in accordance with their terms.

Time is of the essence with respect to all deadlines and other provisions of this Sixth Lease Amendment.

[Signature Pages Follow]

LESSOR

RIVERTECH ASSOCIATES II, LLC

By: Rivertech Associates II, Inc., its Manager

By: /s/ Robert Epstein
Name: Robert Epstein
Title: President

LESSEE

MERSANA THERAPEUTICS, INC.

By: /s/ Anna Protopapas

its duly authorized President/Vice President

By: /s/ Eva Jack

Its duly authorized Treasurer/Ass’t Treasurer

Exhibit 31.1

Certification of Principal Executive Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of Sarbanes-Oxley Act of 2002

I, Anna Protopapas, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Mersana Therapeutics, 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(s) 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)) 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) 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

   c) 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(s) 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.

Mersana Therapeutics, Inc.

/s/ Anna Protopapas

Anna Protopapas
President and Chief Executive Officer
(Principal Executive Officer)

Dated: May 14, 2018

Exhibit 31.2

Certification of Principal Financial Officer pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as adopted pursuant to Section 302 of Sarbanes-Oxley Act of 2002

I, David A. Spellman, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Mersana Therapeutics, 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(s) 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)) 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) 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

   c) 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(s) 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.

Mersana Therapeutics, Inc.

/s/ David A. Spellman

David A. Spellman
Chief Financial Officer
(Principal Financial Officer)

Dated: May 14, 2018

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 Quarterly Report on Form 10-Q of Mersana Therapeutics, Inc. (the “Company”) for the quarter ended March 31, 2018 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), each of the undersigned officers of the company, hereby certifies, pursuant to Section 1350 of Chapter 63 of Title 18, United States Code, that to the best of her knowledge:

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

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

Dated: May 14, 2018

/s/ Anna Protopapas
Anna Protopapas
President and Chief Executive Officer
(Principal Executive Officer)

Dated: May 14, 2018

/s/ David A. Spellman
David A. Spellman
Chief Financial Officer
(Principal Financial Officer)