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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 31, 2019

OR

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

For the transition period from _____ to _____

Commission File Number: 001-38707

LogicBio Therapeutics, Inc.
(Exact Name of Registrant as Specified in its Charter)

Delaware	**47-1514975**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

99 Erie St., Cambridge, MA 02139
(Address of principal executive offices) (Zip code)

(617) 245-0399
(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 every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

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

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
Emerging growth company	☒		

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

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

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.0001 per share	**LOGC**	**Nasdaq Global Market**

As of May 10, 2019, the registrant had 22,494,299 shares of common stock, $0.0001 par value per share, outstanding.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q contains forward-looking statements. In some cases, you can identify these statements by forward-looking words such as "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "could," "would," "project," "plan," "expect," or similar expressions, or the negative or plural of these words or expressions. These forward-looking statements include statements concerning the following:

- the initiation, cost, timing, progress and results of our current and future research and development activities and preclinical studies and potential future clinical trials;
- potential attributes and benefits of our GeneRide technology platform and our product candidate and any future product candidates;
- our ability to take advantage of the modular nature of our GeneRide platform to simplify and accelerate development of new product candidates;
- 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 candidate and any future 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 the duration of our patent protection; and
- our estimates regarding expenses, future revenues, capital requirements, the sufficiency of our current and expected cash resources and our need for additional financing.

These statements are only current predictions and are subject to known and unknown risks, uncertainties and other factors that may cause our or our industry's actual results, levels of activity, performance or achievements to be materially different from those anticipated by the forward-looking statements. We discuss many of these risks in greater detail under Part I, Item 1A. Risk Factors in our Annual Report on Form 10-K for the year ended December 31, 2018 filed with the Securities and Exchange Commission on April 1, 2019, as may be amended or updated in our Quarterly Reports on Form 10-Q. You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Except as required by law, we are under no duty to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, after the date of this Quarterly Report on Form 10-Q, and you should not rely on statements contained herein as representing our views as of any date subsequent to the date of this Quarterly Report on Form 10-Q.

Unless the context otherwise requires, the terms "LogicBio," "LogicBio Therapeutics Inc.," the "Company," "we," "us," "our" and similar references in this Quarterly Report on Form 10-Q refer to LogicBio Therapeutics Inc. and its subsidiaries.

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements.

LogicBio Therapeutics, Inc.

Condensed Consolidated Balance Sheets
(In thousands, except share and per share data)
(Unaudited)

	March 31, 2019	December 31, 2018
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 27,870	$ 80,906
Short-term investments	44,666	—
Prepaid expenses and other current assets	1,763	1,268
Total current assets	74,299	82,174
Property and equipment, net	880	590
Restricted cash	146	146
Operating lease right-of-use asset	1,259	—
Other assets	57	—
TOTAL ASSETS	$ 76,641	$ 82,910
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$ 1,413	$ 1,168
Accrued expenses and other current liabilities	2,354	1,517
Total current liabilities	3,767	2,685
Other liabilities	58	—
Total liabilities	3,825	2,685
STOCKHOLDERS' EQUITY:		
Common stock, par value of $0.0001 per share; 175,000,000 shares authorized as of March 31, 2019 and December 31, 2018, respectively; 22,348,730 and 22,188,393 shares issued and outstanding as of March 31, 2019 and December 31, 2018, respectively	3	3
Additional paid-in capital	107,749	107,473
Accumulated other comprehensive income (loss)	3	(9)
Accumulated deficit	(34,939)	(27,242)
Total stockholders' equity	72,816	80,225
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 76,641	$ 82,910

See notes to consolidated financial statements.

LogicBio Therapeutics, Inc.

Condensed Consolidated Statements of Operations
(In thousands, except share and per share data)
(Unaudited)

	Three Months Ended March 31,	
	2019	2018
OPERATING EXPENSES:		
Research and development	$ 5,486	$ 1,455
General and administrative	2,632	918
Total operating expenses	8,118	2,373
LOSS FROM OPERATIONS	(8,118)	(2,373)
OTHER INCOME, NET:		
Interest income, net	443	68
Other income, net	—	3
Total other income, net	443	71
Loss before income taxes	(7,675)	(2,302)
Income tax provision	(22)	(2)
Net loss	$ (7,697)	$ (2,304)
Net loss attributable to common stockholders—basic and diluted (Note 9)	$ (7,697)	$ (4,907)
Net loss per share attributable to common stockholders—basic and diluted	$ (0.34)	$ (2.75)
Weighted-average common stock outstanding—basic and diluted	22,313,129	1,787,342

See notes to consolidated financial statements.

LogicBio Therapeutics, Inc.

Condensed Consolidated Statements of Comprehensive Loss
(In thousands)
(Unaudited)

	Three Months Ended March 31,	
	2019	2018
Net loss	$ (7,697)	$ (2,304)
Other comprehensive income:		
Unrealized gain on investments	9	—
Foreign currency translation adjustment	3	7
Comprehensive loss	$ (7,685)	$ (2,297)

See notes to consolidated financial statements.

LogicBio Therapeutics, Inc.

Condensed Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)
(In thousands, except share and per share data)
(Unaudited)

	Convertible Preferred Stock									
	Convertible Preferred Stock $0.0001 Par Value Series A		Convertible Preferred Stock $0.0001 Par Value Series B		Common Stock $0.0001 Par Value		Additional Paid-in Capital	Accumulated Other Comprehensive (Loss) Income	Accumulated Deficit	Total Stockholders' (Deficit) Equity
	Shares	Amount	Shares	Amount	Shares	Amount				
BALANCE, January 1, 2018	2,976,190	$ 4,359	19,541,465	$ 28,703	1,606,360	$ 1	$ 1,035	$ (14)	$ (9,621)	$ (8,599)
Vesting of restricted stock	—	—	—	—	173,717	—	—	—	—	—
Foreign currency translation adjustment	—	—	—	—	—	—	—	7	—	7
Stock-based compensation expense	—	—	—	—	—	—	88	—	—	88
Net loss	—	—	—	—	—	—	—	—	(2,304)	(2,304)
BALANCE, March 31, 2018	2,976,190	$ 4,359	19,541,465	$ 28,703	1,780,077	$ 1	$ 1,123	$ (7)	$ (11,925)	$ (10,808)
BALANCE, January 1, 2019	—	$ —	—	$ —	22,188,393	$ 3	$ 107,473	$ (9)	$ (27,242)	$ 80,225
Vesting of restricted stock	—	—	—	—	160,337	—	—	—	—	—
Unrealized gain on investments	—	—	—	—	—	—	—	9	—	9
Foreign currency translation adjustment	—	—	—	—	—	—	—	3	—	3
Stock-based compensation expense	—	—	—	—	—	—	276	—	—	276
Net loss	—	—	—	—	—	—	—	—	(7,697)	(7,697)
BALANCE, March 31, 2019	—	$ —	—	$ —	22,348,730	$ 3	$ 107,749	$ 3	$ (34,939)	$ 72,816

See notes to consolidated financial statements.

LogicBio Therapeutics, Inc.

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

	Three Months Ended March 31,	
	2019	2018
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net loss	$ (7,697)	$ (2,304)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation expense	39	9
Net amortization of premiums and discounts on investments	(95)	—
Stock-based compensation expense	276	88
Non-cash lease expense	274	
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(498)	50
Other assets	(57)	(1)
Accounts payable	201	(670)
Accrued expenses and other current liabilities	(675)	(326)
Net cash used in operating activities	(8,232)	(3,154)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchase of investments	(44,562)	—
Purchase of property and equipment	(247)	(3)
Net cash used in investing activities	(44,809)	(3)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Net cash provided by financing activities	—	—
Effect on foreign exchange rates on cash and cash equivalents	5	7
NET DECREASE IN CASH, CASH EQUIVALENTS AND RESTRICTED CASH	(53,036)	(3,150)
Cash, cash equivalents and restricted cash at beginning of year	81,052	24,575
Cash, cash equivalents and restricted cash at end of period	$ 28,016	$ 21,425
RECONCILIATION OF CASH, CASH EQUIVALENTS AND RESTRICTED CASH		
Cash and cash equivalents	$ 27,870	$ 21,425
Restricted cash	146	—
Total cash, cash equivalents and restricted cash	$ 28,016	$ 21,425
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:		
Cash paid for taxes	$ 31	$ 102
Right-of-use assets obtained in exchange for operating lease obligation	$ 1,323	$ —
Property and equipment purchases in accounts payable and accrued expenses	$ 81	$ 2

See notes to consolidated financial statements.

LogicBio Therapeutics, Inc.

Notes to Condensed Consolidated Financial Statements
(In thousands, except share and per share data)
(Unaudited)

1. NATURE OF BUSINESS AND BASIS OF PRESENTATION

LogicBio Therapeutics, Inc. ("LogicBio" or the "Company") was incorporated in 2014 as a Delaware corporation. Its principal offices are in Cambridge, Massachusetts. The Company is a genome editing company focused on developing medicines to durably treat rare diseases in patients with significant unmet medical need, using GeneRide, its proprietary technology platform. GeneRide technology is designed to precisely and stably integrate corrective genes into a patient's genome to provide a durable therapeutic effect. The Company has demonstrated proof of concept of its therapeutic platform in animal models for a number of diseases and is focusing on its lead product candidate, LB-001, for the treatment of Methylmalonic Acidemia, a life-threatening disease that presents at birth.

On October 23, 2018, the Company completed an initial public offering ("IPO") in which the Company issued and sold 8,050,000 shares of its common stock, including 1,050,000 shares pursuant to the full exercise of the underwriters' option to purchase additional shares, at a public offering price of $10.00 per share, for aggregate gross proceeds of $80,500. The Company received approximately $72,300 in net proceeds after deducting underwriting discounts and commissions and offering costs.

Upon the closing of the IPO, all outstanding shares of convertible preferred stock automatically converted into 11,789,775 shares of common stock at the applicable conversion ratio then in effect. Subsequent to the closing of the IPO, there were no shares of convertible preferred stock outstanding.

Management believes that the Company's existing cash, cash equivalents and investments will allow the Company to continue its operations through 2020. In the absence of a significant source of recurring revenue, the continued viability of the Company beyond that point is dependent on its ability to continue to raise additional capital to finance its operations. There can be no assurance that the Company will be able to obtain sufficient capital to cover its costs on acceptable terms, if at all.

The accompanying unaudited condensed consolidated financial statements as of March 31, 2019 and for the three months ended March 31, 2019 and 2018 have been prepared by the Company in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP") and pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC") for interim financial statements. Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. GAAP have been condensed or omitted pursuant to such rules and regulations. However, the Company believes that the disclosures are adequate to make the information presented not misleading. These condensed consolidated financial statements should be read in conjunction with the Company's audited consolidated financial statements and the notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2018, filed with the SEC on April 1, 2019.

The unaudited interim condensed consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements. In the opinion of management, the accompanying unaudited interim condensed consolidated financial statements contain all adjustments which are necessary for a fair statement of the Company's financial position as of March 31, 2019, consolidated results of operations for the three months ended March 31, 2019 and 2018 and cash flows for the three months ended March 31, 2019 and 2018. Such adjustments are of a normal and recurring nature. The results of operations for the three months ended March 31, 2019 are not necessarily indicative of the results of operations that may be expected for the year ending December 31, 2019.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Significant Accounting Policies

The Company's significant accounting policies are disclosed in the audited consolidated financial statements and the notes thereto, which are included in the Company's Annual Report on Form 10-K for the year ended December 31, 2018, filed with the SEC on April 1, 2019. Since the date of those financial statements, there have been no material changes to its significant accounting policies other than the Company's adoption of ASC 842 (defined below) and the Company's significant accounting policy over investments, both of which are discussed in this note.

Leases

Effective January 1, 2019, the Company adopted ASC Topic 842, Leases ("ASC 842"), using the modified retrospective method and utilized the effective date as its date of initial application, with prior periods presented in accordance with the previous guidance under ASC 840, Leases ("ASC 840").

At the inception of an arrangement, the Company determines whether the arrangement is or contains a lease based on the unique facts and circumstances present in the arrangement. Most leases with a term greater than one year are recognized on the balance sheet as a right-of-use asset and a current and non-current lease liability, as applicable. The Company elected not to recognize on the balance sheet leases with terms of one year or less. The Company typically only includes an initial lease term in its assessment of a leasing arrangement. Options to renew a lease are not included in the Company's assessment unless there is reasonable certainty that the Company will renew the lease. The Company remeasures and relocates the consideration in a contract when there is a modification of a lease that is not accounted for as a separate contract. A lease modification that results in a separate contract, including when the modification grants the lessee an additional right of use that is not included in the original lease, is accounted for in the same manner as a new lease. The Company monitors its material leases on a quarterly basis.

Operating lease liabilities and their corresponding right-of-use assets are recorded based on the present value of lease payments over the expected remaining lease term. Certain adjustments to the right-of-use asset may be required for items such as incentives received. The interest rate implicit in lease contracts is typically not readily determinable. As a result, the Company utilizes its incremental borrowing rate, which reflects the fixed rate at which the Company could borrow on a collateralized basis the amount of the lease payments in the same currency, for a similar term, in a similar economic environment. In transition to ASC 842, the Company utilized the remaining lease term of its leases in determining the appropriate incremental borrowing rates.

In accordance with ASC 842, components of a lease should be split into three categories: lease components (e.g., land, building, etc.), non-lease components (e.g., common area maintenance, consumables, etc.) and non-components (e.g., property taxes, insurance, etc.). The fixed and in-substance fixed contract consideration (including any consideration related to non-components) must be allocated based on the respective relative fair values to the lease components and non-lease components.

Although separation of lease and non-lease components is required, certain practical expedients are available. Entities may elect the practical expedient not to separate lease and non-lease components. Rather, entities would account for each lease component and the related non-lease component together as a single component. For new and amended leases beginning in 2019 and after, the Company has elected to account for the lease and non-lease components for leases for classes of all underlying assets together and allocate all of the contract consideration to the lease component only.

Investments

The Company determines the appropriate classification of its investments in debt securities at the time of purchase. All of the Company's securities are classified as available-for-sale and are reported in short-term investments or long-term investments based on maturity dates and whether such assets are reasonably expected to be realized in cash or sold or consumed during the normal cycle of business. Available-for-sale investments are recorded at fair value, with unrealized gains or losses included in accumulated other comprehensive gain (loss) on the Company's consolidated balance sheets, exclusive of other-than-temporary impairment losses, if any. Investments may be composed of corporate debt securities, commercial paper, U.S. government and agency securities and certificates of deposit.

Recently Adopted Accounting Pronouncements

In February 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2016-02, "Leases (Topic 842)," which requires an entity to recognize assets and liabilities arising from a lease for both financing and operating leases on their balance sheet date. ASU No. 2016-02 is effective for fiscal years beginning after December 15, 2018. In July 2018, an amendment was made that allows companies the option of using the effective date of the new standard as the initial application date (at the beginning of the period in which the new standard is adopted, rather than at the beginning of the earliest comparative period). This update includes a short-term lease exception for leases with a term of 12 months or less, in which a lessee can make an accounting policy election not to recognize the associated lease assets and lease liabilities on its balance sheet. Additionally, in March 2019, the FASB issued ASU 2019-01, *Leases* (Topic 842): Codification Improvements ("ASU No. 2019-01"). ASU No. 2019-01 clarifies the transition guidance related to interim disclosures provided in the year of adoption. Lessees will continue to differentiate between finance leases (previously referred to as capital leases) and operating leases, using classification criteria that are substantially similar to the previous guidance. For lessees, the recognition, measurement, and presentation of expenses and cash flows arising from a lease did not significantly change from previous U.S. GAAP. The modified retrospective method includes several optional practical expedients that entities may elect to apply, as well as transition guidance specific to nonstandard leasing transactions. The Company adopted Topic 842 on January 1, 2019 using a cumulative-effect adjustment on the effective date of the standard, for which comparative periods are presented in accordance with the previous guidance under ASC 840.

In adopting Topic 842, the Company elected to utilize the available package of practical expedients permitted under the transition guidance within the new standard, which does not require the reassessment of the following: i) whether existing or expired arrangements are or contain a lease, ii) the lease classification of existing or expired leases, and iii) whether previous initial direct costs would qualify for capitalization under the new lease standard. Additionally, the Company made an accounting policy election to keep leases with a term of 12 months or less off its balance sheet.

Adoption of this standard resulted in the recording of operating lease liabilities and a right-of-use asset of $210 and $210, respectively, on the Company's condensed consolidated balance sheet on the effective date. The adoption of the standard did not have a material effect on the Company's condensed consolidated statements of operations and comprehensive loss, condensed consolidated statements of cash flows or accumulated deficit. Refer to note 10 for right-of-use asset and liabilities recorded during the three months ended March 31, 2019.

Recently Issued Accounting Pronouncements

There have been no new accounting pronouncements or changes to accounting pronouncements during the three months ended March 31, 2019, as compared to the recent accounting pronouncements described in Note 2 of the Company's Annual Report on Form 10-K for the year ended December 31, 2018, which could be expected to materially impact the Company's unaudited condensed consolidated financial statements.

3. FAIR VALUE MEASUREMENTS

The following tables present information about the Company's financial assets and liabilities measured at fair value on a recurring basis and indicate the level of the fair value hierarchy utilized to determine such fair values:

Description	March 31, 2019	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Other Observable Inputs (Level 3)
Assets				
Sweep bank account	$ 2,305	$ 2,305	$ —	$ —
Money market funds	24,963	24,963	—	—
U.S. Treasury securities	44,666	44,666	—	—
Total financial assets	$ 71,934	$ 71,934	$ —	$ —

Description	December 31, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Other Observable Inputs (Level 3)
Assets				
Sweep bank account	$ 831	$ 831	$ —	$ —
Money market funds	79,212	79,212	—	—
Total financial assets	$ 80,043	$ 80,043	$ —	$ —

The Company classifies its money market funds and U.S. Treasury securities as Level 1 assets under the fair value hierarchy as these assets have been valued using quoted market prices in active markets without any valuation adjustment.

4. INVESTMENTS

The following table summarizes the Company's investments, which are considered available-for-sale and were included in short-term investments on the condensed consolidated balance sheet as of March 31, 2019:

	March 31, 2019			
	Cost Basis	*Gross Unrealized Gains*	*Gross Unrealized Losses*	*Fair Value*
U.S. Treasury securities	$44,657	$ 9	$ —	$44,666
Total	$44,657	$ 9	$ —	$44,666

Certain short-term debt securities with original maturities of less than 90 days are included in cash and cash equivalents on the condensed consolidated balance sheet and are not included in the table above. As of March 31, 2019, all investments have contractual maturities within one year. The Company had no investments as of December 31, 2018.

5. ACCRUED EXPENSES AND OTHER CURRENT LIABILITIES

Accrued expenses and other current liabilities at March 31, 2019 and December 31, 2018 consisted of the following:

	March 31, 2019	December 31, 2018
Accrued compensation and benefits	$ 281	$ 709
Accrued professional services	579	585
Lease liabilities	1,201	—
Other	293	223
Total accrued expenses and other current liabilities	$ 2,354	$ 1,517

Accrued compensation and benefits consists primarily of accrued bonuses and accrued vacation. Accrued professional services consists primarily of consulting services, legal services and services provided by contract research organizations ("CRO") and contract manufacturing organizations ("CMO").

6. CONVERTIBLE PREFERRED STOCK

Series A convertible preferred stock and Series B convertible preferred stock is collectively referred to as "Preferred Stock."

On October 23, 2018, upon the closing of the Company's IPO, all outstanding shares of Preferred Stock converted into 11,789,775 shares of the Company's common stock. As such, there were no outstanding shares of Preferred Stock as of March 31, 2019 and December 31, 2018.

The rights and privileges of the preferred stockholders were as follows:

Conversion: Each share of Preferred Stock was convertible, at the option of the holder, at any time, into shares of common stock on a one-for-1.90993 basis. The conversion ratio was determined by dividing the original issue price of $1.4933 by the conversion price of $0.78186. The Preferred Stock would automatically convert into shares of common stock at the closing a Qualified IPO (as defined in the Company's amended and restated certificate of incorporation, as amended from time to time) or in a non-Qualified IPO, upon the approval of at least 60% of the preferred stockholders.

Liquidation Preference: Prior to the IPO, in the event of any liquidation or "Deemed Liquidation Event," defined below, the preferred stockholders would have been entitled to the greater of (i) the original issue price of the Preferred Stock plus any accrued dividends not yet paid plus any other dividends declared and unpaid or (ii) the amount payable had all classes of shares been converted to common stock. In the event of a Deemed Liquidation Event, accrued dividends would not exceed 40% of the original issue price. After payments of all preferential amounts are made to the preferred stockholders, any remaining assets would be distributed to the common stockholders on a pro rata basis. A Deemed Liquidation Event was defined as a merger, consolidation, reorganization or similar transaction; the sale transfer, exclusive license of all or substantially all of the Company's assets/intellectual property; or the sale or transfer of shares to any person (or group of related or affiliated persons), directly or indirectly, representing a greater than 50% of the voting power of the voting securities of the Company.

Dividends: Preferred stockholders were entitled to receive, when and if declared by the board of directors (the "Board") out of any funds legally available, dividends at the rate of 8% of the original issue price per share. No dividends were declared or paid through October 23, 2018, the date on which all of the Preferred Stock was converted to common stock upon the closing of the Company's IPO.

Voting Rights: Preferred Stock and common stock voted together as one class on an as converted basis.

7. STOCK-BASED COMPENSATION

Equity Incentive Plans

In December 2014, the Company adopted the LogicBio Therapeutics, Inc. 2014 Equity Incentive Plan, as amended (the "2014 Plan"), for the issuance of stock options and other stock-based awards.

In October 2018, the Company's 2018 Equity Incentive Plan (the "2018 Plan") became effective and as a result, no further awards will be made under the 2014 Plan. The 2018 Plan was established to provide equity-based ownership opportunities for employees and directors, as well as outside consultants and advisors. The 2018 Plan authorized up to 1,183,214 of shares of the Company's common stock to be issued. In addition, any previously granted awards under the 2014 Plan will remain outstanding in accordance with their respective terms.

Under the 2018 Plan, there is an annual increase on January 1 of each year from 2019 until 2028, by the lesser of (i) 4% of the number of shares of common stock outstanding on December 31 of the prior year, and (ii) an amount determined by the Board. On January 1, 2019, the Company increased the number of shares available for future grant under the 2018 Plan. At March 31, 2019, there were 1,286,336 shares available for future grant under the 2018 Plan.

Total stock-based compensation expense recorded as research and development and general and administrative expenses, respectively, for employees, directors and non-employees for the three ended March 31, 2019 and 2018 is as follows:

	Three Months Ended March 31,	
	2019	2018
Research and development	$ 155	$ 48
General and administrative	121	40
Total stock-based compensation expense	$ 276	$ 88

During the three months ended March 31, 2019 and 2018, the Company granted options to purchase 79,123 and 120,121 shares of common stock, respectively. The Company recorded stock-based compensation expense for options granted of $210 and $31 during the three months ended March 31, 2019 and 2018, respectively.

As of March 31, 2019 and 2018, there were 2,429,562 and 1,521,184 options outstanding, respectively. The weighted-average grant date fair value per share of options granted during the three months ended March 31, 2019 and 2018 was $6.03 and $0.46, respectively. As of March 31, 2019 and 2018, there was $5,003 and $403 of unrecognized stock-based compensation expense related to unvested stock options to be recognized over a period of 2.2 and 2.3 years, respectively.

During the three months ended March 31, 2019 and 2018, the Company did not grant any shares of restricted stock. The Company recorded stock-based compensation expense for restricted stock granted of $66 and $57 during the three months ended March 31, 2019 and 2018, respectively.

As of March 31, 2019 and 2018, there were 724,383 and 1,260,892 shares of unvested restricted stock outstanding, respectively. As of March 31, 2019 and 2018, there was $463 and $344 of unrecognized stock-based compensation expense related to unvested restricted stock to be recognized over a period of 0.7 and 1.6 years, respectively.

8. INCOME TAXES

During the three months ended March 31, 2019 and the year ended December 31, 2018, the Company maintained a full valuation allowance on federal and state deferred tax assets since management does not forecast the Company to be in a profitable position in the near future. The income tax provision within the condensed consolidated statements of operations related to tax expense of the wholly owned foreign subsidiary, LogicBio Therapeutics Research Ltd.

9. LOSS PER SHARE

Basic loss per share is computed by dividing net loss attributable to common stockholders by the weighted-average common shares outstanding, without consideration to common stock equivalents:

	Three Months Ended March 31,	
	2019	2018
Numerator:		
Net loss	$ (7,697)	$ (2,304)
Less: accruals of dividends of Preferred Stock	—	(2,603)
Net loss attributable to common stockholders—basic and diluted	$ (7,697)	$ (4,907)
Denominator:		
Weighted-average common stock outstanding	22,313,129	1,787,342
Net loss per share attributable to common stockholders—basic and diluted	$ (0.34)	$ (2.75)

The Company's potentially dilutive shares, which include outstanding Preferred Stock and stock options as well as unvested restricted stock, are considered to be common stock equivalents and are only included in the calculation of diluted net loss when their effect is dilutive. The common stock equivalent computation for Preferred Stock uses the applicable conversion rate then in effect for any outstanding shares of Preferred Stock.

The Company excluded the following potential common stock equivalents from the computation of diluted net loss per share attributable to common stockholders because including them would have had an anti-dilutive effect for the three months ended March 31, 2019 and 2018:

	March 31, 2019	March 31, 2018
Preferred Stock	—	11,789,775
Unvested restricted stock	724,383	1,260,892
Options to purchase common stock	2,429,562	1,521,184

10. LEASES

The Company has historically entered into lease arrangements for its facilities and certain equipment. As of March 31, 2019, the Company had three operating leases with required future minimum payments. In applying the transition guidance under ASC 842, the Company determined the classification of these leases to be operating leases and recorded a right-of-use asset and lease liabilities as of the effective date. The Company's leases generally do not include termination or purchase options. From time to time, leases may include options to renew the lease after the expiration of the initial lease term. A renewal period is included in the lease term only when it reasonably certain that the Company will exercise such renewal options. As of March 31, 2019, no renewal options existed that the Company felt were reasonably certain of being exercised.

Operating Leases

In December 2018, the Company entered into an operating lease for laboratory and office space in Cambridge, Massachusetts for a 14-month term, ending in March 2020. As required under the terms of the lease agreement as collateral for the facility lease, the Company had restricted cash of $146 in the form of a certificate deposit as of March 31, 2019 and December 31, 2018.

The following table contains a summary of the lease costs recognized under Topic 842 and other information pertaining to the Company's operating leases for the three months ended March 31, 2019:

Operating leases	Three Months Ended March 31, 2019
Lease cost	
Operating lease cost	$ 274
Variable lease cost	42
Total lease cost	$ 316
Other quarterly lease information	
Operating cash flows used for operating leases	$ 199
Operating lease liabilities arising from obtaining right-of-use assets	$ 1,323

Other operating lease information	As of March 31, 2019
Operating lease liabilities—short term	$ 1,201
Operating lease liabilities—long term	$ 58
Weighted average remaining lease term	1.1 years
Weighted average discount rate	7.04%

The variable lease costs for the quarter ended March 31, 2019 include common area maintenance and other operating charges. As the Company's leases do not provide an implicit rate, the Company utilized its incremental borrowing rate based on what we would normally pay to borrow on a collateralized basis over a similar term for an amount equal to the lease payments at the commencement date in determining the present value of lease payments. As of March 31, 2019, the Company classified its short term and long term operating lease liabilities within accrued expenses and other current liabilities and other liabilities, respectively.

Future minimum lease payments under the Company's operating leases as of March 31, 2019 and December 31, 2018, were as follows:

Maturity of lease liabilities (in thousands)	As of December 31, 2018	As of March 31, 2019
2019	$ 1,028	$ 936
2020	223	377
Thereafter	—	—
Total lease payments	$ 1,251	$ 1,313
Less: imputed interest		(54)
Total operating lease liabilities at March 31, 2019		$ 1,259

11. RELATED PARTIES

From time to time, the Company is or has been party to consulting service agreements with each of its three founders. Under the terms of each agreement, the Company pays an annual fee of $68 for research and development consulting services. For the three months ended March 31, 2019 and 2018, the Company has made payments totaling $51 and $34, respectively, under these consulting service agreements. In addition, each founder receives $5 annually for their participation on the scientific advisory board (the "SAB"), beginning in 2018. Each founder has also received stock options for their services as either a member of the Board or member of the SAB.

In March 2017, the Company subleased to an affiliate certain space in Tel Aviv, Israel, through June 2018. For the three months ended March 31, 2018, the Company recognized income of $13 in other income, net.

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 the unaudited condensed consolidated financial information and the notes thereto included in this Quarterly Report on Form 10-Q and the audited consolidated financial information and the notes thereto included in our Annual Report on Form 10-K for the year ended December 31, 2018, which was filed with the Securities and Exchange Commission, or SEC, on April 1, 2019.

This discussion contains certain forward-looking statements that involve risks and uncertainties. Forward-looking statements are identified by words such as "believe," "will," "may," "estimate," "continue," "anticipate," "intend," "should," "plan," "expect," "predict," "could," "potentially" or the negative of these terms or similar expressions. You should read these statements carefully because they discuss future expectations, contain projections of future results of operations or financial condition, or state other "forward-looking" information. These statements relate to our future plans, objectives, expectations, intentions and financial performance and the assumptions that underlie these statements. These forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from those anticipated in the forward-looking statements. Factors that might cause such a difference include, but are not limited to, those discussed in the "Risk Factors" section in this Quarterly Report on Form 10-Q. Forward-looking statements are based on our management's beliefs and assumptions and on information currently available to our management. These statements, like all statements in this Quarterly Report on Form 10-Q, speak only as of their date, and except as required by law, we undertake no obligation to update or revise these statements in light of future developments. We caution investors that our business and financial performance are subject to substantial risks and uncertainties.

Overview

We are a genome editing company focused on developing medicines to durably treat rare diseases in patients with significant unmet medical need using GeneRide, our proprietary technology platform. Our GeneRide technology is designed to precisely integrate corrective genes into a patient's genome to provide a stable therapeutic effect. Because GeneRide is designed to have this durable therapeutic effect, we are initially targeting rare liver disorders in pediatric patients where it is critical to provide treatment early in a patient's life before irreversible disease pathology can occur. We have demonstrated proof of concept of our therapeutic platform in animal models for a number of diseases and are focusing on development of our lead product candidate, LB-001, for the treatment of Methylmalonic Acidemia, or MMA, a life-threatening disease that presents at birth.

Based on our GeneRide technology, we are developing our lead product candidate, LB-001, to treat MMA. We plan to advance LB-001 to an IND filing by the end of 2019 and into a Phase 1/2 clinical trial in pediatric MMA patients in 2020. We believe that achieving clinical proof of concept in an inherited liver disease such as MMA will validate our platform technology, including its potential application to other organs and diseases. In addition to MMA, we have demonstrated proof of concept of our platform in hemophilia B, alpha-1-antitrypsin deficiency, or A1ATD, and Crigler-Najjar syndrome animal disease models. We expect to select future product candidates from these genetic diseases or others addressed by targeting the liver initially, and later by targeting the central nervous system and muscle.

Since our inception in 2014, we have devoted the majority of our efforts to business planning, research and development, developing and protecting our intellectual property, raising capital and recruiting management and technical staff. We do not have any products approved for sale and have not generated any revenue. As of March 31, 2019, we have raised approximately $72.3 million in net proceeds through our initial public offering, or IPO, in October 2018 and approximately $33.1 million in net proceeds from the sale of our convertible preferred stock in 2016 and 2017. We have incurred significant operating losses since our inception. Our ability to generate product revenue sufficient to achieve profitability will depend on the successful development and commercialization of our product candidate and any future product candidates. Our net loss was $7.7 million for the three months ended March 31, 2019 and our accumulated deficit was $34.9 million as of March 31, 2019. We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future in connection with our ongoing activities. Furthermore, we expect to incur additional costs associated with operating as a public company that we did not previously incur or had previously incurred at lower rates as a private company, including significant legal, accounting, investor relations and other expenses.

Components of Results of Operations

Revenue

Since inception through March 31, 2019, we have not generated any revenue. We do not expect to generate any revenue from the sale of products in the near future. If our development efforts for LB-001, or other product candidates that we may develop in the future, are successful and result in regulatory approval or collaboration or license agreements with third parties, we may generate revenue in the future from a combination of product sales or payments from collaboration or license agreements.

Operating Expenses

Research and Development Expenses

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

- salaries, benefits and other related costs, including stock-based compensation expense, for personnel engaged in research and development functions;
- license maintenance fees and milestone fees incurred in connection with various license agreements;
- the cost of laboratory supplies and acquiring, developing and manufacturing preclinical study and, eventually, clinical trial materials;
- expenses incurred under agreements with contract research organizations, or CROs, contract manufacturing organizations, or CMOs, as well as academic institutions and consultants that conduct our preclinical studies and other scientific development services;
- facility-related expenses, which include direct depreciation costs and allocated expenses for rent and maintenance of facilities and other operating costs;
- costs of outside consultants, including their fees, stock-based compensation and related travel expenses; and
- costs related to compliance with regulatory requirements.

We expense research and development costs as incurred. Costs for external development activities are recognized based on an evaluation of the progress to completion of specific tasks using information provided to us by our vendors. Payments for these activities are based on the terms of the individual agreements, which may differ from the pattern of costs incurred, and are reflected in our financial statements as prepaid or accrued research and development expenses.

Research and development activities are central to our business model. We expect that our research and development expenses will continue to increase for the foreseeable future as we plan and initiate clinical trials for our product candidate LB-001 and continue to discover and develop additional product candidates. If any of our product candidates enter into later stages of clinical development, they will generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of later-stage clinical trials.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and other related costs, including stock-based compensation, for personnel in our executive, finance, corporate and business development and administrative functions. General and administrative expenses also include professional fees for legal, patent, accounting, auditing, tax and consulting services, travel expenses, and facility-related expenses, which include direct depreciation costs and allocated expenses for rent and maintenance of facilities and other operating costs.

We expect that our general and administrative expenses will increase in the future as we increase our general and administrative headcount to support our continued research and development and potential commercialization of our product candidates. We also expect to continue to incur increased expenses associated with being a public company, including costs of accounting, audit, legal, regulatory and tax compliance services, director and officer insurance costs; and investor and public relations costs.

Other Income, Net

Interest income, net consists primarily of interest on our cash and cash equivalents and investments. Other income, net consists primarily of foreign exchange gains and losses.

Results of Operations

Three Months Ended March 31, 2019 and 2018

The following table summarizes our results of operations for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,	
	2019	2018
	(in thousands)	
Operating expenses:		
Research and development	$ 5,486	$ 1,455
General and administrative	2,632	918
Total operating expenses	8,118	2,373
Loss from operations	(8,118)	(2,373)
Other income:		
Other income, net	443	71
Loss before income taxes	(7,675)	(2,302)
Income tax provision	(22)	(2)
Net loss	$(7,697)	$(2,304)

Research and Development Expenses

The following table summarizes our research and development expenses for the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,		
	2019	2018	Increase
		(in thousands)	
LB-001 external development and manufacturing costs	$2,754	$ 494	2,260
Personnel-related costs	1,197	512	685
Other research and development costs	1,535	449	1,086
Total research and development expenses	$5,486	$ 1,455	$ 4,031

Research and development expenses for the three months ended March 31, 2019 were $5.5 million, compared to $1.5 million for the three months ended March 31, 2018. The increase of approximately $4.0 million was primarily due to an increase of approximately $2.3 million related to external development and manufacturing expenses for our lead product candidate LB-001, $1.1 million in other research and development expenses as we increased our overall research and development activities related to general platform development and internal efforts for our lead product candidate LB-001 and $0.7 million in personnel-related costs related to an increase in headcount. Personnel-related costs for the three months ended March 31, 2019 included stock-based compensation expense of $0.2 million, compared to $48,000 for the three months ended March 31, 2018.

General and Administrative Expenses

General and administrative expenses were $2.6 million for the three months ended March 31, 2019, compared to $0.9 million for the three months ended March 31, 2018. The increase of approximately $1.7 million was primarily due to professional fees and personnel-related costs, including salaries, stock-based compensation and bonuses. The increase in professional fees was primarily due to the increase in legal, auditing and consulting services provided. The increase in personnel-related costs was primarily due to an increase in headcount of executive level employees. Stock-based compensation expense included in general and administrative expenses was $0.1 million and $40,000 for the three months ended March 31, 2019 and 2018, respectively.

Other Income, Net

Other income, net was $0.4 million for the three months ended March 31, 2019, compared to other income, net of $0.1 million for the three months ended March 31, 2018. The change was primarily related to the increase in interest income from cash equivalents and investments.

Liquidity and Capital Resources

Overview

Since our inception and through March 31, 2019, we have not generated any revenue and have incurred significant losses and negative cash flows from our operations.

Cash Flows

The following table summarized our cash flows for each of the three months ended March 31, 2019 and 2018:

	Three Months Ended March 31,	
	2019	2018
	(in thousands)	
Net cash used in operating activities	$ (8,232)	$(3,154)
Net cash used in investing activities	(44,809)	(3)
Net cash provided by financing activities	—	—
Effect on foreign exchange rates on cash and cash equivalents	5	7
Net decrease in cash and cash equivalents	$(53,036)	$(3,150)

Operating Activities

The net cash used in operating activities in both periods resulted primarily from our net losses adjusted for non-cash charges and changes in the components of working capital. The increase in cash used in operating activities during the three months ended March 31, 2019 compared to the three months ended March 31, 2018, was primarily driven by an increase in our net loss due to an increase in both our research and development and general and administrative expenses.

Investing Activities

During the three months ended March 31, 2019, net cash used in investing activities increased approximately $44.8 million, primarily related to our purchase of investment securities of $44.6 million and a $0.2 million increase in the purchases of property and equipment as compared to the three months ended March 31, 2018.

Financing Activities

During the three months ended March 31, 2019 and 2018, there were no net cash inflows or outflows related to financing activities.

Funding Requirements

We expect our expenses to increase substantially in connection with our ongoing activities, particularly as we advance the preclinical activities and clinical trials of our product candidate and any future product candidates. We expect that our expenses will increase substantially if and as we:

- continue our current research programs and our preclinical development of any product candidates from our current research programs;
- initiate clinical trials for LB-001 and any other product candidates we identify and develop;
- seek to identify, assess, acquire and/or develop additional research programs and additional product candidates;
- seek marketing approvals for any product candidate that successfully complete clinical trials;
- develop, optimize, scale and validate a manufacturing process and analytical methods for any product candidates we may develop;
- establish and build out internal process and analytical development capabilities and research and preclinical grade production;
- obtain market acceptance of any product candidates we may develop as viable treatment options;
- address competing technological and market developments;
- maintain, expand and protect our intellectual property portfolio and provide reimbursement of third-party expenses related to our patent portfolio;

- further develop our GeneRide technology platform;
- hire additional technical, quality, regulatory, clinical, scientific and commercial personnel and add operational, financial and management information systems and personnel, including personnel to support our process and product development, manufacturing and planned future commercialization efforts;
- make royalty, milestone or other payments under current and any future in-license agreements;
- establish and maintain supply chain and manufacturing relationships with third parties that can provide adequate products and services, in both amount, timing and quality, to support clinical development and the market demand for any product candidate for which we obtain regulatory and marketing approval;
- leasing and building new facilities, including offices and labs, to support organizational growth;
- validate and build-out a commercial-scale current Good Manufacturing Practices, or cGMP, manufacturing facility; and
- establish a sales, marketing and distribution infrastructure to commercialize any product candidates for which we may obtain marketing approval.

Because of the numerous risks and uncertainties associated with the development of LB-001 and any other product candidates and programs we may develop, and because the extent to which we may enter into collaborations with third parties for development of LB-001 and any other product candidates we may develop is unknown, we are unable to estimate the timing and amounts of increased capital outlays and operating expenses associated with completing the research and development of our product candidates. Our future funding requirements, both near and long-term, will depend on many factors, including:

- the initiation, scope, progress, timing, costs and results of drug discovery, preclinical development, laboratory testing, and planned clinical trials for LB-001 and any other product candidates;
- the outcome, timing and cost of meeting regulatory requirements established by the U.S. Food and Drug Administration, or FDA, and other comparable foreign regulatory authorities, including resolving any potential clinical holds that may be imposed on us;
- the cost of filing, prosecuting, defending and enforcing our patent claims and other intellectual property rights;
- the cost of defending potential intellectual property disputes, including patent infringement actions;
- the achievement of milestones or occurrence of other developments that trigger payments under any of our current agreements or other agreements we may enter into;
- the extent to which we are obligated to reimburse, or entitled to reimbursement of, clinical trial costs under future collaboration agreements, if any;
- the effect of competing technological and market developments;
- the cost and timing of completion of clinical or commercial-scale manufacturing activities;
- the extent to which we in-license or acquire other products and technologies;
- our ability to establish and maintain collaborations on favorable terms, if at all;
- the cost of establishing sales, marketing and distribution capabilities for LB-001 and any other product candidates in regions where we choose to commercialize our product candidates, if approved; and
- the initiation, progress, timing and results of our commercialization of LB-001 and any other product candidates, if approved, for commercial sale.

A change in the outcome of any of these variables with respect to the development of a product candidate could mean a significant change in the costs and timing associated with the development of that product candidate. For example, if the FDA or another regulatory authority were to require us to conduct clinical trials beyond those that we anticipate will be required for the completion of clinical development of a product candidate, or if we experience significant trial delays due to patient enrollment or other reasons, we would be required to expend significant additional financial resources and time on the completion of clinical development. We may never succeed in obtaining regulatory approval for our product candidate or any future product candidates.

Until such time, if ever, that we can generate product revenue sufficient to achieve profitability, we expect to finance our cash needs through offerings of securities, private equity financing, debt financings, collaborations, government contracts or other strategic transactions. The terms of financing may adversely affect the holdings or the rights of our stockholders. If we are unable to obtain funding, we may be required to delay, limit, reduce or terminate some or all of our research and product development, product portfolio expansion or future commercialization efforts.

We will also continue to incur costs as a public company that we did not previously incur or have previously incurred at lower rates, including increased fees payable to the non-employee members of our board of directors, increased personnel costs, increased director and officer insurance premiums, audit and legal fees, investor relations fees and expenses for compliance with public company reporting requirements under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and rules implemented by the SEC and Nasdaq.

Contractual Obligations and Commitments

The following table summarizes our contractual obligations as of March 31, 2019:

	Payments Due by Period				
	Total	Less than 1 Year	1 to 3 Years	4 to 5 Years	More than 5 Years
	(in thousands)				
Operating lease commitments	$1,313	$ 936	$377	$ —	$ —
Collaboration and research agreements (1)	559	559	—	—	—
Total	$1,872	$ 1,495	$377	$ —	$ —

(1) Represents license and research fees under our collaboration and research agreements. These amounts do not include any potential contingent payments, including those due upon the achievement by us of specified clinical, regulatory and commercial events, as applicable, or patent prosecution, royalty payments or license and research fees we may be required to make under license agreements we have entered into with various entities, including Stanford, the University of Texas and other research institutions. We have excluded these potential payments in the contractual obligations table because the timing and likelihood of these contingent payments are not currently known and would be difficult to predict or estimate.

We enter into contracts in the normal course of business with CROs, CMOs and other third parties for preclinical research studies and testing. Manufacturing commitments in the preceding table include agreements that are enforceable and legally binding on us and that specify all significant terms, including fixed or minimum quantities to be purchased; fixed, minimum or variable price provisions; and the approximate timing of the transaction. For obligations with cancellation provisions, the amounts included in the preceding table are limited to the non-cancelable portion of the agreement terms or the minimum cancellation fee.

We may incur potential contingent payments upon our achievement of clinical, regulatory and commercial milestones, as applicable, or royalty payments that we may be required to make under license agreements we have entered into with various entities pursuant to which we have in-licensed certain intellectual property. Due to the uncertainty of the achievement and timing of the events requiring payment under these agreements, the amounts to be paid by us are not fixed or determinable at this time and are excluded from the table above.

Critical Accounting Policies and Significant Judgments and Estimates

Our condensed consolidated financial statements are prepared in accordance with generally accepted accounting principles in the United States. The preparation of our condensed consolidated financial statements and related disclosures requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, costs and expenses, and the disclosure of contingent assets and liabilities in our condensed consolidated financial statements. We base our estimates on historical experience, known trends and events and various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions or conditions.

There have been no significant changes to our critical accounting policies from those described in “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” included in our Annual Report on Form 10-K for the year ended December 31, 2018, filed with the SEC on April 1, 2019.

Emerging Growth Company Status

The Jumpstart Our Business Startups Act of 2012 permits an “emerging growth company” such as us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies until those standards would otherwise apply to private companies. We have irrevocably elected to “opt out” of this provision and, as a result, we will comply with new or revised accounting standards when they are required to be adopted by public companies that are not emerging growth companies.

Off-Balance Sheet Arrangements

We have not entered into any off-balance sheet arrangements and do not have any holdings in variable interest entities.

Recently Issued Accounting Pronouncements

Refer to Note 2, in the accompanying notes to our condensed consolidated financial statements appearing elsewhere in this Quarterly Report on Form 10-Q for a discussion of recent accounting pronouncements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

We are exposed to market risks in the ordinary course of our business. These risks primarily include interest rate sensitivities and foreign currency exchange rate sensitivities.

Interest Rate Sensitivity

As of March 31, 2019, we had cash, cash equivalents and investments of $72.5 million. Our exposure to interest rate sensitivity is impacted by changes in the underlying U.S. bank interest rates. From time to time, our surplus cash has been invested in interest-bearing savings accounts and U.S. government and agency securities. We have not entered into investments for trading or speculative purposes. Due to the conservative nature of our investment portfolio, which is predicated on capital preservation of investments with short-term maturities, we do not believe an immediate one percentage point change in interest rates would have a material effect on the fair market value of our portfolio, and therefore we do not expect our operating results or cash flows to be significantly affected by changes in market interest rates.

As of March 31, 2019, we had no debt outstanding and are therefore not subject to interest rate risk related to debt.

Foreign Currency Exchange Risk

The functional currency of our wholly owned foreign subsidiary, LogicBio Therapeutics Research Ltd, or LogicBio Research, is the Israeli new shekel. Assets and liabilities of LogicBio Research are translated into United States dollars at the exchange rate in effect on the consolidated balance sheet date. Income items and expenses are translated at the average exchange rate in effect during the period. Stockholders' equity (deficit) amounts are translated based on historical exchange rates as of the date of each transaction. Unrealized translation gains and losses are recorded as a foreign currency translation adjustment, which is included in the consolidated statements of convertible preferred stock and stockholder's deficit as a component of accumulated other comprehensive loss. Adjustments that arise from exchange rate changes on transactions denominated in a currency other than the local currency are included in other (expense) income, net in the consolidated statements of operations as incurred. All operations have ceased for LogicBio Research as of September 30, 2018.

We do not currently engage in currency hedging activities in order to reduce our currency exposure, but we may begin to do so in the future. Instruments that may be used to hedge future risks include foreign currency forward and swap contracts. These instruments may be used to selectively manage risks, but there can be no assurance that we will be fully protected against material foreign currency fluctuations.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures.

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, as of March 31, 2019. Our disclosure controls and procedures are designed to ensure that information we are required to disclose in the reports we file or submit under the Exchange Act is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosures, and is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms.

Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures as of March 31, 2019 were not effective due to the material weakness identified in fiscal year 2017 in our internal control over financial reporting process which included an ineffective control environment, including a lack of sufficient accounting personnel and personnel with financial reporting expertise, ineffective controls procedures, including those related to recognition in the appropriate period for certain transactions, ineffective risk assessment controls, including those policies and practices that would identify changes in our business practices, which could significantly impact our consolidated financial statements and system of internal controls, and ineffective monitoring of controls related to the financial close and reporting process.

Remediation Plan

We are committed and are taking steps necessary to remediate the control deficiencies that constituted the above material weakness by implementing changes to our internal control over financial reporting. During 2018 and through March 31, 2019, we made the following enhancements to our control environment including the following:

- We added finance personnel to the organization to strengthen our internal accounting team to include a controller.
- We engaged a third party to help us enhance our documentation of accounting policies and positions on technical accounting topics throughout the year.
- We engaged outside consultants to assist in the design, implementation, and documentation of internal controls that address the relevant risks, are properly designed, and provide for appropriate evidence of performance of the internal control.
- We engaged outside consultants to assist us in the evaluation of our information systems to determine if there are internal control gaps that should be addressed in the general information technology controls and implement any needed improvements for existing systems.

Our remediation activities are continuing through the remainder of 2019. In addition to the above activities, we expect to engage in additional activities in the current year, including:

- Add more accounting resources to enhance our control environment;
- Continue to engage external consultants to provide support related to more complex applications of GAAP and document and assess our accounting policies and procedures;
- Enhance the execution of our risk assessment activities by evaluating whether the design of our internal controls appropriately address changes in the business and that could impact our system of internal controls; and
- Engage outside consultants to perform tests of our system of internal controls to monitor the operating effectiveness of operation of our internal controls and to gain assurance whether such controls are present and functioning.

We continue to redesign and implement internal control activities. We continue to establish policies and procedures and enhance corporate oversight over process-level controls and structures to ensure that there is appropriate assignment of authority, responsibility, and accountability to enable remediating our material weaknesses.

We believe that our remediation plan will be sufficient to remediate the identified material weakness and strengthen our internal control over financial reporting. As we continue to evaluate, and work to improve, our internal control over financial reporting, management may determine that additional measures to address control deficiencies or modifications to the remediation plan are necessary. We cannot assure you, however, when we will remediate such weaknesses, nor can it be certain whether additional actions will be required or the costs of any such actions. Moreover, we cannot assure you that additional material weaknesses will not arise in the future.

Changes in Internal Control over Financial Reporting.

Except for the remediation efforts of the previously identified material weakness as described above, there were no changes in our internal control over financial reporting that occurred during the three months ended March 31, 2019 that materially affected, or were 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 become involved in legal proceedings and claims arising in the ordinary course of our business. Although the results of litigation and claims cannot be predicted with certainty, as of the end of the period covered by this Quarterly Report on Form 10-Q, 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.

There have been no material changes from the risk factors previously disclosed in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2018, filed with the SEC on April 1, 2019.

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

Use of Proceeds From Registered Securities

On October 23, 2018, we closed our IPO, in which we issued and sold 8,050,000 shares of our common stock, including 1,050,000 shares sold pursuant to the full exercise of the underwriters' option to purchase additional shares, at a public offering price of $10.00 per share for gross proceeds of $80.5 million, before deducting underwriting discounts and commissions and offering expenses payable by us. 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. 333-227523), which was declared effective by the SEC on October 18, 2018. Jefferies LLC, Barclays Capital Inc. and William Blair & Company, L.L.C. acted as joint book-running managers of the offering and as representatives of the underwriters. Chardan Capital Markets, LLC acted as the lead manager for the offering. The offering commenced on October 18, 2018 and did not terminate until the sale of all of the shares offered.

The net offering proceeds to us, after deducting underwriting discounts and offering costs payable by us of an aggregate of approximately $8.2 million, were approximately $72.3 million. 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.

There has been no material change in our planned use of the net offering proceeds from our IPO as described in our final prospectus filed with the SEC pursuant to Rule 424(b)(4) on October 18, 2018. As of March 31, 2019, we consumed approximately $13.8 million of net proceeds from the IPO, primarily to continue ongoing development of LB-001 in MMA and for discovery and preclinical development of additional product candidates, and for working capital and general corporate purposes. We invested the remaining funds received in cash equivalents and investments.

Item 6. Exhibits.

EXHIBIT 3.1	—	Fourth 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 October 29, 2018).
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 October 29, 2018).
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.

LogicBio Therapeutics, Inc.

Dated: May 14, 2019

By: /s/ Frederic Chereau
Frederic Chereau
President and Chief Executive Officer

Dated: May 14, 2019

By: /s/ Matthias Jaffé
Matthias Jaffé
Chief Financial Officer

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, Frederic Chereau, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of LogicBio 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.

/s/ Frederic Chereau
Frederic Chereau
President and Chief Executive Officer

Dated: May 14, 2019

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, Matthias Jaffé, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of LogicBio 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.

/s/ Matthias Jaffé
Matthias Jaffé
Chief Financial Officer

Dated: May 14, 2019

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 LogicBio Therapeutics, Inc. (the "Company") for the quarter ended March 31, 2019 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 his 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, 2019

/s/ Frederic Chereau
Frederic Chereau
President and Chief Executive Officer

Dated: May 14, 2019

/s/ Matthias Jaffé
Matthias Jaffé
Chief Financial Officer