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 September 30, 2019

OR

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

For the transition period from________ to ________

Commission File Number: 001-38707

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)

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**

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

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

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

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

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

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

As of November 7, 2019, the registrant had 22,924,337 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 (Unaudited).

LogicBio Therapeutics, Inc.

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

	September 30, 2019	December 31, 2018
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 38,680	$ 80,906
Short-term investments	24,481	—
Prepaid expenses and other current assets	1,622	1,268
Restricted cash	146	—
Total current assets	64,929	82,174
Property and equipment, net	1,489	590
Restricted cash	—	146
Operating lease right-of-use asset	669	—
TOTAL ASSETS	$ 67,087	$ 82,910
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$ 1,954	$ 1,168
Accrued expenses and other current liabilities	2,176	1,517
Total current liabilities	4,130	2,685
Long-term debt, net of issuance costs and discount	9,759	—
TOTAL LIABILITIES	13,889	2,685
STOCKHOLDERS' EQUITY:		
Common stock, par value of $0.0001 per share; 175,000,000 shares authorized; 22,765,930 and 22,188,393 shares issued and outstanding as of September 30, 2019 and December 31, 2018, respectively	3	3
Additional paid-in capital	109,081	107,473
Accumulated other comprehensive income (loss)	19	(9)
Accumulated deficit	(55,905)	(27,242)
Total stockholders' equity	53,198	80,225
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 67,087	$ 82,910

See notes to unaudited condensed consolidated financial statements.

LogicBio Therapeutics, Inc.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
OPERATING EXPENSES:				
Research and development	$ 8,858	$ 2,432	$ 22,278	$ 6,113
General and administrative	2,175	2,119	7,331	4,453
Total operating expenses	11,033	4,551	29,609	10,566
LOSS FROM OPERATIONS	(11,033)	(4,551)	(29,609)	(10,566)
OTHER INCOME (EXPENSE), NET:				
Interest income	389	75	1,243	204
Interest expense	(271)	(1)	(271)	(2)
Other expense, net	(3)	(154)	(4)	(158)
Total other income (expense), net	115	(80)	968	44
Loss before income taxes	(10,918)	(4,631)	(28,641)	(10,522)
Income tax provision	—	(38)	(22)	(38)
Net loss	$ (10,918)	$ (4,669)	$ (28,663)	$ (10,560)
Net loss attributable to common stockholders—basic and diluted (Note 10)	$ (10,918)	$ (8,621)	$ (28,663)	$ (14,512)
Net loss per share attributable to common stockholders —basic and diluted	$ (0.48)	$ (4.03)	$ (1.27)	$ (7.39)
Weighted-average common stock outstanding—basic and diluted	22,677,205	2,138,160	22,491,282	1,963,976

See notes to unaudited condensed consolidated financial statements.

LogicBio Therapeutics, Inc.

Condensed Consolidated Statements of Comprehensive Loss
(In thousands)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	**2018**	**2019**	**2018**
Net loss	$ (10,918)	$ (4,669)	$ (28,663)	$ (10,560)
Other comprehensive income:				
Unrealized (loss) gain on investments	(16)	—	20	—
Foreign currency translation adjustment	2	5	8	13
Comprehensive loss	$ (10,932)	$ (4,664)	$ (28,635)	$ (10,547)

See notes to unaudited condensed 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)

	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	Accumulated Other Comprehensive	Accumulated	Total Stockholders' (Deficit)
	Shares	Amount	Shares	Amount	Shares	Amount	Capital	(Loss) Income	Deficit	Equity
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)
Vesting of restricted stock	—	—	—	—	162,569	—	—	—	—	—
Foreign currency translation adjustment	—	—	—	—	—	—	—	1	—	1
Stock-based compensation expense	—	—	—	—	—	—	145	—	—	145
Net loss	—	—	—	—	—	—	—	—	(3,587)	(3,587)
BALANCE, June 30, 2018	2,976,190	4,359	19,541,465	28,703	1,942,646	1	1,268	(6)	(15,512)	(14,249)
Vesting of restricted stock	—	—	—	—	160,329	—	—	—	—	—
Exercise of options	—	—	—	—	17,003	—	11	—	—	11
Issuance of common stock	—	—	—	—	56,097	—	—	—	—	—
Foreign currency translation adjustment	—	—	—	—	—	—	—	5	—	5
Stock-based compensation expense	—	—	—	—	—	—	287	—	—	287
Net loss	—	—	—	—	—	—	—	—	(4,669)	(4,669)
BALANCE, September 30, 2018	2,976,190	$ 4,359	19,541,465	$ 28,703	2,176,075	$ 1	$ 1,566	$ (1)	$ (20,181)	$ (18,615)
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
Vesting of restricted stock	—	—	—	—	160,332	—	—	—	—	—
Exercise of options	—	—	—	—	13,454	—	82	—	—	82
Unrealized gain on investments	—	—	—	—	—	—	—	27	—	27
Foreign currency translation adjustment	—	—	—	—	—	—	—	3	—	3
Stock-based compensation expense	—	—	—	—	—	—	531	—	—	531
Net loss	—	—	—	—	—	—	—	—	(10,048)	(10,048)
BALANCE, June 30, 2019	—	—	—	—	22,522,516	3	108,362	33	(44,987)	63,411
Vesting of restricted stock	—	—	—	—	160,332	—	—	—	—	—
Exercise of options	—	—	—	—	83,082	—	61	—	—	61
Issuance of warrants related to loan and security agreement	—	—	—	—	—	—	136	—	—	136
Unrealized loss on investments	—	—	—	—	—	—	—	(16)	—	(16)
Foreign currency translation adjustment	—	—	—	—	—	—	—	2	—	2
Stock-based compensation expense	—	—	—	—	—	—	522	—	—	522
Net loss	—	—	—	—	—	—	—	—	(10,918)	(10,918)
BALANCE, September 30, 2019	—	$ —	—	$ —	22,765,930	$ 3	$ 109,081	$ 19	$ (55,905)	$ 53,198

See notes to unaudited condensed consolidated financial statements.

LogicBio Therapeutics, Inc.

Condensed Consolidated Statements of Cash Flows
(In thousands)

	Nine Months Ended September 30, 2019		Nine Months Ended September 30, 2018	
CASH FLOWS FROM OPERATING ACTIVITIES:				
Net loss	$	(28,663)	$	(10,560)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation expense		189		49
Loss on disposal of property and equipment		—		142
Net amortization of premiums and discounts on investments		(371)		—
Stock-based compensation expense		1,329		520
Non-cash interest expense		50		—
Non-cash lease expense		865		—
Changes in operating assets and liabilities:				
Prepaid expenses and other current assets		(354)		(608)
Other assets		—		225
Accounts payable		779		(570)
Accrued expenses and other current liabilities		(872)		175
Net cash used in operating activities		(27,048)		(10,627)
CASH FLOWS FROM INVESTING ACTIVITIES:				
Purchase of investments		(58,490)		—
Maturities of investments		34,400		—
Purchase of property and equipment		(1,084)		(362)
Disposal of property and equipment		—		35
Net cash used in investing activities		(25,174)		(327)
CASH FLOWS FROM FINANCING ACTIVITIES:				
Proceeds from borrowings under loan and security agreement, net of issuance costs		9,845		—
Proceeds from exercise of stock options		143		11
Payment of deferred initial public offering costs		—		(775)
Net cash provided by (used in) financing activities		9,988		(764)
Effect on foreign exchange rates on cash and cash equivalents		8		20
NET DECREASE IN CASH, CASH EQUIVALENTS AND RESTRICTED CASH		(42,226)		(11,698)
Cash, cash equivalents and restricted cash at beginning of year		81,052		24,575
Cash, cash equivalents and restricted cash at end of period	$	38,826	$	12,877
RECONCILIATION OF CASH, CASH EQUIVALENTS AND RESTRICTED CASH				
Cash and cash equivalents	$	38,680	$	12,877
Restricted cash		146		—
Total cash, cash equivalents and restricted cash	$	38,826	$	12,877
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:				
Cash paid for taxes	$	6	$	100
Right-of-use assets obtained in exchange for operating lease obligation	$	1,323	$	—
Property and equipment purchases in accounts payable	$	24	$	126
Deferred initial offering costs in accounts payable and accrued expenses	$	—	$	1,107

See notes to unaudited condensed consolidated financial statements.

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

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 pediatric 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 at September 30, 2019 are sufficient to fund the Company's planned operations into 2021. 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 September 30, 2019 and for the three and nine months ended September 30, 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 September 30, 2019, consolidated results of operations for the three and nine months ended September 30, 2019 and 2018 and cash flows for the nine months ended September 30, 2019 and 2018. Such adjustments are of a normal and recurring nature. The results of operations for the three and nine months ended September 30, 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 reallocates 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 income (loss) on the Company's Condensed 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 $210 each of operating lease liabilities and a right-of-use asset 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, comprehensive loss, cash flows or convertible preferred stock and stockholders' equity (deficit). Refer to Note 11 for right-of-use asset and liabilities recorded during the nine months ended September 30, 2019.

Recently Issued Accounting Pronouncements

There have been no new accounting pronouncements or changes to accounting pronouncements during the nine months ended September 30, 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 measured at fair value on a recurring basis and indicate the level of the fair value hierarchy utilized to determine such fair values:

Description	September 30, 2019	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Other Observable Inputs (Level 3)
Assets				
Money market funds and cash equivalents	$ 38,680	$ 38,680	$ —	$ —
U.S. Treasury securities	24,481	24,481	—	—
Total financial assets	$ 63,161	$ 63,161	$ —	$ —

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				
Money market funds and cash equivalents	$ 80,043	$ 80,043	$ —	$ —
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 September 30, 2019:

	September 30, 2019			
	Cost Basis	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. Treasury securities	$ 24,461	$ 20	$ —	$ 24,481
Total	$ 24,461	$ 20	$ —	$ 24,481

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 ofSeptember 30, 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 September 30, 2019 and December 31, 2018 consisted of the following:

	September 30, 2019	December 31, 2018
Accrued compensation and benefits	$ 736	$ 709
Accrued professional services	506	585
Lease liabilities	669	—
Other	265	223
Total accrued expenses and other current liabilities	$ 2,176	$ 1,517

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

6. DEBT

On July 2, 2019 (the "Closing Date"), the Company entered into a loan and security agreement (the "Loan Agreement"), for term loans with Oxford Finance LLC ("Oxford") and Horizon Technology Finance Corporation ("Horizon," and, together with Oxford, the "Lenders"). The Loan Agreement allows the Company to borrow up to $20,000 issuable in two equal tranches (the "Term Loans"). On the Closing Date, the first tranche of $10,000 was drawn down by the Company (the "Term A Loan"). The second tranche of $10,000 will be available to the Company through September 30, 2020, subject to certain clinical milestones (the "Term B Loan").

The outstanding loan balance will accrue interest at the greater of (i) the rate of the one-month U.S. LIBOR rate plus 6.25% and (ii) 8.75%. The Loan Agreement provides for an interest only period until July 1, 2021, followed by thirty-six equal monthly payments of principal and interest continuing through June 1, 2024 (the "Maturity Date"). The Company has the option to prepay the outstanding balance prior to maturity, subject to a prepayment fee of 1.0% to 3.0% depending upon when the prepayment occurs. Upon repayment of the Term Loans, the Company is required to make a final payment to the Lenders equal to 4.5% of the original principal amount of the Term Loans funded which will be accrued by charges to interest expense over the term of the loans using the effective interest method.

In conjunction with the Loan Agreement, the Company issued 15,686 of common stock warrants ("Warrants") to the Lenders at a per share exercise price of $12.75, a maximum contractual term of 10 years and exercisable immediately. The fair value of the Warrants was accounted for as a debt discount and calculated to be approximately $136 using the Black-Scholes method. The Company determined the Warrants met the criteria for equity classification, and, as such, the fair value of the Warrants is recorded as additional paid-in capital on the condensed consolidated balance sheets. Finally, the Company incurred issuance costs of approximately $150. Both the debt discount and issuance costs will be accreted to Notes payable by charges to interest expense over the term of the Term A Loan using the effective interest method.

The Loan Agreement contains customary representations, warranties and covenants and also includes customary events of default. Events of default include, among other things, the Company's failure to pay amounts due, a breach of certain covenants, a material adverse change event, misrepresentations and judgements. Upon the occurrence of an event of default, a default interest rate of an additional 5.00% per annum may be applied to the outstanding loan balances, and the Lenders may declare all outstanding obligations immediately due and payable. Borrowings under the Loan Agreement are collateralized by substantially all the Company's assets, other than its intellectual property.

Interest expense was $271 for the third quarter of 2019. The effective rate on the Loan Agreement,including the amortization of the debt discount and issuance costs, and accretion of the final payment, was 9.7% at September 30, 2019. The components of the long-term debt balance are as follows:

		September 30, 2019
Notes payable, gross	$	10,000
Less: Unamortized debt discount and issuance costs		(273)
Accretion of final payment fee		32
Carrying value of notes payable		9,759
Less: Current portion of long-term debt		—
Long-term debt, net of issuance costs and discount	$	9,759

As of September 30, 2019, the estimated future principal payments due were as follows:

		As of September 30, 2019
2019 (three months ending December 31)	$	—
2020		—
2021		1,945
2022		3,333
2023		3,333
Thereafter		1,389
Total principal payments	$	10,000

7. 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 September 30, 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.

8. 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 by 887,535 shares. At September 30, 2019, there were 1,249,344 shares available for future grant under the 2018 Plan.

The 2018 Plan is administered by the Board. The exercise prices, vesting and other restrictions are determined at the discretion of the Board, except that the exercise price per share of stock options may not be less than 100% of the fair market value of the common stock on the date of grant. Stock options awarded under the 2018 Plan expire 10 years after the grant date, unless the Board sets a shorter term. Vesting periods for awards under the 2018 Plan are determined at the discretion of the Board. Incentive stock options granted to employees and shares of restricted stock granted to employees, officers, members of the Board, advisors, and consultants of the Company typically vest over four years. Non-statutory options and shares of restricted stock granted to employees, officers, members of the Board, advisors, and consultants of the Company typically vest over three or four years.

Stock Options

During the nine months ended September 30, 2019 and 2018, the Company granted options to purchase 236,456 and 596,394 shares of common stock, respectively, with a weighted-average grant date fair value per share of $6.70 and $4.20, respectively. The Company recorded stock-based compensation expense for options granted of $1,130 and $292 during the nine months ended September 30, 2019 and 2018, respectively. As of September 30, 2019, there were 2,332,500 options outstanding and $5,030 of unrecognized stock-based compensation expense related to unvested stock options to be recognized over a weighted-average period of 2.9 years.

Restricted Common Stock

The Company has granted shares of restricted common stock with time-based and performance-based vesting conditions from time to time. During the nine months ended September 30, 2019, the Company did not grant any shares of restricted common stock. During the nine months ended September 30, 2018, the Company granted 107,054 shares of restricted common stock. The Company recorded stock-based compensation expense for restricted common stock granted of $199 and $228 during the nine months ended September 30, 2019 and 2018, respectively. As of September 30, 2019, there were 403,695 shares of unvested restricted common stock outstanding and $327 of unrecognized stock-based compensation expense related to unvested restricted common stock to be recognized over a weighted-average period of 2.0 years.

Stock-Based Compensation Expense

Total stock-based compensation expense recorded as research and development and general and administrative expenses, respectively, for employees, directors and non-employees for the nine months ended September 30, 2019 and 2018 is as follows:

	Nine Months Ended September 30,	
	2019	2018
Research and development	$ 553	$ 147
General and administrative	776	373
Total stock-based compensation expense	$ 1,329	$ 520

9. INCOME TAXES

For the nine months ended September 30, 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, which ceased operations in 2018 and was formally dissolved in November 2019.

10. 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 September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Numerator:				
Net loss	$ (10,918)	$ (4,669)	$ (28,663)	$ (10,560)
Less: accruals of dividends of Preferred Stock	—	(3,952)	—	(3,952)
Net loss attributable to common stockholders — basic and diluted	$ (10,918)	$ (8,621)	$ (28,663)	$ (14,512)
Denominator:				
Weighted-average common stock outstanding	22,677,205	2,138,160	22,491,282	1,963,976
Net loss per share attributable to common stockholders — basic and diluted	$ (0.48)	$ (4.03)	$ (1.27)	$ (7.39)

The Company's potentially dilutive shares, which include any outstanding Preferred Stock, stock options, warrants and 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 and nine months ended September 30, 2019 and 2018.

	September 30, 2019	September 30, 2018
Preferred Stock	—	11,789,775
Unvested restricted stock	403,695	1,045,050
Options to purchase common stock	2,332,500	2,009,671
Term A Loan warrants	15,686	—

11. LEASES

The Company has historically entered into lease arrangements for its facilities and certain equipment. As of September 30, 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 September 30, 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 September 30, 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 and nine months ended September 30, 2019and as of September 30, 2019:

	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2019
Operating leases		
Lease cost		
Operating lease cost	$ 312	$ 901
Variable lease cost	100	234
Total lease cost	$ 412	$ 1,135
Other year-to-date lease information		
Operating cash flows used for operating leases		$ 836
Operating lease liabilities arising from obtaining right-of-use assets		$ 1,323

	As of September 30, 2019
Other operating lease information	
Operating lease liabilities — short term	$ 669
Operating lease liabilities — long term	$ —
Weighted average remaining lease term	0.6 years
Weighted average discount rate	7.04%

The variable lease costs for the three and nine months ended September 30, 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 it 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 September 30, 2019, the Company classified its short-term operating lease liabilities within accrued expenses and other current liabilities.

Future minimum lease payments under the Company's operating leases as of September 30, 2019 and December 31, 2018, were as follows:

	As of September 30, 2019	As of December 31, 2018
Maturity of lease liabilities		
2019	$ 312	$ 1,028
2020	377	223
Thereafter	—	—
Total lease payments	$ 689	$ 1,251
Less: imputed interest	(20)	
Total operating lease liabilities	$ 669	

12. 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 September 30, 2019 and 2018, the Company charged $34 and $0, respectively, to research and development expenses under these consulting service agreements. For the nine months ended September 30, 2019 and 2018, the Company charged $118 and $68 to research and development expenses, respectively, under these consulting service agreements. In addition, beginning in 2018, each founder receives $5 annually for their participation on the Scientific Advisory Board. Each founder has also received stock options for their services as either a board member or member of the Scientific Advisory Board.

In March 2017, the Company subleased to an affiliate certain space in Tel Aviv, Israel, through June 2018. For the three and nine months ended September 30, 2018, the Company recognized income of $0 and $21, respectively, in other income related to this arrangement.

13. SUBSEQUENT EVENTS

Effective November 8, 2019, Dean Falb, Ph.D., the Company's Chief Scientific Officer and a Named Executive Officer in fiscal 2018, has separated from the Company. Dr. Falb's separation was without cause and, subject to the entry into an acceptable separation agreement, he will be entitled to receive severance pursuant to his amended and restated employment agreement with the Company dated as of October 23, 2018. The Company has begun the process of identifying qualified candidates.

In November 2019, the Company entered into a lease agreement for office, laboratory and vivarium space located at 65 Hayden Avenue in Lexington, Massachusetts ("65 Hayden Ave Lease") to replace the Company's current headquarters located at 99 Erie Street in Cambridge, Massachusetts. Under the terms of the 65 Hayden Ave Lease, the Company will lease approximately 23,901 square feet of space and pay an initial annual base rent of approximately $1,494, which is subject to scheduled annual increases, plus certain operating expenses and taxes. The Company anticipates it will take possession of the space on April 1, 2020 ("Lease Commencement Date") and continue through July 1, 2025 ("Lease Termination Date"). The Company has one option to extend the lease for a term of 5 years. Upon execution of the lease, the Company executed a $622 cash-collateralized letter of credit. Lease payments are anticipated to begin three months after the Lease Commencement Date and will continue in monthly installments through the Lease Termination Date.

The Company will assess the lease classification of the 65 Hayden Ave Lease and commence recognition of the associated rent expense upon the Lease Commencement Date.

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 pediatric 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 in the fourth quarter of 2019 and into a Phase 1/2 clinical trial in pediatric MMA patients in the first half of 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 plan to nominate a second indication by the end of 2019. 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 September 30, 2019, we have raised approximately $9.8 million in net proceeds through the loan and security agreement in July 2019, 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 $10.9 million and $28.7 million for the three and nine months ended September 30, 2019, respectively, and our accumulated deficit was $55.9 million as of September 30, 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 September 30, 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 (Expense), Net

Interest income consists primarily of interest on our cash and cash equivalents and investments. Interest expense consists of interest expense related to the aggregate $10.0 million principal amount of the Term A Loan borrowing under the loan and security agreement in July 2019. A portion of the interest expense on the Term A Loan is non-cash expense relating to the accretion of the debt discount and amortization of issuance costs. In the third quarter of 2019, we recorded $0.3 million in interest expense, of which $0.2 million relates to cash interest paid and the remainder to the accretion of the debt discount and amortization of issuance costs. Other expense, net consists primarily of foreign exchange losses.

Results of Operations

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

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

	Three Months Ended September 30,	
	2019	2018
	(in thousands)	
Operating expenses:		
Research and development	$ 8,858	$ 2,432
General and administrative	2,175	2,119
Total operating expenses	11,033	4,551
Loss from operations	(11,033)	(4,551)
Other income (expense):		
Other income (expense), net	115	(80)
Loss before income taxes	(10,918)	(4,631)
Income tax provision	—	(38)
Net loss	$ (10,918)	$ (4,669)

Research and Development Expenses

The following table summarizes our research and development expenses for the three months ended September 30, 2019 and 2018:

	Three Months Ended September 30,		
	2019	2018	Increase
	(in thousands)		
LB-001 external development and manufacturing costs	$ 5,546	$ 714	$ 4,832
Personnel-related costs	1,534	720	814
Other research and development costs	1,778	998	780
Total research and development expenses	$ 8,858	$ 2,432	$ 6,426

Research and development expenses for the three months ended September 30, 2019 were $8.9 million, compared to $2.4 million for the three months ended September 30, 2018. The increase of approximately $6.4 million was primarily due to an increase of approximately $4.8 million related to external development and manufacturing expenses for our lead product candidate, LB-001, $0.8 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 LB-001 and $0.8 million in personnel-related costs related to an increase in headcount. Personnel-related costs for the three months ended September 30, 2019 included stock-based compensation expense of $0.2 million, compared to $0.1 million for the three months ended September 30, 2018.

General and Administrative Expenses

General and administrative expenses were $2.2 million for the three months ended September 30, 2019, compared to $2.1 million for the three months ended September 30, 2018. The increase of approximately $0.1 million was primarily due to an increase in personnel-related costs, including salaries, stock-based compensation and bonuses of $0.3 million related to an increase in headcount and offset by a decrease in professional fees of $0.2 million related to non-recurring consulting expenses incurred as part of our October 2018 initial public offering. Stock-based compensation expense included in general and administrative expenses was $0.3 million and $0.2 million for the three months ended September 30, 2019 and 2018, respectively.

Other Income (Expense), Net

Other income (expense), net was $0.1 million for the three months ended September 30, 2019, compared to other income (expense), net of $(0.1) million for the three months ended September 30, 2018. The change was primarily related to the increase in interest income from cash equivalents and investments which was mostly offset by interest expense related to the loan and security agreement and a prior year loss of $0.2 million related to the disposal of Property and Equipment.

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

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

	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
	(in thousands)	
Operating expenses:		
Research and development	$ 22,278	$ 6,113
General and administrative	7,331	4,453
Total operating expenses	29,609	10,566
Loss from operations	(29,609)	(10,566)
Other income:		
Other income, net	968	44
Loss before income taxes	(28,641)	(10,522)
Income tax provision	(22)	(38)
Net loss	$ (28,663)	$ (10,560)

Research and Development Expenses

The following table summarizes our research and development expenses for the nine months ended September 30, 2019 and 2018:

	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018	Increase
	(in thousands)		
LB-001 external development and manufacturing costs	$ 12,976	$ 2,001	$ 10,975
Personnel-related costs	4,229	1,714	2,515
Other research and development costs	5,073	2,398	2,675
Total research and development expenses	$ 22,278	$ 6,113	$ 16,165

Research and development expenses for the nine months ended September 30, 2019 were $22.3 million, compared to $6.1 million for the nine months ended September 30, 2018. The increase of approximately $16.2 million was primarily due to an increase of approximately $11.0 million related to external development and manufacturing expenses for our lead product candidate, LB-001, $2.7 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 LB-001 and $2.5 million in personnel-related costs related to an increase in headcount. Personnel-related costs for the nine months ended September 30, 2019 included stock-based compensation expense of $0.6 million, compared to $0.1 million for the nine months ended September 30, 2018.

General and Administrative Expenses

General and administrative expenses were $7.3 million for the nine months ended September 30, 2019, compared to $4.5 million for the nine months ended September 30, 2018. The increase of approximately $2.9 million was primarily due to an increase of approximately $1.3 million in personnel-related costs, including salaries, stock-based compensation and bonuses due to an increase in headcount, $0.8 million in legal and professional fees due to the increase in legal, auditing and consulting services associated with being a public company and $0.7 million in other expenses primarily related to an increase in insurance premiums. Stock-based compensation expense included in general and administrative expenses was $0.8 million and $0.4 million for the nine months ended September 30, 2019 and 2018, respectively.

Other Income, Net

Other income, net was $1.0 million for the nine months ended September 30, 2019, compared to other income, net of $44,000 for the nine months ended September 30, 2018. The change was primarily related to the increase in interest income from cash equivalents and investments, partially offset by interest expense related to the loan and security agreement.

Liquidity and Capital Resources

Overview

Since our inception and through September 30, 2019, we have not generated any revenue and have incurred significant losses and negative cash flows from our operations.

Cash Flows

The following table summarizes our cash flows for the nine months ended September 30, 2019 and 2018:

	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
	(in thousands)	
Net cash used in operating activities	$ (27,048)	$ (10,627)
Net cash used in investing activities	(25,174)	(327)
Net cash provided by (used in) financing activities	9,988	(764)
Effect of foreign exchange rates on cash and cash equivalents	8	20
Net decrease in cash, cash equivalents and restricted cash	$ (42,226)	$ (11,698)

Operating Activities

During the nine months ended September 30, 2019, net cash used in operating activities was approximately $27.0 million, primarily related to our net loss adjusted for non-cash charges and changes in the components of working capital. The $16.4 million increase in cash used in operating activities during the nine months ended September 30, 2019 compared to the nine months ended September 30, 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 nine months ended September 30, 2019, net cash used in investing activities increased approximately $24.8 million, primarily related to net short-term investments activity of $24.1 million and a $0.7 million increase in the purchases of property and equipment as compared to the nine months ended September 30, 2018.

Financing Activities

During the nine months ended September 30, 2019, net cash provided by financing activities was $10.0 million primarily related to net proceeds of $9.8 million under the July 2019 loan and security agreement as well as $0.1 million related to the exercise of stock options. During the nine months ended September 30, 2018, net cash used in financing activities was $0.8 million, primarily for the payment of deferred IPO costs.

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 predinical 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 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;
- lease and build 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 the Nasdaq Global Market.

Contractual Obligations and Commitments

Our principal contractual obligations consist of our outstanding balance under the loan and security agreement, our operating lease agreements and service and research agreements with collaborators, CROs, CMOs and other third parties for preclinical research studies and testing, all of which are entered in the normal course of business.

With the exception of the $10.0 million borrowing under the loan and security agreement entered in July 2019 and described in Note 6 to the condensed consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q, there have been no significant changes to our future non-cancelable minimum payments under these commitments from those reported in our Annual Report on Form 10-K for the year ended December 31, 2018, other than normal period-to-period variations as of September 30, 2019.

We may incur potential contingent payments upon our achievement of clinical, regulatory or commercial milestones, as applicable, or royalty payments under license agreements we have entered with research institutions, including Stanford University, the University of Texas and the National Institutes of Health. The timing and likelihood of these contingent payments are not currently known and would be difficult to predict or estimate due to the uncertainty of the achievement and timing of the events requiring payments under these agreements.

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 unaudited 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 September 30, 2019, we had cash, cash equivalents and investments of $63.2 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.

We also have interest rate exposure as a result of borrowings outstanding under our loan and security agreement. As of September 30, 2019, the outstanding principal amount of our borrowings was $10.0 million. Our borrowings under the loan and security agreement accrue interest at the greater of (i) the rate of the one-month U.S. LIBOR rate plus 6.25% and (ii) 8.75%. An immediate 10% change in the one-month U.S. LIBOR rate would not have a material impact on our operating results or cash flows.

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 Condensed Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (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, net in the Condensed Consolidated Statements of Operations as incurred. All operations ceased for LogicBio Research as of September 30, 2018 and the entity was formally dissolved in November 2019.

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 September 30, 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 September 30, 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 September 30, 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 and a senior director of external reporting and technical accounting.
- We engaged a third party to help us enhance our documentation of accounting policies and positions on technical accounting topics throughout the year.
- With the support of outside consultants, we completed risk assessment activities, which include evaluating and documenting the design of our internal controls that address the relevant risks, and identifying any gaps in the internal control environment that require remediation.
- 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.
- Implemented and refined internal controls that remediated gaps identified during the design assessment.

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 fourth quarter, including:

- Continue to engage external consultants to provide support related to more complex applications of U.S. GAAP and document and assess our accounting policies and procedures; 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 weakness.

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 September 30, 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, except as set forth below.

The terms of our Loan and Security Agreement place restrictions on our operating and financial flexibility.

In July 2019, we entered into a Loan and Security Agreement with Oxford Finance LLC and Horizon Technology Finance Corporation (the "Loan Agreement"), which is secured by substantially all of our assets other than our intellectual property, which is subject to a negative pledge. We borrowed $10.0 million upon execution of the Loan Agreement under an initial term A loan. Oxford Finance LLC and Horizon Technology Finance Corporation (each, a "Lender" and, collectively, the "Lenders") will make an additional term B loan in an aggregate principal amount up to $10.0 million upon the occurrence of the Milestone Event (as defined in the Loan Agreement).

The Loan Agreement contains representations and warranties, affirmative and negative covenants applicable to us and our subsidiaries and events of default, in each case subject to grace periods, thresholds and materiality qualifiers, as more fully described in the Loan Agreement. The affirmative covenants include, among others, covenants requiring us and our subsidiaries to maintain our legal existence and material governmental approvals, deliver certain financial reports, maintain insurance coverage and maintain certain cash balances in controlled accounts. The negative covenants include, among others, restrictions on dispositions, changes in business, management, ownership or business locations, mergers or acquisitions, indebtedness, encumbrances, maintenance of collateral accounts, distributions, investments, transactions with affiliates and subordinated debt.

The Loan Agreement also includes events of default, the occurrence and continuation of which provide Oxford Finance LLC, as collateral agent, with the right to exercise remedies against us and the collateral securing the loans under the Loan Agreement, including foreclosure against our properties securing the Loan Agreement, including our cash, potentially requiring us to renegotiate our agreement on terms less favorable to us or to immediately cease operations. These events of default include, among other things, the nonpayment of principal or interest, violations of covenants, material adverse changes, attachment, levy, restraint on business, cross-defaults on material indebtedness, bankruptcy, material judgments, misrepresentations, subordinated debt, governmental approvals, lien priority and delisting.

Further, if we are liquidated, the Lenders' right to repayment would be senior to the rights of the holders of our common stock to receive any proceeds from the liquidation. The Lenders could declare a default upon the occurrence of any event that they interpret as a material adverse change as defined under the Loan Agreement, thereby requiring us to repay the loan immediately or to attempt to reverse the declaration of default through negotiation or litigation. Any declaration by the Lenders of an event of default could significantly harm our business and prospects and could cause the price of our common stock to decline.

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

Use of Proceeds from Initial Public Offering

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. We have been using and plan to continue to use the net proceeds from the IPO primarily to fund the development of LB-001 in MMA and for discovery and preclinical development of additional product candidates, and for working capital and general corporate purposes.

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, File No. 001-38707, 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, File No. 001-38707, filed on October 29, 2018).
EXHIBIT 4.1	—	Form of Warrant to Purchase Common Stock of LogicBio Therapeutics Inc., dated as of July 2, 2019 (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, File No. 001-38707, filed on July 2, 2019).
EXHIBIT 10.1	—	Loan and Security Agreement dated as of July 2, 2019, among Oxford Finance LLC, the Lenders listed on Schedule 1.1 thereto and Horizon Technology Finance Corporation and LogicBio Therapeutics, Inc. and LogicBio Australia Pty Limited (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, File No. 001-38707, filed on July 2, 2019).
EXHIBIT 10.2	—	Amended and Restated Executive Employment Agreement, by and between LogicBio Therapeutics, Inc. and Dean Falb.
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: November 12, 2019	By:	/s/ Frederic Chereau Frederic Chereau President and Chief Executive Officer
Dated: November 12, 2019	By:	/s/ Matthias Jaffé Matthias Jaffé Chief Financial Officer

Exhibit 10.2

LOGICBIO THERAPEUTICS, INC.

AMENDED AND RESTATED EXECUTIVE EMPLOYMENT AGREEMENT

This Amended and Restated Employment Agreement (this "**Agreement**") is entered into as of the last date set forth on the signature page below (the "**Effective Date**") by and between LogicBio Therapeutics, Inc. (the "**Company**") and Dean Falb ("**Executive**").

Duties and Scope of Employment.

Positions and Duties. The Company hereby agrees to continue to employ Executive as its Chief Scientific Officer, and Executive will hereby agrees to continue in such position and serve the Company in such capacity, during the Employment Term. Executive will render such business and professional services in the performance of his duties, consistent with Executive's position within the Company, as will reasonably be assigned to Executive by the Company's President and Chief Executive Officer (the "**CEO**"). The period of Executive's employment under this Agreement is referred to herein as the "**Employment Term**."

Obligations. During the Employment Term, Executive will perform his duties faithfully and to the best of his ability and will devote his full business efforts and time to the Company. For the duration of the Employment Term, Executive agrees not to actively engage in any other employment, occupation, or consulting activity for any direct or indirect remuneration without the prior approval of the CEO or the Company's Board of Directors (the "**Board**").

At-Will Employment. The parties agree that Executive's employment with the Company will continue to be "at-will" employment and may be terminated at any time with or without cause or notice. However, as described in this Agreement, Executive may be entitled to severance benefits depending on the circumstances of Executive's termination of employment with the Company.

Compensation.

Base Salary. During the Employment Term, the Company will pay Executive an annual salary (the "**Base Salary**") of $340,000 as compensation for Executive's services. The Base Salary will be paid periodically in accordance with the Company's normal payroll practices. Executive's Base Salary will be subject to review by the Compensation Committee (the "**Compensation Committee**") of the Board and adjustments to the Base Salary may be made in its discretion.

Bonus. During the Employment Term, Executive will be eligible to receive an annual bonus, with a target annual bonus equal to thirty-five percent (35%) of the Base Salary, upon achievement of certain performance objectives to be determined by the Compensation Committee. The amount, terms and conditions of any annual bonus will be determined by the Compensation Committee in its discretion and any annual bonus will be subject to the terms and conditions of the applicable Company bonus plan, as in effect from time to time. Any earned annual bonus will be paid as soon as reasonably practicable after the Compensation Committee determines that such bonus has been earned, but in no event shall the bonus be paid after the March 15th following the end of the calendar year to which the bonus relates, in accordance with the Company's normal payroll practices. The payment of any annual bonus will be subject to Executive's continued employment through the payment date, except as set forth in Section 6 or 7 below or as otherwise provided in an applicable bonus plan.

Equity Compensation. During the Employment Term, Executive will be eligible to receive equity and equity-based awards in the discretion of the Board or the Compensation Committee and on such terms and conditions as are determined by the Board or the Compensation Committee in its discretion. Any equity and equity-based awards granted to Executive, whether before or after the Effective Date, will be governed by the terms and conditions of the applicable Company equity incentive plan(s), as in effect from time to time, and the award agreements governing such equity or equity-based awards (any such plan and award agreements, collectively, the "**Equity Agreements**").

Employee Benefits. During the Employment Term, Executive will be entitled to participate in the employee benefit plans maintained by the Company as in effect from time to time of general applicability to other senior executives of the Company. The Company reserves the right to cancel or change any of its employee benefit plans at any time.

Indemnification. Executive will be entitled to the same indemnification rights as the Company grants to other senior executives of the Company, subject to the provisions of the Company's by-laws and certificate of incorporation.

Vacation. Executive will be entitled to earn paid annual vacation in accordance with Company policy for other senior executive officers, as in effect from time to time.

Expenses.

Subject to Section 5(b), the Company will reimburse Executive for all reasonable and necessary expenses incurred by Executive in connection with the performance of Executive's duties hereunder.

Subject to any applicable policy established by the Company as in effect from time to time, the Company will reimburse Executive for expenses incurred pursuant to Section 5(a) upon Executive's having submitted valid receipts to the Company, provided that Executive is an employee of the Company on the date on which the expenses are incurred. Executive's right to payment or reimbursement for expenses hereunder shall be subject to the following additional rules: (i) the amount of expenses eligible for payment or reimbursement during any calendar year shall not affect the expenses eligible for payment or reimbursement in any other calendar year, (ii) payment or reimbursement shall be made not later than December 31 of the calendar year following the calendar year in which the expense or payment was incurred, and (iii) the right to payment or reimbursement is not subject to liquidation or exchange for any other benefit.

Severance.

Termination for other than Cause, Death or Disability or Resignation for Good Reason. If the Company (or any parent or subsidiary or successor of the Company) terminates Executive's employment with the Company other than for Cause (as defined below) and other than due to Executive's death or Disability (as defined below), or Executive resigns with Good Reason (as defined below), then, subject to Section 8, Executive will be entitled to (i) receive severance pay at a rate equal to Executive's Base Salary, as then in effect, for six (6) months from the date of such termination, which will be paid in equal installments in accordance with the Company's normal payroll practices; (ii) an amount equal to Executive's target annual bonus for the year in which such termination of employment occurs, multiplied by .5, payable in equal installments in accordance with the Company's normal payroll practices over six (6) months from the date of such termination; and (iii) if Executive elects continuation coverage pursuant to the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended ("**COBRA**") for Executive and his eligible dependents within the time period prescribed pursuant to COBRA, the Company will reimburse Executive for the COBRA premiums for such coverage until the earlier of (A) a period of three (3) months from the last date of employment of Executive with the Company, or (B) the date upon which Executive ceases to be eligible for coverage under COBRA. COBRA reimbursements will be made by the Company to Executive consistent with the Company's normal expense reimbursement policy. However, if the Company determines in its sole discretion that it cannot provide the foregoing COBRA benefits without potentially violating applicable law (including, without limitation, Section 2716 of the Public Health Service Act) or incurring additional taxes, the Company will in lieu thereof provide to Executive a taxable monthly payment in an amount equal to the monthly COBRA premium that Executive would be required to pay to continue his group health coverage in effect on the date of his termination of employment (which amount will be based on the premium for the first month of COBRA coverage) for the time period described in clause (A) in equal installments in accordance with the Company's normal payroll practices. In addition to the amounts described above, Executive will be entitled to receive Executive's accrued and unpaid Base Salary through the date Executive's employment terminates, any unreimbursed expenses due under Section 5 of above, and any vested benefits required to be paid or provided under the terms and conditions of the Company's benefit plans (collectively, the "**Accrued Benefits**") if Executive's employment terminates in the circumstances described in this Section 6(a).

Termination for Cause or Death or Disability; Voluntary Resignation. If Executive's employment with the Company (or any parent or subsidiary or successor of the Company) is terminated voluntarily by Executive without Good Reason, for Cause by the Company or due to Executive's death or Disability, then Executive will be entitled to receive the Accrued Benefits and no further compensation or benefits will be paid to Executive under this Agreement.

Exclusive Remedy. In the event of a termination of Executive's employment with the Company (or any parent or subsidiary or successor of the Company), the provisions of this Section 6 and Section 7 below are intended to be and are exclusive and in lieu of any other rights or remedies to which Executive or the Company may otherwise be entitled in connection with the termination of Executive's employment under any employee compensation or benefit plan which provides benefits in the nature of severance or continuation pay.

Termination for other than Cause, Death or Disability or Resignation for Good Reason within 24 months following a Change in Control. If the Company (or any parent or subsidiary or successor of the Company) terminates Executive's employment with the Company other than for Cause (as defined below) and other than due to Executive's death or Disability (as defined below), or Executive resigns with Good Reason (as defined below), in either case, within twenty-four (24) months following a Change of Control (as defined below) then, subject to Section 8 and in lieu of the payments set forth in Section 6 above, Executive will be entitled to (i) receive a severance payment equal to one times (1x) the sum of (A) Executive's annual Base Salary, as then in effect, and (B) Executive's target annual bonus for the year in which such termination of employment occurs (ii) an amount equal to the monthly COBRA premium that Executive would be required to pay to continue his group health coverage in effect on the date of his termination of employment for a period of nine (9) months (which amount will be based on the premium for the first month of COBRA coverage); and (iv) accelerated vesting as to one hundred percent (100%) of Executive's then outstanding and unvested equity and equity-based awards (with any performance-vesting awards vesting at target levels). All amounts payable under prongs (i) and (ii) of this Section 7 will be paid in a lump sum on the first normal payroll date of the Company following the Release Deadline (as defined below) in accordance with the Company's normal payroll practices. In addition to the amounts described above, Executive will be entitled to receive the Accrued Benefits.

Conditions to Receipt of Severance; No Duty to Mitigate.

Separation Agreement and Release of Claims. The receipt of any severance pursuant to Sections 6 or 7 will be subject to Executive signing and not revoking a separation agreement and general release of claims in a form reasonably satisfactory to the Company (the "**Release**") and provided that such Release becomes effective and irrevocable no later than sixty (60) days following the termination date (such deadline, the "**Release Deadline**"). If the Release does not become effective and irrevocable by the Release Deadline, Executive will forfeit any rights to severance or benefits under this Agreement. In no event will severance payments or benefits be paid or provided until the Release becomes effective and irrevocable. Subject to Section 8(b), any cash severance pay to which Executive is entitled pursuant to Section 6 or 7 (other than the Accrued Obligations) will be paid, or will begin to be paid, on the first normal payroll date of the Company following the Release Deadline, with such payment to include all amounts that would have been paid prior to such date but for this Section 8(a).

Section 409A.

Notwithstanding anything to the contrary in this Agreement, no severance pay or benefits to be paid or provided to Executive, if any, pursuant to this Agreement that, when considered together with any other payments or benefits, would be considered deferred compensation under Code Section 409A and the final regulations and any guidance promulgated thereunder (collectively, "**Section 409A**") (together, the "**Deferred Payments**") will be paid or otherwise provided until Executive has incurred a "separation from service" within the meaning of Section 409A.

Notwithstanding anything to the contrary in this Agreement, if Executive is a "specified employee" within the meaning of Section 409A at the time of Executive's termination (other than due to death), then the Deferred Payments that are payable within the first six (6) months following Executive's separation from service, will become payable on the first payroll date that occurs on or after the date six (6) months and one (1) day following the date of Executive's separation from service. All subsequent Deferred Payments, if any, will be payable in accordance with the payment schedule applicable to each payment or benefit. Notwithstanding anything herein to the contrary, if Executive dies following Executive's separation from service, but prior to the six (6) month anniversary of the separation from service, then any payments delayed in accordance with this paragraph will be payable in a lump sum as soon as administratively practicable after the date of Executive's death and all other Deferred Payments will be payable in accordance with the payment schedule applicable to each payment or benefit. Each payment and benefit payable under this

Agreement is intended to constitute a separate payment for purposes of Section 1.409A-2(b)(2) of the Treasury Regulations.

Any amounts paid under this Agreement that satisfies the requirements of the "short-term deferral" rule set forth in Section 1.409A-1(b)(4) of the Treasury Regulations will not constitute Deferred Payments for purposes of clause (i) above.

Any amount paid under this Agreement that qualifies as a payment made as a result of an involuntary separation from service pursuant to Section 1.409A-1(b)(9)(iii) of the Treasury Regulations that does not exceed the Section 409A Limit (as defined below) will not constitute Deferred Payments for purposes of clause (i) above.

All payments under this Agreement are intended to be exempt from, or comply with, the requirements of Section 409A so that none of the payments and benefits provided hereunder will be subject to the additional tax imposed under Section 409A, and any ambiguities herein will be interpreted to so comply. The Company and Executive agree to work together in good faith to consider amendments to this Agreement and to take such reasonable actions which are necessary, appropriate or desirable to avoid imposition of any additional tax or income recognition prior to actual payment to Executive under Section 409A. In no event will the Company, any of its subsidiaries or affiliates be liable to Executive by reason of any acceleration of income or any additional tax (including any interest and penalties) asserted with respect to the failure of any payments or benefits provided under this Agreement to satisfy the applicable requirements of Section 409A.

Confidential Information Agreement. Executive's continuing receipt of any payments or benefits under Section 6 or 7 will be subject to Executive continuing to comply with the terms of Confidential Information Agreement (as defined in Section 11). In the event Executive breaches the provisions of the Confidential Information Agreement, then all payments and benefits to which Executive may otherwise be entitled pursuant to Sections 6 or 7 will immediately cease.

No Duty to Mitigate. Executive will not be required to mitigate the amount of any payment contemplated by this Agreement, nor will any earnings that Executive may receive from any other source reduce any such payment.

Definitions.

Cause. For purposes of this Agreement, "**Cause**" is defined, as determined by the Company in its reasonable judgment, as (i) breach of this Agreement or the Confidential Information Agreement by Executive; (ii) intentional and continued nonperformance or misperformance of Executive's duties or refusal to abide by or comply with the reasonable directives of the CEO or the Board, or the Company's policies and procedures, which, if reasonably susceptible to cure (as determined by the Company), is not cured within fifteen (15) days following Executive's receipt of written notice from the Company describing in reasonable detail the nature of the nonperformance, misperformance or refusal, as applicable; (iii) Executive's gross negligence in the performance of his material duties under this Agreement; (iv) Executive's fraud or willful misconduct with respect to the business or affairs of the Company; (v) Executive's conviction of, or a plea of nolo contendere to, a felony or other crime involving moral turpitude; or (vi) the commission of any act in direct or indirect competition with or materially detrimental to the best interests of Company.

Change of Control. For purposes of this Agreement, "**Change of Control**" is defined as:

the acquisition of the Company by another entity by means of any transaction or series of related transactions (including, without limitation, any reorganization, merger or consolidation or stock transfer, but excluding any such transaction effected primarily for the purpose of changing the domicile of the Company), unless the Company's stockholders of record immediately prior to such transaction or series of related transactions hold, immediately after such transaction or series of related transactions, at least fifty percent (50%) of the voting power of the surviving or acquiring entity (*provided* that the sale by the Company of its securities for the primary purpose of raising additional funds shall not constitute a Change of Control hereunder); or

a sale, license or other disposition of all or substantially all of the assets, intellectual property or technology of the Company.

Notwithstanding the foregoing provisions of this definition, a transaction will not be deemed a Change of Control unless the transaction qualifies as a "change in control event" within the meaning of Section 409A.

Code. For purposes of this Agreement, "**Code**" means the Internal Revenue Code of 1986, as amended.

Disability. For purposes of this Agreement, "**Disability**" means that Executive has been unable to perform Executive's Company duties as the result of Executive's incapacity due to physical or mental illness for at least twenty-six (26) weeks after the commencement of such incapacity or for one-hundred and eighty (180) days in any consecutive twelve (12) month period, which incapacity is determined by a physician selected by the Company or its insurers and acceptable to Executive or Executive's legal representative (such agreement as to acceptability not to be unreasonably withheld).

Good Reason. For purposes of this Agreement, "**Good Reason**" means Executive's resignation within thirty (30) days following the expiration of any Company cure period (described below) following the occurrence of one or more of the following, without Executive's consent:

a material diminution of Executive's authority, duties, or responsibilities with the Company in effect immediately prior to such assignment;

a material breach of this Agreement by the Company; or

a material reduction in Executive's base salary in effect immediately prior to such termination, unless the Company also similarly reduces the base salaries of all other similarly-situated employees of the Company.

Executive will not resign for Good Reason without first providing the Company with written notice of the acts or omissions constituting the grounds for "Good Reason" within ninety (90) days of the initial existence of the grounds for "Good Reason" and a cure period of thirty (30) days following the date of such notice.

Section 409A Limit. For purposes of this Agreement, "**Section 409A Limit**" will mean two (2) times the lesser of: (i) Executive's annualized compensation based upon the annual rate of pay paid to Executive during Executive's taxable year preceding Executive's taxable year of his separation from service as determined under Treasury Regulation Section 1.409A-1(b)(9)(iii)(A)(1) and any Internal Revenue Service guidance issued with respect thereto; or (ii) the maximum amount that may be taken into account under a qualified plan pursuant to Section 401(a)(17) of the Internal Revenue Code for the year in which Executive's separation from service occurred.

Limitation on Payments.

If Executive receives, is provided or may receive or be provided any payment or benefit that constitutes a "parachute payment" (as defined in Section 280G(b)(2) of the Code), and the net after-tax amount of any such parachute payment is less than the net after-tax amount if the aggregate payments and benefits to be made to Executive were three times Executive's "base amount" (as defined in Section 280G(b)(3) of the Code), less $1.00, then the aggregate of the amounts constituting the parachute payments shall be reduced to an amount equal to three times Executive's base amount, less $1.00. For purposes of determining the "net after-tax amount," the Company will cause to be taken into account all applicable federal, state and local income and employment taxes and the excise taxes (all computed at the highest applicable marginal rate, net of the maximum reduction in federal income taxes which could be obtained from a deduction of such state and local taxes). If a reduction pursuant to this Section 10 is to occur, (x) Executive will have no rights to any additional payments and/or benefits that are being reduced, and (y) reduction in payments and/or benefits will occur in the following order: (i) reduction of cash payments, if any, which shall occur in reverse chronological order such that the cash payment owed on the latest date following the occurrence of the event triggering such excise tax will be the first cash payment to be reduced; (ii) cancellation of accelerated vesting of equity awards other than stock options, if any; (iii) cancellation of accelerated vesting of stock options, if any; and (iv) reduction of other payments or benefits, if any, paid or provided to Executive, which shall occur in reverse chronological order such that the payment or benefit owed on the latest date following the occurrence of the event triggering such excise tax will be the first benefit to be reduced. In the event that acceleration of vesting of equity awards or stock options is to be reduced, such acceleration of vesting will be cancelled in the reverse order of the date of grant. If two or more equity awards or stock options are granted on the same date, each award or stock option will be reduced on a pro-rata basis. Notwithstanding, any excise tax imposed will be solely the responsibility of Executive. In no event shall Executive have any discretion with respect to the ordering of his payment reductions.

Unless the Company and Executive otherwise agree in writing, any determination required under this Section 10 will be made in writing by a nationally recognized firm of independent public accountants selected by the Company, the Company's legal counsel or such other person or entity to which the Parties mutually agree (the "**Firm**"), whose determination will be conclusive and binding upon Executive and the Company for all purposes. For purposes of making the calculations required by this Section 10, the Firm may make reasonable assumptions and approximations concerning applicable taxes and may rely on reasonable, good faith interpretations concerning the application of Sections 280G and 4999 of the Code. The Company and Executive will furnish to the Firm such information and documents as the Firm may reasonably request in order to make a determination under this Section 10. The Company will bear all costs the Firm may reasonably incur in connection with any calculations contemplated by this Section 10.

Confidential Information. Executive agrees that Executive will continue to be bound by the Confidential Information, Invention Assignment, Restricted Activities, and Arbitration Agreement (the " **Confidential Information Agreement**") by and between Executive and the Company in accordance with its terms.

Assignment. This Agreement will be binding upon and inure to the benefit of (a) the heirs, executors and legal representatives of Executive upon Executive's death and (b) any successor of the Company. Any such successor of the Company will be deemed substituted for the Company under the terms of this Agreement for all purposes. For this purpose, "**successor**" means any person, firm, corporation or other business entity which at any time, whether by purchase, merger or otherwise, directly or indirectly acquires all or substantially all of the assets or business of the Company. None of the rights of Executive to receive any form of compensation payable pursuant to this Agreement may be assigned or transferred except by will or the laws of descent and distribution. Any other attempted assignment, transfer, conveyance or other disposition of Executive's right to compensation or other benefits will be null and void.

Notices. All notices, requests, demands and other communications called for hereunder will be in writing and will be deemed given (i) on the date of delivery if delivered personally, (ii) one (1) day after being sent by a well established commercial overnight service, or (iii) four (4) days after being mailed by registered or certified mail, return receipt requested, prepaid and addressed to the parties or their successors at the following addresses, or at such other addresses as the parties may later designate in writing:

If to the Company:

LogicBio Therapeutics, Inc.
700 Main Street
Cambridge, Massachusetts 02139

If to Executive:

at the last residential address known by the Company.

Severability. In the event that any provision hereof becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Agreement will continue in full force and effect without said provision.

Arbitration. Executive agrees that any and all controversies, claims, or disputes with anyone (including the Company and any employee, officer, director, stockholder or benefit plan of the Company in their capacity as such or otherwise) arising out of, relating to, or resulting from Executive's service to the Company, shall be subject to arbitration in accordance with the provisions of the Confidential Information Agreement.

Integration. This Agreement represents the entire agreement and understanding between the parties as to the subject matter herein and supersedes all prior or contemporaneous agreements whether written or oral. This Agreement may be modified only by agreement of the parties by a written instrument executed by the parties that is designated as an amendment to this Agreement.

Waiver of Breach. The waiver of a breach of any term or provision of this Agreement, which must be in writing, will not operate as or be construed to be a waiver of any other previous or subsequent breach of this Agreement.

Headings. All captions and section headings used in this Agreement are for convenient reference only and do not form a part of this Agreement.

Tax Withholding. All payments made pursuant to this Agreement will be subject to withholding of applicable taxes and other legally required amounts.

Governing Law. This Agreement will be governed by the laws of the Commonwealth of Massachusetts without regard to any conflict of laws principles that would result in the application of the laws of any other jurisdiction. Executive agrees to submit to the exclusive jurisdiction of the courts of or in the Commonwealth of Massachusetts in connection with any dispute arising out of this Agreement.

Acknowledgment. Executive acknowledges that he has had the opportunity to discuss this matter with and obtain advice from his private attorney, has had sufficient time to, and has carefully read and fully understands all the provisions of this Agreement, and is knowingly and voluntarily entering into this Agreement.

Counterparts. This Agreement may be executed in counterparts, and each counterpart will have the same force and effect as an original and will constitute an effective, binding agreement on the part of each of the undersigned.

[*Signature Page Follows.*]

IN WITNESS WHEREOF, each of the parties has executed this Agreement, in the case of the Company by their duly authorized officers, as of the day and year written below.

COMPANY:

LOGICBIO THERAPEUTICS, INC.

By: /s/ Frederic Chereau

Date: October 23, 2018

Name: Frederic Chereau

Title: President & Chief Executive Officer

EXECUTIVE:

/s/ Dean Falb
Dean Falb

Date: October 23, 2018

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: November 12, 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: November 12, 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 September 30, 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: November 12, 2019	/s/ Frederic Chereau Frederic Chereau President and Chief Executive Officer
Dated: November 12, 2019	/s/ Matthias Jaffé Matthias Jaffé Chief Financial Officer