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

DIVISION OF
CORPORATION FINANCE

September 10, 2018

Frederic Chereau
President and Chief Executive Officer
LogicBio Therapeutics, Inc.
610 Main Street, 3rd Floor
Cambridge, MA 02139

Re: LogicBio Therapeutics, Inc.
Draft Registration Statement on Form S-1
Submitted August 13, 2018
CIK No. 0001664106

Dear Mr. Chereau:

We have reviewed your draft registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

Draft Registration Statement on Form S-1 submitted August 13, 2018

Our GeneRide Technology, page 1

1. Please revise your pipeline table on pages 3 and 82 to remove the programs that are in the discovery phase. Because you have not identified a product candidate or target indication for these programs, it is premature to include them in a product pipeline table. In addition, please revise the column headings to eliminate the implication that your candidates may be closer to regulatory approval and commercialization than they are. For instance, we note that with the use of separate columns for sub-phases of the preclinical stage, it appears the preclinical stage is shorter than the clinical stage and that a candidate that has

completed the preclinical stage may be halfway through the development process. Also, revise to create separate columns for phases 1 and 2.

Prospectus Summary
Overview, page 1

2. Please revise the Prospectus Summary to disclose that you license your core technology from Stanford University and the University of Texas and include disclosure where appropriate regarding the risks of licensing such technology.

Risks Associated with Our Business, page 3

3. Please expand the ninth bullet point in this section to provide specific examples of the risk of not being able to maintain necessary rights to your product candidates. In particular, please address the fact that you only have a non-exclusive license from the NIH to the therapeutic transgene included in LB-001 for non-clinical, research uses and not for clinical or commercial uses, as well as any risks stemming from your license of your core technology from Stanford University and the University of Texas.

Implications of Being an Emerging Growth Company, page 4

4. Please supplementally provide us with copies of all written communications, as defined in Rule 405 under the Securities act, that you, or anyone authorized to do so on your behalf, present to potential investors in reliance on Section 5(d) of the Securities Act, whether or not they retain copies of the communications.

Use of Proceeds, page 64

5. Please revise your disclosure in this section to indicate how far the proceeds from the offering will allow you to proceed in the Phase 1/2 clinical trial for LB-001 in MMA. Please also disclose the amount and sources of other funds needed to complete the Phase 1/2 clinical trial. Refer to Instruction 3 to Item 504 of Regulation S-K.

6. We note you will use a portion of offering proceeds for discovery and preclinical development of additional product candidates using GeneRide technology. To the extent offering proceeds will be used to advance any of the product candidates you have already identified, such as LB-101 and LB-201, please revise to specify the candidates, the amount of proceeds to be allocated to each, and how far in their development you expect to reach with the proceeds.

Management's Discussion and Analysis of Financial Condition and Results of Operations
Critical Accounting Policies and Significant Judgments and Estimates
Stock-Based Compensation, page 77

7. Once you have an estimated offering price range, please explain to us the reasons for any differences between the recent valuations of your common stock leading up to the IPO

and the midpoint of the estimated offering price range. This information will help facilitate our review of your accounting for equity issuances.

Business
License Agreements, page 105

8. We note your disclosure on page 38 that you currently have a non-exclusive license from the NIH to an engineered methylmalonyl-CaA mutase gene, the therapeutic transgene included in LB-001. Please include a description of the material terms of the license agreement and file the agreement as an exhibit to the registration statement, or tell us why this is not required. See Item 601(b)(10) of Regulation S-K.

9. Please revise your disclosure to include the aggregate milestone payments due under each of the license agreements and the royalty term of the license agreement with Stanford.

Exhibits

10. Please file the employment agreements described in page 127 as exhibits to the registration statement. Refer to Item 601(b)(10) of Regulation S-K. Please also file the January 2016 consulting agreements referenced in Note 13 to the financial statements and the research agreement referenced in Note 15, or tell us why they are not required to be filed.

General

11. Please provide us proofs of all graphics, visual, or photographic information you will provide in teh printed prospectus prior to its use, for example in a preliminary prospectus.

You may contact Franklin Wyman at 202-551-3660 or Angela Connell at 202-551-3426 if you have questions regarding comments on the financial statements and related matters. Please contact Irene Paik at 202-551-6553 or Mary Beth Breslin at 202-551-3625 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Healthcare & Insurance

cc: Marc Rubenstein, Ropes & Gray LLP