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

DIVISION OF
CORPORATION FINANCE

September 18, 2019

David M. Epstein
Chief Executive Officer
Black Diamond Therapeutics, Inc.
139 Main Street
Cambridge, MA 02142

Re: Black Diamond Therapeutics, Inc.
Draft Registration Statement on Form S-1
Submitted August 23, 2019
File No. 377-02808

Dear Dr. Epstein:

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

Our pipleline, page 3

1. Please refer to the "Discovery," "Optimization" and "IND-enabling" columns. Please advise how "IND-enabling" differs from pre-clinical. Additionally, please advise what is the difference between "Discovery" and "Optimization." To the extent you retain these columns rather than just "Discovery" and "Pre-Clinical" columns, please add detailed footnotes to the table to explain each development phase clearly so that investors can appreciate the differences between the phases.

2. For the BDTX-189 row in the pipeline table, please remove the "in progress" bar from the Phase 1 column. In this regard, we note you disclose that you plan to start a combined Phase 1/2 clinical trial in the first half of 2020, which implies that Phase 1 testing has not yet commenced for this drug candidate. Please make a conforming revision to the pipeline table in the business section of the prospectus.

Our BDTX-189 program, page 4

3. Please refer to the included chart. We note your comparison to approved drugs, erlotinib and osimertinib. Please tell us on what basis you believe you are able to make these comparisons given your pre-clinical stage and the lack of any head-to-head clinical trials or, alternatively, delete these comparisons.

Implications of being an emerging growth company, page 8

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 87

5. We note that the net proceeds will be used to fund the clinical development of BDTX-189 to include your planned Phase 1/2 clinical trial. Please revise your disclosure to specify how far in the clinical development you expect to reach with the net proceeds.

Critical accounting policies and significant judgments and estimates
Stock-based compensation
Determination of the fair value of common stock, page 108

6. Once you have an estimated offering price or range, please explain to us the reasons for any differences between the recent valuations of your common stock leading up to the initial public offering and the estimated offering price. This information will help facilitate our review of your accounting for equity issuances including stock compensation and beneficial conversion features.

Choice of forum, page 181

7. We note that your forum selection provision identifies the Court of Chancery of the State of Delaware as the exclusive forum for certain litigation, including any “derivative action.” Please disclose whether this provision applies to actions arising under the Securities Act. In that regard, we note that Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. If the provision applies to Securities Act claims, please also revise your prospectus to state

that there is uncertainty as to whether a court would enforce such provision and that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. If this provision does not apply to actions arising under the Securities Act or Exchange Act, please also ensure that the exclusive forum provision in the governing documents states this clearly.

General

8. Please provide us mockups of any pages that include any additional pictures or graphics to be presented, including any accompanying captions. Please keep in mind, in scheduling your printing and distribution of the preliminary prospectus, that we may have comments after our review of these materials.

You may contact Sasha Parikh at 202-551-3627 or Kevin Vaughn at 202-551-3494 if you have questions regarding comments on the financial statements and related matters. Please contact Donald Field at 202-551-3680 or Dietrich King at 202-551-8071 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Healthcare & Insurance