UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 REGISTRATION STATEMENT

Under The Securities Act of 1933

BLACK DIAMOND THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)

One Main Street Cambridge, Massachusetts (Address of Principal Executive Offices) 81-4254660 (I.R.S. Employer Identification Number)

02142

(Zip Code)

Black Diamond Therapeutics, Inc. 2020 Stock Option and Incentive Plan (the "2020 Plan") Black Diamond Therapeutics, Inc. 2020 Employee Stock Purchase Plan (the "2020 ESPP") (Full Title of the Plans)

David M. Epstein, Ph.D. President and Chief Executive Officer Black Diamond Therapeutics, Inc. One Main Street Cambridge, Massachusetts 02142 (617) 252-0848 (Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Robert E. Puopolo, Esq. Mitchell S. Bloom, Esq. Goodwin Procter LLP 100 Northern Avenue Boston, Massachusetts 02210 (617) 570-1000

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 □ Non-accelerated filer ⊠

Accelerated filer

Smaller reporting company \Box

Emerging growth company \square

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 7(a)(2)(B) of the Securities Act. \Box

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price per Share	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$0.0001 par value per share	1,443,135 shares(2)	\$24.90(3)	\$35,934,061.50	\$3,920.41
Common Stock, \$0.0001 par value per share	326,364 shares(4)	\$21.17(5)	\$6,909,125.88	\$753.79
Total	1,769,499 shares		\$42,843,187.38	\$4,674.20

⁽¹⁾ Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement (this "Registration Statement") shall also cover any additional shares of common stock, \$0.0001 par value per share (the "common stock") of Black Diamond Therapeutics, Inc. (the "Registrant") which become issuable under the above-named plans by reason of any stock dividend, stock split, recapitalization or any other similar transaction effected without the receipt of consideration which results in an increase in the number of our outstanding shares of common stock. Pursuant to Rule 416(c) under the Securities Act, this Registration Statement shall also cover an indeterminate amount of interests to be offered or sold pursuant to the employee benefit plans described herein.

(2) Represents an increase of 1,443,135 shares of common stock to the number of shares available for issuance under the 2020 Plan, effective January 1, 2021. Shares available for issuance under the 2020 Plan were previously registered on a registration statement on Form S-8 filed with the Securities and Exchange Commission (the "Commission") on January 30, 2020 (File No. 333-236170).

(3) The price of \$24.90 per share, which is the average of the high and low sales prices of the common stock of the Registrant as quoted on the Nasdaq Global Select Market on March 18, 2021, is set forth solely for the purpose of calculating the registration fee pursuant to Rule 457(c) and (h) of the Securities Act.

(4) Represents an increase of 326,364 shares of common stock to the number of shares available for issuance under the 2020 ESPP, effective January 1, 2021. Shares available for issuance under the ESPP Plan were previously registered on a registration statement on Form S-8 filed with the Securities and Exchange Commission on January 30, 2020 (File No. 333-236170).

(5) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) and (h) of the Securities Act, and based on 85% of the average of the high and low sales price of the Registrant's common stock, as quoted on the Nasdaq Global Select Market, on March 18, 2021. Pursuant to the 2020 ESPP, the purchase price of the shares of common stock reserved for issuance thereunder will be 85% of the fair market value per share of common stock on the first trading day of the applicable offering period or on the exercise date of the applicable offering period, whichever is less.

EXPLANATORY NOTE

This Registration Statement is filed for the purposes of registering (i) 1,443,135 additional shares of common stock that may be issued pursuant to the 2020 Plan and (ii) 326,364 additional shares of common stock that may be issued pursuant to the 2020 ESPP. The number of shares of common stock reserved and available for issuance under the 2020 Plan is subject to an annual increase on each January 1 by an amount equal to up to four percent (4%) of the number of shares of common stock issued and outstanding on the immediately preceding December 31 or such lesser number of shares of common stock as determined by the Administrator (as defined in the 2020 Plan). Accordingly, on January 1, 2021, the number of shares of common stock reserved and available for issuance under the 2020 Plan increased by 1,443,135. This Registration Statement registers these additional 1,443,135 shares of common stock. The additional shares are of the same class as other securities relating to the 2020 Plan for which the Registrant's registration statement filed on Form S-8 (File No. 333-236170) on January 30, 2020 is effective. The number of shares of common stock reserved and available for issuance under the 2020 ESPP is subject to an annual increase on each January 1 by an amount equal to the least of one percent (1%) of the number of shares of common stock issued and outstanding on the immediately preceding December 31, 326,364 shares of common stock or such lesser number of shares of common stock as determined by the Administrator (as defined in the 2020 ESPP). Accordingly, on January 1, 2021, the number of shares of common stock reserved and available for issuance under the 2020 ESPP increased by 326,364. This Registration Statement registers these additional 326,364 shares of common stock. The additional shares are of the same class as other securities relating to the 2020 ESPP for which the Registrant's registration statement filed on Form S-8 (File No. 333-236170) on January 30, 2020 is effective. The information contained in the Registrant's registration statement on Form S-8 (File No. 333-236170) is hereby incorporated by reference pursuant to General Instruction E, except for "Item 8. Exhibits."

Part II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 8. Exhibits.

See the Exhibit Index for a list of exhibits filed as part of this Registration Statement, which Exhibit Index is incorporated herein by reference.

EXHIBIT INDEX

Exhibit No.	Description
5.1*	Opinion of Goodwin Procter LLP.
23.1*	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm.
23.2*	Consent of Goodwin Procter LLP (included in Exhibit 5.1).

24.1* <u>Power of Attorney (included on signature page to this registration statement).</u>

* Filed herewith.

SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Cambridge, State of Massachusetts, on the 25th day of March, 2021.

BLACK DIAMOND THERAPEUTICS, INC.

By: /s/ David M. Epstein

David M. Epstein President and Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

KNOW ALL BY THESE PRESENT, that each individual whose signature appears below hereby constitutes and appoints David M. Epstein and Thomas Leggett, and each of them, either of whom may act without the joinder of the other, as his or her true and lawful attorneys-in-fact and agents with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement on Form S-8, and to file the same, with all exhibits thereto, and all documents in connection therewith, with the Securities and Exchange Commission granting unto each said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or his or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the date indicated below.

Name	Title	Date
/s/ David M. Epstein	President, Chief Executive Officer and Director	March 25, 2021
David M. Epstein	(Principal Executive Officer)	
/s/ Thomas Leggett	Chief Financial Officer	March 25, 2021
Thomas Leggett	(Principal Financial Officer and Principal Financial Officer)	
/s/ Robert A. Ingram	Chairman and Director	March 25, 2021
Robert A. Ingram		
/s/ Bradley Bolzon	Director	March 25, 2021
Bradley Bolzon		
/s/ Ali Behbahani	Director	March 25, 2021
Ali Behbahani		, -
/s/ Kapil Dhingra	Director	March 25, 2021
Kapil Dhingra		

/s/ Samarth Kulkarni Samarth Kulkarni	Director	March 25, 2021
/s/ Alexander Mayweg Alexander Mayweg	Director	March 25, 2021
/s/ Garry E. Menzel	Director	March 25, 2021
Garry E. Menzel /s/ Rajeev Shah	Director	March 25, 2021
Rajeev Shah		

Black Diamond Therapeutics, Inc. One Main Street, 10th Floor Cambridge, Massachusetts 02142

Re: Securities Being Registered under Registration Statement on Form S-8

We have acted as counsel to you in connection with your filing of a Registration Statement on Form S-8 (the "Registration Statement") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), on or about the date hereof relating to an aggregate of 1,769,499 shares (the "Shares") of Common Stock, \$0.0001 par value per share, of Black Diamond Therapeutics, Inc., a Delaware corporation (the "Company"), that may be issued pursuant to the Company's 2020 Stock Option and Incentive Plan and 2020 Employee Stock Purchase Plan (collectively, the "Plans").

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinions set forth below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinion set forth below, on certificates of officers of the Company.

The opinion set forth below is limited to the Delaware General Corporation Law.

For purposes of the opinion set forth below, we have assumed that no event occurs that causes the number of authorized shares of Common Stock available for issuance by the Company to be less than the number of then unissued Shares.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized and, upon issuance and delivery against payment therefor in accordance with the terms of the Plans, will be validly issued, fully paid and non-assessable.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours, /s/ Goodwin Procter LLP GOODWIN PROCTER LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of Black Diamond Therapeutics, Inc. of our report dated March 25, 2021 relating to the financial statements, which appears in Black Diamond Therapeutics, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2020.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts March 25, 2021