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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

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**FORM S-8  
REGISTRATION STATEMENT**  
*Under  
The Securities Act of 1933*

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**BLACK DIAMOND THERAPEUTICS, INC.**  
(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

81-4254660  
(I.R.S. Employer  
Identification Number)

One Main Street, 14<sup>th</sup> Floor  
Cambridge, Massachusetts  
(Address of Principal Executive Offices)

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)

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David M. Epstein, Ph.D.  
President and Chief Executive Officer  
Black Diamond Therapeutics, Inc.  
One Main Street, 14<sup>th</sup> Floor  
Cambridge, Massachusetts 02142  
(617) 252-0848

(Name, address, including zip code, and telephone number, including area code, of agent for service)

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*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	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

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.

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## EXPLANATORY NOTE

This Registration Statement on Form S-8 (this “Registration Statement”) is filed for the purposes of registering (i) an additional 1,457,371 shares of common stock, par value \$0.0001 per share (the “common stock”), of Black Diamond Therapeutics, Inc. (the “Registrant”) that may be issued pursuant to the 2020 Plan and (ii) an additional 326,364 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 the lesser of: (i) four percent (4%) of the number of shares of common stock issued and outstanding on the immediately preceding December 31, or (ii) such lesser number of shares of common stock as determined by the Administrator (as defined in the 2020 Plan). Accordingly, on January 1, 2023, the number of shares of common stock reserved and available for issuance under the 2020 Plan increased by 1,457,371. This Registration Statement registers these additional 1,457,371 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 statements filed on Form S-8 (File No. 333-236170, File No. 333-254686, and File No. 333-263648) filed with the Securities and Exchange Commission (the “SEC”) on [January 30, 2020](#), [March 25, 2021](#), and [March 17, 2022](#), respectively, are 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 (i) 326,364 shares of common stock, (ii) one percent (1%) of the number of shares of common stock issued and outstanding on the immediately preceding December 31, or (iii) such lesser number of shares of common stock as determined by the Administrator (as defined in the 2020 ESPP). Accordingly, on January 1, 2023, 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 statements filed on Form S-8 (File No. 333-236170, File No. 333-254686, and File No. 333-263648) filed with the SEC on [January 30, 2020](#), [March 25, 2021](#), and [March 17, 2022](#) respectively, are effective. The information contained in the Registrant’s registration statements on Form S-8 (File No. 333-236170, File No. 333-254686, and File No. 333-263648) is hereby incorporated by reference pursuant to General Instruction E, except for “Item 8. Exhibits.”

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**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**

<u>Exhibit No.</u>	<u>Description</u>
<a href="#"><u>4.1</u></a>	<a href="#"><u>Fourth Amended and Restated Certificate of Incorporation of the Registrant, as currently in effect (incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K (File No. 001-39200) filed on February 3, 2020).</u></a>
<a href="#"><u>4.2</u></a>	<a href="#"><u>Amended and Restated By-laws of the Registrant, as currently in effect (incorporated by reference to Exhibit 3.2 of the Registrant's Current Report on Form 8-K (File No. 001-39200) filed on February 3, 2020).</u></a>
<a href="#"><u>4.3</u></a>	<a href="#"><u>Second Amended and Restated Investors' Rights Agreement among the Registrant and certain of its stockholders, dated November 25, 2019 (incorporated by reference to Exhibit 4.1 of the Registrant's Registration Statement on Form S-1 (File No. 333-235789) filed on January 3, 2020).</u></a>
<a href="#"><u>4.4</u></a>	<a href="#"><u>Warrant to Purchase Stock, dated September 21, 2016, issued by the Registrant to Roche Finance Ltd (incorporated by reference to Exhibit 4.3 of the Registrant's Registration Statement on Form S-1 (File No. 333-235789) filed on January 3, 2020).</u></a>
<a href="#"><u>4.5</u></a>	<a href="#"><u>2020 Stock Option and Incentive Plan and forms of award agreements thereunder (incorporated by reference to Exhibit 10.2 of the Registrant's Registration Statement on Form S-1/A (File No. 333-235789) filed on January 21, 2020).</u></a>
<a href="#"><u>4.6</u></a>	<a href="#"><u>2020 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.4 of the Registrant's Registration Statement on Form S-1/A (File No. 333-235789) filed on January 21, 2020).</u></a>
<a href="#"><u>5.1*</u></a>	<a href="#"><u>Opinion of Goodwin Procter LLP.</u></a>
<a href="#"><u>23.1*</u></a>	<a href="#"><u>Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm.</u></a>
<a href="#"><u>23.2*</u></a>	<a href="#"><u>Consent of Goodwin Procter LLP (included in Exhibit 5.1).</u></a>
<a href="#"><u>24.1*</u></a>	<a href="#"><u>Power of Attorney (included on signature page to this registration statement).</u></a>
<a href="#"><u>107*</u></a>	<a href="#"><u>Filing Fee Table.</u></a>

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\* Filed herewith.

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## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, 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 9th day of March, 2023.

### 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 Brent Hatzis-Schoch, 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 of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the date indicated below.

<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ David M. Epstein</u> David M. Epstein	<i>President, Chief Executive Officer and Director (Principal Executive Officer)</i>	March 9, 2023
<u>/s/ Fang Ni</u> Fang Ni	<i>Chief Business and Financial Officer (Principal Financial Officer)</i>	March 9, 2023
<u>/s/ Erika Jones</u> Erika Jones	<i>Vice President, Finance and Corporate Controller (Principal Accounting Officer)</i>	March 9, 2023
<u>/s/ Mark A. Velleca</u> Mark A. Velleca	<i>Chairman and Director</i>	March 9, 2023
<u>/s/ Ali Behbahani</u> Ali Behbahani	<i>Director</i>	March 9, 2023
<u>/s/ Kapil Dhingra</u> Kapil Dhingra	<i>Director</i>	March 9, 2023
<u>/s/ Wendy Dixon</u> Wendy Dixon	<i>Director</i>	March 9, 2023
<u>/s/ Samarth Kulkarni</u> Samarth Kulkarni	<i>Director</i>	March 9, 2023
<u>/s/ Alexander Mayweg</u> Alexander Mayweg	<i>Director</i>	March 9, 2023
<u>/s/ Garry E. Menzel</u> Garry E. Menzel	<i>Director</i>	March 9, 2023
<u>/s/ Rajeev Shah</u> Rajeev Shah	<i>Director</i>	March 9, 2023

March 9, 2023

Black Diamond Therapeutics, Inc.  
One Main Street, 14<sup>th</sup> 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 1,783,735 shares (the "Shares") of common stock, \$0.0001 par value per share ("Common Stock"), 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 opinion 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 nonassessable.

This opinion letter and the opinion it contains shall be interpreted in accordance with the Core Opinion Principles as published in 74 Business Lawyer 815 (Summer 2019).

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

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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 9, 2023 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, 2022.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts

March 9, 2023

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## Calculation of Filing Fee Table

Form S-8  
(Form Type)Black Diamond Therapeutics, Inc.  
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Amount Registered <sup>(1)</sup>	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common Stock, \$0.0001 par value per share	Rule 457(c) and Rule 457(h)(1)	1,457,371 <sup>(2)</sup>	1.87 <sup>(3)</sup>	\$ 2,725,284.77	\$ 0.00011020	\$ 300.33
Equity	Common Stock, \$0.0001 par value per share	Rule 457(c) and Rule 457(h)(1)	326,364 <sup>(4)</sup>	1.59 <sup>(5)</sup>	\$ 518,755.58	\$ 0.00011020	\$ 57.17
<b>Total Offering Amounts</b>					\$ 3,244,039.35		\$ 357.49
<b>Total Fee Offsets</b>							N/A
<b>Net Fee Due</b>							\$ 357.49

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the “Securities Act”), this registration statement on Form S-8 (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 Registrant’s 2020 Stock Option and Incentive Plan (the “2020 Plan”) and 2020 Employee Stock Purchase Plan (the “2020 ESPP”) 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 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 1,457,371 shares of common stock to the number of shares available for issuance under the 2020 Plan, effective January 1, 2023. Shares available for issuance under the 2020 Plan were previously registered on registration statements on Form S-8 (File No. 333-236170, File No. 333-254686, and File No. 333-263648) filed with the Securities and Exchange Commission (the “Commission”) on January 30, 2020, March 25, 2021, and March 17, 2022, respectively.
- (3) The price of \$1.87 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 3, 2023, 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, 2023. Shares available for issuance under the 2020 ESPP were previously registered on registration statements on Form S-8 (File No. 333-236170, File No. 333-254686 and File No. 333-263648) filed with the Commission on January 30, 2020, March 25, 2021, and March 17, 2022, respectively.
- (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 3, 2023. 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.