UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM S-8 REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

MAGENTA THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization)

100 Technology Square Cambridge, Massachusetts (Address of Principal Executive Offices) 81-0724163 (I.R.S. Employer Identification No.)

> 02139 (Zip Code)

MAGENTA THERAPEUTICS, INC. 2018 STOCK OPTION AND INCENTIVE PLAN (Full title of the plan)

> Jason Gardner President and Chief Executive Officer Magenta Therapeutics, Inc. 100 Technology Square Cambridge, Massachusetts 02139 (Name and address of agent for service)

(857) 242-0170 (Telephone number, including area code, of agent for service)

Copies to:

Mitchell S. Bloom, Esq. William D. Collins, 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 \Box

 \mathbf{X}

Non-accelerated filer

Accelerated filer \Box

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 pursuant to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price per Share(2)	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, \$0.001 par value per share	1,941,325 shares(3)	\$10.13	\$19,665,622.25	\$2,145.52

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement shall also cover any additional shares of common stock which become issuable under the Magenta Therapeutics, Inc. 2018 Stock Option and Incentive Plan (the "Plan") 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 the Registrant's outstanding shares of common stock.
- (2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(h) of the Securities Act, and based on the average of the high and low sale prices of the Registrant's common stock, as quoted on the Nasdaq Global Market, on February 26, 2021.
- (3) Represents an automatic increase of 1,941,325 shares of Common Stock to the number of shares available for issuance under the Plan, effective January 1, 2021. Shares available for issuance under the Plan were previously registered on a registration statement on Form S-8 filed with the Securities and Exchange Commission on June 22, 2018 (Registration No. 333-225838), March 19, 2019 (Registration No. 333-230387) and March 3, 2020 (Registration No. 333-236853).

EXPLANATORY NOTE

This Registration Statement on Form S-8 registers 1,941,325 additional shares of Common Stock under the Magenta Therapeutics, Inc. 2018 Stock Option and Incentive Plan (the "Plan"). The number of shares of Common Stock reserved and available for issuance under the Plan is subject to an automatic annual increase on each January 1, beginning in 2019, by an amount equal to four percent 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 Plan). Accordingly, on January 1, 2021, the number of shares of Common Stock reserved and available for issuance under the Plan increased by 1,941,325. The additional shares are of the same class as other securities relating to the Plan for which the Registrant's registration statement filed on Form S-8 (Registration No. 333-225838) on June 22, 2018, is effective. The information contained in the Registrant's registration statement on Form S-8 (Registration No. 333-225838) is hereby incorporated by reference pursuant to General Instruction E.

Part II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 8.	Exhibits.		
Exhibit No.	Description		
4.1	Amended and Restated Certificate of Incorporation of the Registrant (Incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-38541) filed with the Securities and Exchange Commission on June 25, 2018).		
4.2	Amended and Restated By-laws of the Registrant (Incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K (File No. 001-38541) filed with the Securities and Exchange Commission on June 25, 2018).		
4.3	Specimen Common Stock Certificate of the Registrant (Incorporated by reference to Exhibit 4.1 to the Registrant's Registration Statement on Form S-1/A (File No. 333-225178) filed with the Securities and Exchange Commission on June 8, 2018).		
4.4	Second Amended and Restated Investors' Rights Agreement by and among the Registrant and certain of its stockholders dated April 2, 2018 (Incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-1 (File No. 333-225178) filed with the Securities and Exchange Commission on May 24, 2018).		
5.1*	Opinion of Goodwin Procter LLP.		
23.1*	Consent of KPMG LLP, independent registered public accounting firm.		
23.2*	Consent of Goodwin Procter LLP (included in Exhibit 5.1).		
24.1*	Power of Attorney (included on signature page).		
99.1	2018 Stock Option and Incentive Plan and forms of option agreements thereunder (Incorporated by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form S-1/A (File No. 333-225178) filed with the Securities and Exchange Commission on June 8, 2018).		

* Filed herewith.

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, Commonwealth of Massachusetts, on March 3, 2021.

Magenta Therapeutics, Inc.

By: /s/ Steve Mahoney

Steve Mahoney Chief Financial and Operating Officer (Principal Financial and Accounting Officer)

POWER OF ATTORNEY AND SIGNATURES

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jason Gardner and Steve Mahoney, and each of them, as such person's true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution in each of them, for such person in such person's, place and stead, in any and all capacities, to sign for us and in our names in the capacities indicated below the Registration Statement on Form S-8 of Magenta Therapeutics, Inc., and any or all amendments (including post-effective amendments), and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in connection therewith and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents or any of them, or substitutes of any of them, 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 on Form S-8 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date	
/s/ Jason Gardner	President, Chief Executive Officer and Director (Principal	March 3, 2021	
Jason Gardner, D.Phil.	Executive Officer)		
/s/ Steve Mahoney	Chief Financial and Operating Officer	March 3, 2021	
Steve Mahoney	(Principal Financial and Accounting Officer)		
/s/ Jeffrey Albers	Director	March 3, 2021	
Jeffrey Albers	_		
/s/ Michael W. Bonney	Director	March 3, 2021	
Michael W. Bonney	_	,	
/s/ Bruce Booth	Director	March 3, 2021	
Bruce Booth, D.Phil.		, -	
/s/ Alexis A. Borisy	Director	March 3, 2021	
Alexis A. Borisy	_		
/s/ Blake Byers	Director	March 3, 2021	
Blake Byers, Ph.D.	_	,	
/s/ Thomas O. Daniel	Director	March 3, 2021	
Thomas O. Daniel, M.D.	_	,	
/s/ Alison Lawton	Director	March 3, 2021	
Alison Lawton	-		
/s/ Anne McGeorge	Director	March 3, 2021	
Anne McGeorge	_		
/s/ Amy L. Ronneberg	Director	March 3, 2021	
Amy L. Ronneberg	_		
/s/ David T. Scadden	Director	March 3, 2021	
David T. Scadden, M.D.	_		

Magenta Therapeutics, Inc. 100 Technology Square Cambridge, MA 02139

Re: <u>Securities Being Registered under Registration Statement on Form S-8</u>

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 1,941,325 shares (the "Shares") of common stock, \$0.001 par value per share (the "Common Stock"), of Magenta Therapeutics, Inc., a Delaware corporation (the "Company"), that may be issued pursuant to the Magenta Therapeutics, Inc. 2018 Stock Option and Incentive Plan (the "Plan").

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 Plan, will be validly issued, fully paid and nonassessable.

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

The Board of Directors Magenta Therapeutics, Inc.:

We consent to the use of our report dated March 3, 2021, with respect to the consolidated balance sheets of Magenta Therapeutics, Inc. and subsidiary as of December 31, 2020 and 2019, and the related consolidated statements of operations and comprehensive loss, stockholders' equity, and cash flows for the years then ended, and the related notes, incorporated by reference herein.

/s/ KPMG LLP

Boston, Massachusetts March 3, 2021