UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8 REGISTRATION STATEMENT

THE SECURITIES ACT OF 1933

Dyne Therapeutics, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware (State or Other Jurisdiction of Incorporation or Organization)

1560 Trapelo Road Waltham, Massachusetts (Address of Principal Executive Offices) 36-4883909 (I.R.S. Employer Identification No.)

> 02451 (Zip Code)

2020 Stock Incentive Plan (Full Title of the Plan)

Joshua T. Brumm President and Chief Executive Officer 1560 Trapelo Road Waltham, Massachusetts 02451 (Name and Address of Agent for Service)

(781) 786-8230 (Telephone Number, Including Area Code, of Agent for Service)

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 ⊠

Smaller reporting company

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.

Statement of Incorporation by Reference

This Registration Statement on Form S-8, relating to the 2020 Stock Incentive Plan (the "2020 Plan") of Dyne Therapeutics, Inc. (the "Registrant"), is being filed for the purpose of registering additional securities of the same class as other securities for which a Registration Statement on Form S-8 relating to the 2020 Plan has previously been filed and is effective. Pursuant to General Instruction E to Form S-8, except as otherwise set forth below, this Registration Statement incorporates by reference (i) the contents of the Registration Statement on Form S-8, File No. 333-248873, relating to the 2020 Plan filed by the Registration with the Securities and Exchange Commission on September 17, 2020, and (ii) the contents of the Registration Statement on Form S-8, File No. 333-253863, relating to the 2020 Plan filed by the Registrant with the Securities and Exchange Commission on March 4, 2021.

Item 8. Exhibits.

Filed herewith

The following exhibits are incorporated herein by reference:

Number	Description
4.1	Restated Certificate of Incorporation of the Registrant (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed with the Securities and Exchange Commission on September 21, 2020).
4.2	Amended and Restated Bylaws of the Registrant (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K, filed with the Securities and Exchange Commission on September 21, 2020).
5.1*	Opinion of Wilmer Cutler Pickering Hale and Dorr LLP, counsel to the Registrant.
23.1*	Consent of Deloitte & Touche LLP, independent registered public accounting firm.
23.2*	Consent of Wilmer Cutler Pickering Hale and Dorr LLP (included in Exhibit 5.1).
24.1*	Power of attorney (included on the signature pages of this registration statement).
99.1	2020 Stock Incentive Plan (incorporated by reference to Exhibit 10.4 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1 (File No. 333-248414) filed with the Securities and Exchange Commission on September 10, 2020).
107*	Filing Fee Table

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, 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 Waltham, Commonwealth of Massachusetts on this 10th day of March, 2022.

DYNE THERAPEUTICS, INC.

By: /s/ Joshua Brumm

Joshua Brumm President and Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of Dyne Therapeutics, Inc., hereby severally constitute and appoint Joshua Brumm and Richard Scalzo, and each of them singly (with full power to each of them to act alone), our true and lawful attorneys with full power of substitution and resubstitution in each of them for him or her and in his or her name, place and stead, and 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 filed herewith and any and all subsequent amendments to said registration statement, and generally to do all such things in our names and on our behalf in our capacities as officers and directors to enable Dyne Therapeutics, Inc. to comply with the provisions of the Securities Act of 1933, as amended, and all requirements of the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys, or any of them, to said registration statement and any and all amendments thereto.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Joshua Brumm Joshua Brumm	President, Chief Executive Officer and Director (principal executive officer)	March 10, 2022
/s/ Richard Scalzo Richard Scalzo	Vice President of Accounting and Administration and Treasurer (principal financial and accounting officer)	March 10, 2022
/s/ Jason Rhodes Jason Rhodes	Director and Chairman of the Board	March 10, 2022
/s/ Ed Hurwitz Ed Hurwitz	Director	March 10, 2022
<u>/s/ Carlo Incerti, M.D.</u> Carlo Incerti, M.D.	Director	March 10, 2022
/s/ Dirk Kersten Dirk Kersten	Director	March 10, 2022

/s/ Lawrence Klein, Ph.D.	Director	March 10, 2022
Lawrence Klein, Ph.D.		
/s/ David Lubner David Lubner	Director	March 10, 2022
/s/ Catherine Stehman-Breen, M.D. Catherine Stehman-Breen, M.D.	Director	March 10, 2022

Exhibit 5.1

WILMERHALE

+1 617 526 6000 (t) +1 617 526 5000 (f) wilmerhale.com

March 10, 2022

Dyne Therapeutics, Inc. 1560 Trapelo Road Waltham, MA 02451

Registration Statement on Form S-8 Re: 2020 Stock Incentive Plan

Ladies and Gentlemen:

We have assisted in the preparation of a Registration Statement on Form S-8 (the "Registration Statement") to be filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"), relating to an aggregate of 2,580,376 additional shares of common stock, \$0.0001 par value per share (the "Shares"), of Dyne Therapeutics, Inc., a Delaware corporation (the "Company") issuable under the Company's 2020 Stock Incentive Plan (the "Plan").

We have examined the Certificate of Incorporation and Bylaws of the Company, each as amended and/or restated to date, and originals, or copies certified to our satisfaction, of all pertinent records of the meetings of the directors and stockholders of the Company, the Registration Statement and such other documents relating to the Company as we have deemed material for the purposes of this opinion.

In our examination of the foregoing documents, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified, photostatic or other copies, the authenticity of the originals of any such documents and the legal competence of all signatories to such documents.

We assume that the appropriate action will be taken, prior to the offer and sale of the Shares in accordance with the Plan, to register and qualify the Shares for sale under all applicable state securities or "blue sky" laws.

We express no opinion herein as to the laws of any state or jurisdiction other than the state laws of the Commonwealth of Massachusetts, the General Corporation Law of the State of Delaware and the federal laws of the United States of America.

It is understood that this opinion is to be used only in connection with the offer and sale of the Shares while the Registration Statement is in effect.

Wilmer Cutler Pickering Hale and Dorr LLP, 60 State Street, Boston, Massachusetts 02109 Beijing Berlin Boston Brussels Denver Frankfurt London Los Angeles New York Palo Alto San Francisco Washington March 10, 2022 Page 2

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized for issuance and, when the Shares are issued and paid for in accordance with the terms and conditions of the Plan, the Shares will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion with the Commission in connection with the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K under the Securities Act. In giving such consent, we do not hereby 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 of the Commission.

Very truly yours,

WILMER CUTLER PICKERING HALE AND DORR LLP

By: <u>/s/ Stuart M. Falber</u> Stuart M. Falber, a Partner

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated March 10, 2022, relating to the financial statements of Dyne Therapeutics, Inc. appearing in the Annual Report on Form 10-K of Dyne Therapeutics, Inc. for the year ended December 31, 2021.

/s/ Deloitte & Touche LLP

Boston, Massachusetts March 10, 2022

Calculation of Filing Fee Tables

Form S-8

(Form Type)

Dyne 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(1)	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common stock, par value \$0.0001 per share	Other(2)	2,580,376(3)	\$8.18(2)	\$21,107,476	\$92.70 per \$1,000,000	\$1,957
Total Offering Amounts					\$21,107,476		\$1,957
Total Fee Offsets							-
Net Fee Due							\$1,957

(1) In accordance with Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement shall be deemed to cover any additional securities that may from time to time be offered or issued to prevent dilution resulting from stock splits, stock dividends or similar transactions.

(2) Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and 457(h) of the Securities Act and based upon the average of the high and low sales price of the registrant's common stock on the Nasdaq Global Select Market on March 7, 2022.

(3) Consists of 2,580,376 additional shares issuable under the 2020 Stock Incentive Plan.

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