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

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

Inozyme Pharma, Inc.
(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

38-4024528
(I.R.S. Employer
Identification No.)

**321 Summer Street
Suite 400
Boston, Massachusetts**
(Address of Principal Executive Offices)

02210
(Zip Code)

**2020 Stock Incentive Plan
2020 Employee Stock Purchase Plan**
(Full Title of the Plan)

**Axel Bolte
President and Chief Executive Officer
321 Summer Street
Suite 400
Boston, Massachusetts 02210**
(Name and Address of Agent For Service)
(857) 330-4340
(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 Accelerated filer
 Non-accelerated filer 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 provided 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	Proposed maximum aggregate offering price	Amount of registration fee
Common Stock, par value \$0.0001 per share	1,169,247(2)	\$19.16(3)	\$22,402,773(3)	\$2,444.15

- (1) In accordance with Rule 416 under the Securities Act of 1933, as amended, 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) Consists of an additional (i) 935,398 shares issuable under the 2020 Stock Incentive Plan and (ii) 233,849 shares issuable under the 2020 Employee Stock Purchase Plan.
- (3) Estimated solely for the purpose of calculating the registration fee pursuant to Rules 457(c) and 457(h) of the Securities Act of 1933, as amended, and based upon the average of the high and low sale prices of the Registrant’s Common Stock as reported on the Nasdaq Global Select Market on March 23, 2021.

STATEMENT OF INCORPORATION BY REFERENCE

This Registration Statement on Form S-8, relating to the 2020 Stock Incentive Plan of Inozyme Pharma, Inc. (the “Registrant”) and the 2020 Employee Stock Purchase Plan of 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 Stock Incentive Plan and the 2020 Employee Stock Purchase Plan has previously been filed and is effective. Accordingly, this Registration Statement incorporates by reference the contents of the Registration Statement on [Form S-8](#), File No. 333-240146, filed with the Securities and Exchange Commission on July 28, 2020 by the Registrant, relating to the Registrant’s Amended and Restated 2017 Equity Incentive Plan, as amended, 2020 Stock Incentive Plan and 2020 Employee Stock Purchase Plan, except for Item 8, Exhibits.

Item 8. Exhibits

<u>Number</u>	<u>Description</u>
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 (File No. 001-39397) filed with the Securities and Exchange Commission on July 28, 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 (File No. 001-39397) filed with the Securities and Exchange Commission on July 28, 2020)
5.1*	Opinion of Wilmer Cutler Pickering Hale and Dorr LLP, counsel to the Registrant
23.1*	Consent of Ernst & Young 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 10.5 to Amendment No. 1 to the Registrant’s Registration Statement on Form S-1 (File No. 333-239648) filed with the Securities and Exchange Commission on July 20, 2020)
99.2	2020 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.8 to Amendment No. 1 to the Registrant’s Registration Statement on Form S-1 (File No. 333-239648) filed with the Securities and Exchange Commission on July 20, 2020)

* Filed herewith

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 Boston, Commonwealth of Massachusetts, on this 25th day of March, 2021.

INOZYME PHARMA, INC.

By: /s/ Axel Bolte
Axel Bolte
President and Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of Inozyme Pharma, Inc., hereby severally constitute and appoint Axel Bolte and Stephen Basso, and each of them singly, our true and lawful attorneys with full power to them, and each of them singly, 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 Inozyme Pharma, 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.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Axel Bolte</u> Axel Bolte	President and Chief Executive Officer, Director (Principal Executive Officer)	March 25, 2021
<u>/s/ Stephen Basso</u> Stephen Basso	Senior Vice President, Finance (Principal Financial and Accounting Officer)	March 25, 2021
<u>/s/ Douglas Treco</u> Douglas Treco	Chairman	March 25, 2021
<u>/s/ Sarah Bhagat</u> Sarah Bhagat	Director	March 25, 2021
<u>/s/ Reinaldo Diaz</u> Reinaldo Diaz	Director	March 25, 2021
<u>/s/ Martin Edwards</u> Martin Edwards	Director	March 25, 2021
<u>/s/ Robert Hopfner</u> Robert Hopfner	Director	March 25, 2021

/s/ Edward Mathers
Edward Mathers

Director

March 25, 2021

/s/ Lynne Sullivan
Lynne Sullivan

Director

March 25, 2021

March 25, 2021

Brian A. Johnson

+1 212 230 8800 (t)
+1 212 230 8888 (f)
wilmerhale.com

Inozyme Pharma, Inc.
321 Summer Street
Suite 400
Boston, Massachusetts 02210

RE: 2020 Stock Incentive Plan; 2020 Employee Stock Purchase 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 1,169,247 shares of common stock, par value \$0.0001 per share (the "Shares"), of Inozyme Pharma, Inc., a Delaware corporation (the "Company"), issuable under the Company's 2020 Stock Incentive Plan and 2020 Employee Stock Purchase Plan (collectively, the "Plans").

We have examined the certificate of incorporation and bylaws of the Company, each as amended and 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 Plans, 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 State of New York, 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.

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 Plans, 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: /s/ Brian A. Johnson
Brian A. Johnson, a Partner

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the 2020 Stock Incentive Plan and the 2020 Employee Stock Purchase Plan of Inozyme Pharma, Inc. of our report dated March 25, 2021, with respect to the consolidated financial statements of Inozyme Pharma, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2020, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Boston, Massachusetts
March 25, 2021