## UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

## FORM S-8 REGISTRATION STATEMENT

UNDER
THE SECURITIES ACT OF 1933

### PRAXIS PRECISION MEDICINES, INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization) 47-5195942 (I.R.S. Employer Identification No.)

99 High Street, 30th Floor Boston, MA (Address of Principal Executive Offices)

02110 (Zip Code)

PRAXIS PRECISION MEDICINES, INC. 2020 STOCK OPTION AND INCENTIVE PLAN PRAXIS PRECISION MEDICINES, INC. 2020 EMPLOYEE STOCK PURCHASE PLAN (Full title of the plan)

Marcio Souza
Chief Executive Officer
Praxis Precision Medicines, Inc.
99 High Street, 30th Floor
Boston, MA 02110
(Name and address of agent for service)

617-300-8460

(Telephone number, including area code, of agent for service)

Copies to:
Peter N. Handrinos
Wesley C. Holmes
Jennifer A. Yoon
Latham & Watkins LLP
200 Clarendon Street
Boston, Massachusetts 02116
(617) 880-4500

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 definition	iis of large accelerated filer,	accelerated files,	smaner reporting company,	anu	emerging growin company	III Rule 120-2 of the Exchange Ac	ι.
Large accelerated filer						Accelerated filer	
Non-accelerated filer	$\boxtimes$					Smaller reporting company	X
						Emerging growth company	
0 00	npany, indicate by check mark aant to Section 7(a)(2)(B) of the	0		ed tran	sition period for complying	with any new or revised financial	

#### Part I

#### EXPLANATORY NOTE

This Registration Statement on Form S-8 is being filed for the purpose of registering an additional 2,469,122 shares of common stock, \$0.0001 par value per share ("Common Stock") of Praxis Precision Medicines, Inc. (the "Registrant") to be issued pursuant to the Praxis Precision Medicines, Inc. 2020 Stock Option and Incentive Plan (the "2020 Plan") and an additional 327,102 shares of the Registrant's Common Stock to be issued pursuant to the Praxis Precision Medicines, Inc. 2020 Employee Stock Purchase Plan (the "2020 ESPP"). Registration Statements of the Registrant on Form S-8 relating to the same employee benefit plans are effective.

### INCORPORATION BY REFERENCE OF CONTENTS OF REGISTRATION STATEMENTS ON FORM S-8

Except as set forth below, the contents of the Registration Statements on Form S-8 (File Nos. 333-249522, 333-254410 and 333-263081) filed with the Securities and Exchange Commission, relating to the 2020 Plan and 2020 ESPP, are incorporated by reference herein.

Errhibita

Exhibits.
Description
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. 001-39620) filed with the Securities and Exchange Commission on October 20, 2020).
Amended and Restated Bylaws of the Registrant (Incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K (File No. 001-39620) filed with the Securities and Exchange Commission on January 7, 2022).
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 (Registration No. 333-249074) filed with the Securities and Exchange Commission on October 9, 2020).
Fourth Amended and Restated Investors' Rights Agreement among the Registrant and certain of its stockholders, effective as of July 24, 2020 (Incorporated by reference to Exhibit 4.2 to the Registrant's Registration Statement on Form S-3 (Registration No. 333-260726) filed with the Securities and Exchange Commission on November 3, 2021.
Opinion of Latham & Watkins LLP.
Consent of Ernst & Young LLP, independent registered public accounting firm.
Consent of Latham & Watkins LLP (included in Exhibit 5.1).
Power of Attorney (included on signature page).
Form of 2020 Stock Option and Incentive Plan (Incorporated by reference to Exhibit 10.4 to the Registrant's Registration Statement on Form S-1/A (File No. 333-249074) filed with the Securities and Exchange Commission on October 9, 2020).
Form of Incentive Stock Option Agreement under the Registrant's 2020 Stock Option and Incentive Plan (Incorporated by reference to Exhibit 10.5 to the Registrant's Registration Statement on Form S-1/A (File No. 333-249074) filed with the Securities and Exchange Commission on October 9, 2020).

99.3	Form of Non-Qualified Stock Option Agreement for Company Employees under the Registrant's 2020 Stock Option and Incentive Plan (Incorporated by reference to Exhibit 10.6 to the Registrant's Registration Statement on Form S-1/A (File No. 333-249074) filed with the Securities and Exchange Commission on October 9, 2020).
99.4	Form of Non-Qualified Stock Option Agreement for Non-Employee Directors under the Registrant's 2020 Stock Option and Incentive Plan (Incorporated by reference to Exhibit 10.7 to the Registrant's Registration Statement on Form S-1/A (File No. 333-249074) filed with the Securities and Exchange Commission on October 9, 2020).
99.5	Form of Restricted Stock Award Agreement under the Registrant's 2020 Stock Option and Incentive Plan (Incorporated by reference to Exhibit 10.8 to the Registrant's Registration Statement on Form S-1/A (File No. 333-249074) filed with the Securities and Exchange Commission on October 9, 2020).
99.6	Form of Restricted Stock Award Agreement for Company Employees under the Registrant's 2020 Stock Option and Incentive Plan (Incorporated by reference to Exhibit 10.9 to the Registrant's Registration Statement on Form S-1/A (File No. 333-249074) filed with the Securities and Exchange Commission on October 9, 2020).
99.7	Form of Restricted Stock Award Agreement for Non-Employee Directors under the Registrant's 2020 Stock Option and Incentive Plan (Incorporated by reference to Exhibit 10.10 to the Registrant's Registration Statement on Form S-1/A (File No. 333-249074) filed with the Securities and Exchange Commission on October 9, 2020).
99.8	2020 Employee Stock Purchase Plan (Incorporated by reference to Exhibit 10.11 to the Registrant's Registration Statement on Form S-1/A (File No. 333-240264) filed with the Securities and Exchange Commission on October 9, 2020).

107\* <u>Filing Fee Table.</u>

\* 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 Boston, Commonwealth of Massachusetts, on February 7<sup>th</sup>, 2023.

#### Praxis Precision Medicines, Inc.

By: /s/ Marcio Souza
Marcio Souza
Chief Executive Officer

#### POWER OF ATTORNEY AND SIGNATURES

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Marcio Souza and Alex Nemiroff, 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 Praxis Precision Medicines, 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	Pate February 7, 2023		
/s/ Marcio Souza Marcio Souza	Chief Executive Officer and Director (Principal Executive Officer)			
/s/ Timothy Kelly Timothy Kelly	Chief Financial Officer (Principal Financial Officer)	February 7, 2023		
/s/ Lauren Mastrocola Lauren Mastrocola	Principal Accounting Officer	February 7, 2023		
/s/ Dean Mitchell Dean Mitchell	Chairman of the Board	February 7, 2023		
/s/ Jeffrey Chodakewitz Jeffrey Chodakewitz, M.D.	Director	February 7, 2023		
/s/ Merit Cudkowicz Merit Cudkowicz, M.D.	Director	February 7, 2023		

/s/ Jill DeSimone Jill DeSimone	Director	February 7, 2023
/s/ Gregory Norden Gregory Norden	Director	February 7, 2023
/s/ William Young William Young	Director	February 7, 2023

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# LATHAM&WATKINS

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February 7, 2023

Praxis Precision Medicines, Inc. 99 High Street, 30th Floor Boston, MA 02110

Re: Registration Statement on Form S-8; 2,796,224 shares of Praxis Precision Medicines, Inc. Common Stock, \$0.0001 par value per share

To the addressee set forth above:

We have acted as special counsel to Praxis Precision Medicines, Inc., a Delaware corporation (the "Company"), in connection with the preparation and filing by the Company with the Securities and Exchange Commission (the "Commission") of a registration statement on Form S-8 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Act"), relating to the issuance by the Company of up to an aggregate of 2,796,224 shares of common stock of the Company, \$0.0001 par value per share (the "Shares"), issuable under the Praxis Precision Medicines, Inc. 2020 Stock Option and Incentive Plan (the "2020 Plan") and the Praxis Precision Medicines, Inc. 2020 Employee Stock Purchase Plan (together with the 2020 Plan, the "Plans"). This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement or the prospectus forming a part thereof, other than as expressly stated herein with respect to the issuance of the Shares.

As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this letter. With your consent, we have relied upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters. We are opining herein as to the General Corporation Law of the State of Delaware (the "**DGCL**"), and we express no opinion with respect to any other laws.

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof, when the Shares shall have been duly registered on the books of the transfer agent and registrar therefor in the name or on behalf of the purchasers, and have been issued by the Company for legal consideration in excess of par value in the circumstances contemplated by the Plans, assuming in each case that the individual grants or awards under the Plans are duly authorized by all necessary corporate action and duly granted or awarded and exercised in accordance with the requirements of law and the Plans (and the agreements and awards duly adopted thereunder and in accordance therewith), the issue and sale of the Shares will have been duly authorized by all necessary corporate action of the Company, and the Shares will be validly issued, fully paid and nonassessable. In rendering the foregoing opinion, we have assumed that the Company will comply with all applicable notice requirements regarding uncertificated shares provided in the DGCL.

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This opinion is for your benefit in connection with the Registration Statement and may be relied upon by you and by persons entitled to rely upon it pursuant to the applicable provisions of the Act. We consent to your filing this opinion as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Sincerely,

/s/ Latham & Watkins LLP

#### Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the Praxis Precision Medicines, Inc. 2020 Stock Option and Incentive Plan and the Praxis Precision Medicines, Inc. 2020 Employee Stock Purchase Plan of our report dated February 7, 2023, with respect to the consolidated financial statements of Praxis Precision Medicines, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2022, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Boston, Massachusetts February 7, 2023

#### **Calculation of Filing Fee Tables**

Form S-8 (Form Type)

#### Praxis Precision Medicines, 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(2)	Proposed Maximum Offering Price Per Unit <sup>(1)</sup>	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common stock, \$0.0001 par value per share	Other(1)	2,796,224(3)	\$4.86	\$13,589,648.64	0.00011020	\$1,497.58
	Total	Offering Amounts					\$1,497.58
	T	otal Fee Offsets					\$ <i>—</i>
	Net Fees Due						\$1,497.58

- (1) 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 (the "Securities Act"), and based upon the average of the high and low prices of the Registrant's common stock as reported on the Nasdaq Global Select Market on February 2, 2023.
- Pursuant to Rule 416(a) under the Securities Act, this registration statement shall also cover any additional securities which may be offered or issued under the Praxis Precision Medicines, Inc. 2020 Stock Option and Incentive Plan (the "2020 Plan") and the Praxis Precision Medicines, Inc. 2020 Employee Stock Purchase Plan (the "2020 ESPP") to prevent dilution resulting from any stock split, stock dividend or similar transaction. In addition, pursuant to Rule 416(c) under the Securities Act, this registration statement also covers an indeterminate amount of interests to be offered or sold pursuant to the employee benefit plans described herein.
- (3) Consists of 2,469,122 shares of common stock that may become issuable under the 2020 Plan pursuant to its terms and 327,102 shares of common stock that may become issuable under the 2020 ESPP pursuant to its terms.