UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM S-8 REGISTRATION STATEMENT

UNDER
THE SECURITIES ACT OF 1933

SAGE THERAPEUTICS, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware (State or Other Jurisdiction of Incorporation or Organization) 27-4486580 (I.R.S. Employer Identification No.)

215 First Street Cambridge, MA 02142 (Address of Principal Executive Offices)

Sage Therapeutics, Inc. 2014 Employee Stock Purchase Plan (Full Title of the Plans)

Barry E. Greene
President and Chief Executive Officer
Sage Therapeutics, Inc.
215 First Street
Cambridge, MA 02142
(617) 299-8380
(Name and Address of Agent For Service)

Copy to:

Anne Marie Cook Senior Vice President, General Counsel Sage Therapeutics, Inc. 215 First Street Cambridge, MA 02142 (617) 299-8380

Stuart M. Falber, Esq.
Rosemary G. Reilly, Esq.
Wilmer Cutler Pickering Hale and Dorr LLP
60 State Street
Boston, MA 02109
(617) 526-6000

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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.

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Large accelerated filer	\boxtimes	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. \Box

EXPLANATORY NOTE

This Registration Statement on Form S-8, relating to an aggregate of 500,000 shares of common stock, par value \$0.0001 per share ("Common Stock"), issuable under the Sage Therapeutics, Inc. (the "Registrant") 2014 Employee Stock Purchase Plan, as amended (the "2014 Plan"), 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 has previously been filed and is effective. Accordingly, this Registration Statement incorporates by reference the contents of the following Registration Statements on Form S-8 filed by the Registrant with the Securities and Exchange Commission relating to the 2014 Plan, except, in each case, with respect to "Item 8. Exhibits" thereof:

- (1) Registration Statement on Form S-8 (Registration No. 333-197498) filed on July 18, 2014; and
- (2) Registration Statement on Form S-8 (Registration No. 333-266455) filed on August 2, 2022.

Part II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 8. Exhibits.

Exhibit No.	Description
4.1	Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.1 of the Registrant's Registration Statement on Form S-1, as amended (File No. 333-196849) filed on July 8, 2014)
4.2	Fifth 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. 001-36544) filed on July 25, 2014)
4.3	Amended and Restated Bylaws of the Registrant, as amended on June 15, 2023 (incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K (File No. 001-36544) filed on June 16, 2023)
5.1*	Opinion of Wilmer Cutler Pickering Hale and Dorr LLP
23.1*	Consent of PricewaterhouseCoopers 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	2014 Employee Stock Purchase Plan, as amended (incorporated by reference to Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q (File No. 001-36544) filed on August 7, 2023)
107*	Filing Fee Table

^{*} 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 the 7th day of August, 2023.

SAGE THERAPEUTICS, INC.

By: /s/ Barry E. Greene

Barry E. Greene Chief Executive Officer, President and Director

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of Sage Therapeutics, Inc., hereby severally constitute and appoint Barry E. Greene and Kimi Iguchi, and each of them singly (with full power to each of them to act alone), our true and lawful attorneys-in-fact and agents, 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 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 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 and about the premises, as full 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 their or his 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.

Signature	Title	Date
/s/ Barry E. Greene	Chief Executive Officer, President and Director	August 7, 2023
Barry E. Greene	(Principal Executive Officer)	
/s/ Kimi Iguchi	Chief Financial Officer	August 7, 2022
		August 7, 2023
Kimi Iguchi	(Principal Financial and Accounting Officer)	
/s/ Michael F. Cola	Director	August 7, 2023
Michael F. Cola		8 ,
/s/ Steven Paul	Director	August 7, 2023
Steven Paul, M.D.		
/s/ Kevin P. Starr	Director	August 7, 2023
Kevin P. Starr		
/s/ James M. Frates	Director	August 7, 2023
James M. Frates		
lal Cana Carmana	Divertor	August 7, 2022
/s/ Geno Germano	Director	August 7, 2023
Geno Germano		

/s/ Jeffrey M. Jonas	Director	August 7, 2023
Jeffrey M. Jonas, M.D.		
/s/ Elizabeth Barrett	Director	August 7, 2023
Elizabeth Barrett		
/s/ George Golumbeski	Director	August 7, 2023
George Golumbeski, Ph.D.		
/s/ Jessica Federer Jessica Federer	Director	August 7, 2023

wilmerhale.com

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August 7, 2023 +1 617 526 6000 (t) +1 617 526 5000 (f)

Sage Therapeutics, Inc. 215 First Street Cambridge, MA 02142

Re: 2014 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 500,000 shares of common stock, \$0.0001 par value per share (the "Shares"), of Sage Therapeutics, Inc., a Delaware corporation (the "Company"), issuable under the Company's 2014 Employee Stock Purchase Plan (the "Plan").

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 board of directors and stockholders of the Company, the Registration Statement, the Plan 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 General Corporation Law of the State of Delaware.

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 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.

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

WILMERHALE

Sage Therapeutics, Inc. August 7, 2023 Page 2

Very truly yours, /s/ Wilmer Cutler Pickering Hale and Dorr LLP

WILMER CUTLER PICKERING HALE AND DORR LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of Sage Therapeutics, Inc. of our report dated February 16, 2023 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in Sage Therapeutics, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2022.

/s/ PricewaterhouseCoopers LLP Boston, Massachusetts August 7, 2023

Calculation of Filing Fee Tables

Form S-8 (Form Type)

Sage 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, \$0.0001					\$110.20	
	par value		500,000			per	
	per share	Other	shares (2)	\$34.58 (3)	\$17,290,000 (3)	\$1,000,000	\$1,905.36
Total Offering Amounts				\$17,290,000		\$1,905.36	
Total Fee Offsets						\$0	
Net Fee Due						\$1,905.36	

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement shall also cover any additional securities which become issuable with respect to the securities identified in the table above by reason of any stock dividend, stock split, recapitalization or any other similar transaction.
- (2) Represents shares of common stock, \$0.0001 par value per share (the "Common Stock"), reserved and available for issuance under the 2014 Employee Stock Purchase Plan, as amended (the "ESPP"), pursuant to an amendment to the ESPP approved at the Registrant's 2023 Annual Meeting of Stockholders on June 15, 2023. Shares available for issuance under the ESPP were previously registered on the registration statements on Form S-8 filed with the Securities and Exchange Commission on July 18, 2014 (Registration No. 333-197498) and August 2, 2022 (Registration No. 333-266455).
- (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 prices of the Registrant's Common Stock as reported on the Nasdaq Global Market on July 31, 2023.