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

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

Synlogic, Inc.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

26-1824804
(I.R.S. Employer
Identification Number)

**301 Binney Street, Suite 402
Cambridge, MA 02142
(617) 401-9975**
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

2015 Employee Stock Purchase Plan
(Full Title of the Plan)

**Aoife Brennan
President and Chief Executive Officer
Synlogic, Inc.
301 Binney Street, Suite 402
Cambridge, MA 02142**

(617) 401-9975
(Name, address, including zip code, and 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	<input type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input checked="" type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

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.

EXPLANATORY NOTE

On November 23, 2016, the Board of Directors of the Registrant suspended the Registrant's 2015 Employee Stock Purchase Plan (the "ESPP") pursuant to the terms of the ESPP. On December 19, 2019, the Board of Directors of the Registrant reactivated the ESPP, for which a Registration Statement of the Registrant on Form S-8 (File No. [333-207299](#)) is effective. This Registration Statement on Form S-8 is being filed for the purpose of registering an additional 667,362 shares of the Registrant's Common Stock issuable under the ESPP, as a result of the operation of an automatic annual increase provision therein, which added 667,362 shares of Common Stock. This Registration Statement registers additional securities of the same class as other securities for which registration statements filed on Form S-8 of the Registrant relating to one or more employee benefit plans is effective (File Nos. [333-207299](#), [333-210466](#), [333-237105](#), [333-254689](#) and [333-263629](#)).

INCORPORATION BY REFERENCE OF CONTENTS OF REGISTRATION STATEMENT ON FORM S-8

Pursuant to Instruction E of Form S-8, the contents of the Registration Statement on Form S-8 filed with the Securities and Exchange Commission on October 6, 2015 (File No. [333-207299](#)) are incorporated by reference herein.

Exhibit Index

Exhibit Number	Exhibit Description	Incorporated by Reference			Filed Herewith
		Form	Date	Number	
4.1	Amended and Restated Certificate of Incorporation.	8-K	10/6/2015	3.1	
4.2	Certificate of Amendment to Amended and Restated Certificate of Incorporation.	8-K	8/28/2017	3.1	
4.3	Certificate of Amendment to Amended and Restated Certificate of Incorporation.	8-K	8/28/2017	3.2	
4.4	Amended and Restated Bylaws.	8-K	10/6/2015	3.2	
4.5	Form of Common Stock Certificate.	S-3	10/13/2017	4.5	
5.1	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.				X
23.1	Consent of KPMG LLP, independent registered public accounting firm.				X
23.2	Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (included in Exhibit 5.1).				X
24.1	Power of Attorney. Reference is made to the signature page to the Registration Statement.				X
99.1#	Synlogic, Inc. 2015 Employee Stock Purchase Plan, as amended.	8-K	12/20/2019	10.1	
107	Calculation of Filing Fee Table				X

Indicates management contract or compensatory plan.

Signatures

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Registration Statement on Form S-8 to be signed on its behalf by the undersigned, thereunto duly authorized, in Cambridge, Massachusetts on March 29, 2023.

SYNLOGIC, INC.

By: /s/ Aoife Brennan

Aoife Brennan

President and Chief Executive Officer

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Aoife Brennan and Michael Jensen, and each of them acting individually, as his or her true and lawful attorneys-in-fact and agents, each with full power of substitution, for him or her in any and all capacities, to sign any and all amendments to this Registration Statement, including post-effective amendments or any abbreviated registration statement and any amendments thereto filed pursuant to Rule 462(b) increasing the number of securities for which registration is sought, and to file the same, with all exhibits thereto and other documents in connection therewith, with the SEC, granting unto said attorneys-in-fact and agents, with full power of each to act alone, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully for 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 his, her or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

Name	Title	Date
<hr/> <i>/s/ Aoife Brennan</i> Aoife Brennan	President, Chief Executive Officer, and Director <i>(Principal Executive Officer)</i>	March 29, 2023
<hr/> <i>/s/ Michael Jensen</i> Michael Jensen	Chief Financial Officer <i>(Principal Financial Officer and Principal Accounting Officer)</i>	March 29, 2023
<hr/> <i>/s/ Peter Barrett</i> Peter Barrett	Chairman of the Board	March 29, 2023
<hr/> <i>/s/ Michael Burgess</i> Michael Burgess	Director	March 29, 2023
<hr/> <i>/s/ Michael Heffernan</i> Michael Heffernan	Director	March 29, 2023
<hr/> <i>/s/ Patricia Hurter</i> Patricia Hurter	Director	March 29, 2023
<hr/> <i>/s/ Lisa Kelly-Croswell</i> Lisa Kelly-Croswell	Director	March 29, 2023
<hr/> <i>/s/ Nick Leschly</i> Nick Leschly	Director	March 29, 2023
<hr/> <i>/s/ Edward Mathers</i> Edward Mathers	Director	March 29, 2023
<hr/> <i>/s/ Richard P. Shea</i> Richard P. Shea	Director	March 29, 2023



One Financial Center
Boston, MA 02111
617 542 6000
mintz.com

March 29, 2023

Synlogic, Inc.
301 Binney St., Suite 402
Cambridge, MA 02142

Ladies and Gentlemen:

We have acted as legal counsel to Synlogic, Inc., a Delaware corporation (the “Company”), in connection with the preparation and filing with the Securities and Exchange Commission (the “Commission”) of a Registration Statement on Form S-8 (the “Registration Statement”), pursuant to which the Company is registering the issuance under the Securities Act of 1933, as amended (“Securities Act”), of an aggregate of 667,362 shares (the “Shares”) of the Company’s common stock, \$0.001 par value per share (“Common Stock”), in accordance with the terms of the Synlogic, Inc. 2015 Employee Stock Purchase Plan (the “Plan”). This opinion is being rendered in connection with the filing of the Registration Statement with the Commission. All capitalized terms used herein and not otherwise defined shall have the respective meanings given to them in the Registration Statement.

In connection with this opinion, we have examined the Company’s Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, each as currently in effect; such other records of the corporate proceedings of the Company and certificates of the Company’s officers as we have deemed relevant; and the Registration Statement and the exhibits thereto.

In our examination, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as copies, the authenticity of the originals of such copies, and the truth and correctness of any representations and warranties contained therein. In addition, we have assumed that the Company will receive any required consideration in accordance with the terms of the Plan.

Our opinion expressed herein is limited to the General Corporation Law of the State of Delaware and we express no opinion with respect to the laws of any other jurisdiction. No opinion is expressed herein with respect to the qualification of the Shares under the securities or blue sky laws of any state or any foreign jurisdiction.

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. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.

BOSTON LONDON LOS ANGELES NEW YORK SAN DIEGO SAN FRANCISCO WASHINGTON
MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C.

Based upon the foregoing, we are of the opinion that the Shares, when issued and delivered in accordance with the terms of the Plan, will be validly issued, fully paid and non-assessable.

We understand that you wish to file this opinion with the Commission as an exhibit to the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K promulgated under the Securities Act, and we hereby consent thereto. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission promulgated thereunder.

Very truly yours,

/s/ Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND
POPEO, P.C.

BOSTON LONDON LOS ANGELES NEW YORK SAN DIEGO SAN FRANCISCO WASHINGTON

MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C.

Consent of Independent Registered Public Accounting Firm

We consent to the use of our report dated March 29, 2023, with respect to the consolidated financial statements of Synlogic, Inc., incorporated herein by reference.

/s/ KPMG LLP

Boston, Massachusetts
March 29, 2023

Calculation of Filing Fee Table

Form S-8
(Form Type)

Synlogic, Inc.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered

Security Type	Security Class Title	Fee Calculation Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee
Equity	Common Stock, par value \$0.001 per share	457(c) and 457(h)	667,362(1)	\$0.5875(2)	\$392,075.18	\$0.00011020	\$43.21
Total Offering Amount					\$392,075.18		\$43.21
Total Fee Offsets							
Net Fee Due							\$43.21

- (1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement shall also cover any additional shares of the Registrant's common stock, par value \$0.001 per share (the "Common Stock") that become issuable under the 2015 Employee Stock Purchase Plan (the "ESPP") by reason of any stock dividend, stock split, recapitalization or similar transaction effected without the Registrant's receipt of consideration which would increase the number of outstanding shares of Common Stock.
- (2) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(h) and Rule 457(c) promulgated under the Securities Act. The offering price per share and the aggregate offering price for shares reserved for future issuance under the ESPP are based on the average of the high and the low price of Registrant's Common Stock as reported on The Nasdaq Capital Market on March 24, 2023.