

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER
THE SECURITIES ACT OF 1933

Assembly Biosciences, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

20-8729264
(I.R.S. Employer
Identification No.)

11711 N. Meridian Street, Suite 310
Carmel, Indiana
(Address of Principal Executive Offices)

46032
(Zip Code)

Assembly Biosciences, Inc. 2018 Stock Incentive Plan
(Full title of the plan)

Elizabeth H. Lacy
General Counsel, SVP, Legal Operations and Corporate Secretary
Assembly Biosciences, Inc.
11711 N. Meridian Street, Suite 310
Carmel, Indiana 46032
(Name and address of agent for service)

(833) 509-4583
(Telephone number, including area code, of agent for service)

Copies to:

Mitchell S. Bloom, Esq.
Maggie L. Wong, Esq.
Goodwin Procter LLP
100 Northern Avenue
Boston, Massachusetts 02210
(617) 570-1000

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.

Large accelerated filer
Non-accelerated filer

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(2)	Amount of registration fee
Common Stock, \$0.001 par value per share	1,100,000(3)	\$ 13.35	\$ 14,685,000	\$ 1,779.82

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement (the "Registration Statement") shall also cover any additional shares of common stock that become issuable under the Assembly Biosciences, Inc. (the "Company") 2018 Stock Incentive Plan, as amended (the "Plan") by reason of any stock dividend, stock split or similar transaction effected without the receipt of consideration that results in an increase in the number of the outstanding shares of common stock.
- (2) Estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(h) of the Securities Act. The proposed maximum

aggregate offering price is calculated pursuant to Rule 457(c) and Rule 457(h) under the Securities Act on the basis of \$13.35 per share, the average of the high and low sale prices of the Company's common stock on the Nasdaq Global Select Market on August 1, 2019.

- (3) Represents 1,100,000 shares of common stock that were added to the shares reserved and available for issuance under the Plan, as approved by the Company's stockholders on May 17, 2019.
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EXPLANATORY NOTE

This Registration Statement on Form S-8 (the “Registration Statement”) is being filed by Assembly Biosciences, Inc. (the “Company”), pursuant to General Instruction E to the Form S-8 Registration Statement under the Securities Act of 1933, as amended (the “Securities Act”), in connection with the registration of an additional 1,100,000 shares of the Company’s common stock, par value \$0.001 per share (the “Common Stock”) issuable pursuant to the Company’s 2018 Stock Incentive Plan (as amended, the “Plan”). 1,900,000 shares of Common Stock issuable under the Plan were registered pursuant to the Company’s Registration Statement on [Form S-8](#) (File No. 333-226703) filed with the Securities and Exchange Commission on August 8, 2018, and the information contained therein is incorporated herein by reference.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

The documents containing the information specified in Part I will be delivered in accordance with Form S-8 and Rule 428(b) under the Securities Act. Such documents are not required to be, and are not, filed with the Securities and Exchange Commission (the "Commission"), either as part of this Registration Statement or as prospectuses or prospectus supplements pursuant to Rule 424 under the Securities Act. These documents, and the documents incorporated by reference in this Registration Statement pursuant to Item 3 of Part II of this Form S-8, taken together, constitute a prospectus that meets the requirements of Section 10(a) of the Securities Act.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents, which have been filed with the Commission by the Company, pursuant to the Securities Act and the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as applicable, are hereby incorporated by reference in, and shall be deemed to be a part of, this Registration Statement:

- the Company's Annual Report on [Form 10-K](#) for the year ended December 31, 2018, filed with the Commission on February 28, 2019 (including, for the avoidance of doubt, the information specifically incorporated by reference in the Company's Form 10-K from the Company's [Definitive Proxy Statement for the 2019 Annual Meeting of Stockholders, filed with the Commission on April 4, 2019](#));
- the Company's Quarterly Reports on Form 10-Q for the quarters ended [March 31, 2019](#) and [June 30, 2019](#), filed with the Commission on May 9, 2019 and August 5, 2019, respectively;
- our Current Reports on Form 8-K filed with the SEC on [April 22, 2019](#), [May 2, 2019](#) and [May 21, 2019](#); and
- the description of the Company's common stock in the Company's Registration Statement on [Form 8-A](#) (File No. 001-35005) filed with the Commission on December 10, 2010, including any amendment or report filed by the Company for the purpose of updating such description.

All documents subsequently filed by the Company pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the filing of a post-effective amendment to this Registration Statement that indicates that all of the shares of common stock registered hereunder have been sold or that deregisters all of such shares then remaining unsold, shall be deemed to be incorporated by reference into this Registration Statement and to be a part hereof from the respective dates of filing of such documents, except as to any portion of any future annual or quarterly report to stockholders or document or current report furnished under current Items 2.02 or 7.01 of Form 8-K that is not deemed filed under such provisions.

Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein, or in any other subsequently filed document that also is or is deemed to be incorporated by reference herein, modifies or supersedes such earlier statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

You may request a copy of these filings, at no cost, by writing or telephoning the Company at:

11711 N. Meridian Street,
Suite 310
Carmel, Indiana 46032
Telephone: (833) 509-4583
Attn: Corporate Secretary

You should rely only on the information provided or incorporated by reference in this Registration Statement or any related prospectus. The Company has not authorized anyone to provide you with different information. You should not assume that the information in this Registration Statement or any related prospectus is accurate as of any date other than the date on the front of the document.

Item 8. Exhibits.

See the Exhibit Index on the page immediately preceding the signatures to this Registration Statement for a list of exhibits filed as part of this Registration Statement, which Exhibit Index is incorporated herein by reference.

EXHIBIT INDEX

Exhibit No.	Description
<u>4.1</u>	<u>Fourth Amended and Restated Certificate of Incorporation of Assembly Biosciences, Inc. (incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K filed with the Commission on June 1, 2018).</u>
<u>4.2</u>	<u>Amended and Restated Bylaws of Assembly Biosciences, Inc. (incorporated by reference to Exhibit 3.1 of the Registrant's Current Report on Form 8-K filed with the Commission on January 24, 2018).</u>
<u>4.3</u>	<u>Specimen Common Stock Certificate of Assembly Biosciences, Inc. (incorporated by reference to Exhibit 4.1 of the Registrant's Registration Statement on Form S-3 filed with the Commission on December 30, 2015).</u>
<u>5.1*</u>	<u>Opinion of Goodwin Procter LLP.</u>
<u>23.1*</u>	<u>Consent of Goodwin Procter LLP (included in Exhibit 5.1).</u>
<u>23.2*</u>	<u>Consent of Independent Registered Public Accounting Firm.</u>
<u>24.1*</u>	<u>Power of Attorney (included on the signature page of this Registration Statement).</u>
<u>99.1</u>	<u>Assembly Biosciences, Inc. 2018 Stock Incentive Plan (incorporated by reference to Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed with the Commission on June 1, 2018).</u>
<u>99.2</u>	<u>Amendment No. 1 to Assembly Biosciences, Inc. 2018 Stock Incentive Plan (incorporated by reference to Exhibit 10.2 of the Registrant's Current Report on Form 8-K filed with the Commission on May 21, 2019).</u>

* 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 Carmel, State of Indiana, on August 5, 2019.

ASSEMBLY BIOSCIENCES, INC.

By: /s/ Derek A. Small
Derek A. Small
President and Chief Executive Officer

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of Assembly Biosciences, Inc., hereby severally constitute and appoint Derek A. Small and Elizabeth H. Lacy, 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/her and in his/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/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/her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons on August 5, 2019 in the capacities indicated.

<u>Signature</u>	<u>Title</u>
<u>/s/ Derek A. Small</u> Derek A. Small	Director, President and Chief Executive Officer (Principal Executive Officer and Principal Financial Officer)
<u>/s/Michael P. Samar</u> Michael P. Samar	SVP, Finance and Business Operations (Principal Accounting Officer)
<u>/s/ William R. Ringo, Jr.</u> William R. Ringo, Jr.	Chairman of the Board
<u>/s/ Anthony E. Altig</u> Anthony E. Altig	Director
<u>/s/ Mark Auerbach</u> Mark Auerbach	Director
<u>/s/ Richard D. DiMarchi, Ph.D.</u> Richard D. DiMarchi, Ph.D.	Director
<u>/s/ Myron Z. Holubiak</u> Myron Z. Holubiak	Director
<u>/s/ Helen S. Kim</u> Helen S. Kim	Director
<u>/s/ Alan J. Lewis, Ph.D.</u> Alan J. Lewis, Ph.D.	Director
<u>/s/ Susan Mahony, Ph.D.</u> Susan Mahony, Ph.D.	Director



Goodwin Procter LLP
100 Northern Avenue
Boston, MA 02210
goodwinlaw.com
+1 617 570 1000

August 5, 2019

Assembly Biosciences, Inc.
11711 N. Meridian Street, Suite 310
Carmel, Indiana 46032

Re: Securities Being Registered under Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as counsel to you in connection with your filing of a Registration Statement on Form S-8 (the "Registration Statement") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), on or about the date hereof relating to an aggregate of 1,100,000 shares (the "Shares") of Common Stock, \$0.001 par value per share, of Assembly Biosciences, Inc., a Delaware corporation (the "Company"), that may be issued pursuant to the Company's 2018 Stock Incentive Plan, as amended (the "Plan").

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinions set forth below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinion set forth below, on certificates of officers of the Company.

The opinion set forth below is limited to the Delaware General Corporation Law.

For purposes of the opinion set forth below, we have assumed that no event occurs that causes the number of authorized shares of Common Stock available for issuance by the Company to be less than the number of then unissued Shares.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized and, upon issuance and delivery against payment therefor in accordance with the terms of the Plan, will be validly issued, fully paid and nonassessable.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement. In giving our consent, we do not 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 thereunder.

Very truly yours,

/s/ Goodwin Procter LLP

GOODWIN PROCTER 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 Assembly Biosciences, Inc. 2018 Stock Incentive Plan of our reports dated February 28, 2019, with respect to the consolidated financial statements and related notes of Assembly Biosciences, Inc. and the effectiveness of internal control over financial reporting of Assembly Biosciences, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2018, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Redwood City, California
August 5, 2019
