UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

SELECTA BIOSCIENCES, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware 26-1622110
(State or Other Jurisdiction of Incorporation or Organization) (I.R.S. Employer Identification No.)

480 Arsenal Way Watertown, Massachusetts 02472 (Address of Principal Executive Offices) (Zip Code)

Selecta Biosciences, Inc. 2016 Incentive Award Plan Selecta Biosciences, Inc. 2016 Employee Stock Purchase Plan (Full Title of the Plan)

Werner Cautreels, Ph.D.
President and Chief Executive Officer
Selecta Biosciences, Inc.
480 Arsenal Way
Watertown, Massachusetts 02472
(Name and Address of Agent for Service)

(617) 923-1400 (Telephone Number, including Area Code, of Agent for Service)

Copies to:

Peter N. Handrinos, Esq. Latham & Watkins LLP 200 Clarendon Street Boston, MA 02116 (617) 948-6060

| ndicate 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 |
|--|-----|
| lefinitions 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 | $\hfill\Box$ (Do not check if a smaller reporting company) | Smaller reporting company | |
|---|---|--|---|
| If an emerging growth company, provided pursuant to Section 7(a | indicate by check mark if the registrant has elected not to use the (2)(B) of the Securities Act. x | he extended transition period for complying with | new or revised financial accounting standards |

Accelerated filer

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 | 407,819 shares(2) | \$9.30(3) | \$3,792,716.70 | \$473 |
| Common Stock, par value \$0.0001 per share | 1,631,279 shares(4) | \$9.30 (3) | \$15,170,894.70 | \$1,889 |

- (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 under the Selecta Biosciences, Inc. 2016 Employee Stock Purchase Plan ("ESPP") and the Selecta Biosciences, Inc. 2016 Incentive Award Plan (the "Incentive Plan") to prevent dilution resulting from stock splits, stock dividends or similar transactions.
- (2) Consists of 407,819 shares of Common Stock that may become issuable under the ESPP pursuant to its terms.
- (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 March 28, 2018.
- (4) Consists of 1,631,279 shares of Common Stock that may become issuable under the Incentive Plan pursuant to its terms.

PART I

EXPLANATORY NOTE

This Registration Statement on Form S-8 is being filed for the purpose of registering an additional 407,819 shares of the common stock of Selecta Biosciences, Inc. (the "Registrant") to be issued pursuant to the ESPP and an additional 1,631,279 shares of the Registrant's common stock to be issued pursuant to the Incentive Plan. A Registration Statement of the Registrant on Form S-8 relating to the same employee benefit plans is effective.

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

Except as set forth below, the contents of the Registration Statement on Form S-8 (File No. 333-212215) filed with the Securities and Exchange Commission, relating to the ESPP and Incentive Plan, are incorporated by reference herein.

Item 8. Exhibits.

| Number | Description |
|--------|---|
| 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. 001-37798) filed on June 29, 2016) |
| 4.2 | Amended and Restated By-laws of the Registrant (incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K (File No. 001-37798) filed on June 29, 2016) |
| 5.1+ | Opinion of Latham & Watkins LLP, counsel to the Registrant |
| 23.1+ | Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm |
| 23.2 + | Consent of Latham & Watkins LLP (included in Exhibit 5.1) |
| 24.1+ | Power of attorney (included on signature pages below) |
| 99.1 | Selecta Biosciences, Inc. 2016 Incentive Award Plan (incorporated by reference to Exhibit 10.2 to the Registrant's Registration Statement on Form S-1 (Reg. No. 333-2111555) filed on June 8, 2016) |
| 99.2 | <u>Selecta Biosciences, Inc. 2016 Employee Stock Purchase Plan (incorporated by reference to Exhibit 10.3 to the Registrant's Registration Statement on Form S-1 (Reg. No. 333-211555) filed on June 8, 2016)</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 Watertown, Commonwealth of Massachusetts, on this 3rd day of April, 2018.

SELECTA BIOSCIENCES, INC.

By: /s/ Werner Cautreels, Ph.D.

Werner Cautreels, Ph.D.

President, Chief Executive Officer and Director

POWER OF ATTORNEY AND SIGNATURES

We, the undersigned officers and directors of Selecta Biosciences, Inc. (the "Company"), hereby severally constitute and appoint the Chief Executive Officer of the Company, who is currently Werner Cautreels, Ph.D., and the Chief Financial Officer of the Company, who is currently John Leaman, M.D., 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 and in his name, place and stead, and in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement, 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 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, 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> |
|---|--|---------------|
| /s/ Werner Cautreels, Ph.D. | President, Chief Executive Officer and Director | April 3, 2018 |
| Werner Cautreels, Ph.D. | (Principal Executive Officer) | |
| /s/ John Leaman, M.D. | Chief Financial Officer, Head of Corporate Strategy, and Treasurer | April 3, 2018 |
| John Leaman, M.D. | (Principal Financial and Accounting Officer) | |
| /s/ Timothy C. Barabe Timothy C. Barabe | Director | April 3, 2018 |
| /s/ Omid Farokhzad, M.D. Omid Farokhzad, M.D. | Director | April 3, 2018 |
| /s/ Peter Barton Hutt Peter Barton Hutt | Director | April 3, 2018 |
| /s/ Amir Nashat, Ph.D Amir Nashat, Ph.D | Director | April 3, 2018 |
| /s/ Aymeric Sallin Aymeric Sallin | Director | April 3, 2018 |
| /s/ Timothy Springer, Ph.D. Timothy Springer, Ph.D. | Director | April 3, 2018 |
| /s/ Patrick Zenner Patrick Zenner | Director – | April 3, 2018 |

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LATHAM & WATKINS LLP

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File No. 049821-0014

April 3, 2018

Selecta Biosciences, Inc. 480 Arsenal Wav Watertown, MA 02139

Re: Registration Statement on Form S-8; 2,039,098 shares of Selecta Biosciences, Inc. Common Stock, \$0.0001 par value per share

Ladies and Gentlemen:

We have acted as special counsel to Selecta Biosciences, 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 2,039,098 shares of common stock of the Company, \$0.0001 par value per share (the "Shares"), issuable under the Selecta Biosciences, Inc. 2016 Incentive Award Plan (the "2016 Plan") and the Selecta Biosciences, Inc. 2016 Employee Stock Purchase Plan (the "2016 ESPP" and, together with the 2016 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 issue 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.

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.

Very truly yours,

/s/ Latham and Watkins LLP

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement on Form S-8 for the registration of 2,039,098 shares of its common stock pertaining to the 2016 Incentive Award Plan and the 2016 Employee Stock Purchase Plan of Selecta Biosciences, Inc. and subsidiaries of our report dated March 15, 2018 with respect to the consolidated financial statements of Selecta Biosciences, Inc. and subsidiaries included in its Annual Report (Form 10-K) for the year ended December 31, 2017, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Boston, Massachusetts April 2, 2018