

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

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

FLUIDIGM CORPORATION

(Exact name of Registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

77-0513190

(I.R.S. Employer
Identification No.)

**7000 Shoreline Court, Suite 100
South San Francisco, California 94080**

(Address of principal executive offices, including zip code)

2011 Equity Incentive Plan

(Full title of the plan)

**Gajus V. Worthington
President and Chief Executive Officer
7000 Shoreline Court, Suite 100
South San Francisco, California 94080
(650) 266-6000**

(Name, address and telephone number, including area code, of agent for service)

Copies to:

**Robert F. Kornegay
Wilson Sonsini Goodrich & Rosati,
Professional Corporation
650 Page Mill Road
Palo Alto, California 94304
(650) 493-9300**

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act (Check one).

Large accelerated filer
Non-accelerated filer (Do not check if a smaller reporting company)

Accelerated filer
Smaller reporting company

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, \$0.001 par value per share, reserved for issuance pursuant to the Fluidigm Corporation 2011 Equity Incentive Plan	1,000,000 ⁽²⁾	\$6.69 ⁽³⁾	\$6,690,000.00	\$673.69

- (1) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended, this Registration Statement shall also cover any additional shares of the Registrant's common stock that become issuable under the 2011 Equity Incentive Plan ("2011 Plan") by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without receipt of consideration that increases the number of the Registrant's outstanding shares of common stock.
- (2) Represents shares of the Registrant's common stock that were automatically added to the shares authorized for issuance under the 2011 Plan on January 1, 2016 pursuant to an "evergreen" provision contained in the 2011 Plan. Pursuant to such provision, on January 1st of each fiscal year beginning with the 2012 fiscal year, the number of shares available for issuance under the 2011 Plan is automatically increased in an amount equal

to the least of (i) 1,000,000 shares of the Registrant's common stock, (ii) four percent (4%) of the number of shares of the Registrant's common stock outstanding on December 31st of the preceding fiscal year, or (iii) such number of shares of the Registrant's common stock determined by the Registrant's board of directors.

- (3) Estimated in accordance with paragraphs (c) and (h) of Rule 457 solely for the purpose of calculating the total registration fee. Computation based on the average of the high and low prices of the Registrant's common stock as reported on the NASDAQ Global Select Market on February 29, 2016.
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FLUIDIGM CORPORATION
REGISTRATION OF ADDITIONAL SECURITIES
PURSUANT TO GENERAL INSTRUCTION E

This Registration Statement registers additional shares of the common stock of Fluidigm Corporation (the “**Registrant**”) to be issued pursuant to the Registrant’s 2011 Equity Incentive Plan (the “**2011 Plan**”). Accordingly, the contents of (i) the previous Registration Statement on Form S-8 filed by the Registrant with the Securities and Exchange Commission (the “**Commission**”) on February 11, 2011 (File No. 333-172206); (ii) the previous Registration Statement on Form S-8 filed by the Registrant with the Commission on March 26, 2012 (File No. 333- 180363); (iii) the previous Registration Statement on Form S-8 filed by the Registrant with the Commission on March 12, 2013 (File No. 333- 187204); (iv) the previous Registration Statement on Form S-8 filed by the Registrant with the Commission on February 21, 2014 (File No. 333- 194084); and (v) the previous Registration Statement on Form S-8 filed by the Registrant with the Commission on February 26, 2015 (File No. 333- 202325) (together, the “**Previous Forms S-8**”) are incorporated by reference into this Registration Statement pursuant to General Instruction E of Form S-8.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The Registrant hereby incorporates by reference into this Registration Statement the following documents previously filed with the Commission:

- (1) The Registrant’s Annual Report on Form 10-K for the fiscal year ended December 31, 2015, filed with the Commission on February 29, 2016;
- (2) All other reports filed with the Commission pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”), since the end of the fiscal year covered by the Registrant’s Annual Report referred to in (1) above; and
- (3) The description of the Registrant’s common stock contained in the Registrant’s Registration Statement on Form 8-A (File No. 001-34180) filed with the Commission on February 7, 2011, pursuant to Section 12(b) of the Exchange Act, including any amendment or report filed for the purpose of updating such description.

All documents filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act on or after the date of this Registration Statement and prior to the filing of a post-effective amendment to this Registration Statement that indicates that all securities offered have been sold or that deregisters all securities then remaining unsold shall be deemed to be incorporated by reference in this Registration Statement and to be part hereof from the date of filing of such documents; *provided, however*, that documents or information deemed to have been furnished and not filed in accordance with the rules of the Commission shall not be deemed incorporated by reference into this Registration Statement. 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 subsequently filed document which also is deemed to be incorporated by reference herein modifies or supersedes such 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.

Under no circumstances will any information furnished under current items 2.02 or 7.01 of Form 8-K be deemed incorporated herein by reference unless such Form 8-K expressly provides to the contrary.

Item 8. Exhibits.

Exhibit Number	Description
4.1	Specimen Common Stock Certificate of the Registrant, which is incorporated herein by reference to Exhibit 4.1 to the Registrant’s Registration Statement on Form S-1/A (Registration No. 333-170965), filed with the Commission on February 7, 2011.
4.2	2011 Equity Incentive Plan and related form agreements, which is incorporated herein by reference to Exhibit 10.4 and 10.4A to the Registrant’s Registration Statement on Form S-1/A (Registration No. 333-170965), filed with the Commission on January 28, 2011.
5.1	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.
23.1	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm.
23.2	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.
23.3	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (contained in Exhibit 5.1 hereto).
24.1	Power of Attorney (contained on signature page hereto).

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 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 South San Francisco, State of California, on March 3, 2016.

Fluidigm Corporation

By: /s/ Gajus V. Worthington

Gajus V. Worthington
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 Gajus V. Worthington and Vikram Jog, and each of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign the Registration Statement on Form S-8 of Fluidigm Corporation, and any or all amendments thereto (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 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 might or could do in person, hereby and about the premises hereby ratifying and confirming all that said attorneys-in-fact and agent, proxy and agent, 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 of 1933, this Registration Statement on Form S-8 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ Gajus V. Worthington</u> Gajus V. Worthington	President, Chief Executive Officer, and Director (Principal Executive Officer)	March 3, 2016
<u>/s/ Vikram Jog</u> Vikram Jog	Chief Financial Officer (Principal Financial and Accounting Officer)	March 3, 2016
<u>/s/ Samuel D. Colella</u> Samuel D. Colella	Chairman of the Board of Directors	March 3, 2016
<u>/s/ Gerhard F. Burbach</u> Gerhard F. Burbach	Director	March 3, 2016
<u>/s/ Evan Jones</u> Evan Jones	Director	March 3, 2016
<u>/s/ Patrick S. Jones</u> Patrick S. Jones	Director	March 3, 2016
<u>/s/ John A. Young</u> John A. Young	Director	March 3, 2016

EXHIBIT INDEX

**Exhibit
Number**

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OPINION OF WILSON SONSINI GOODRICH & ROSATI,
PROFESSIONAL CORPORATION

March 3, 2016

Fluidigm Corporation
7000 Shoreline Court, Suite 100
South San Francisco, CA 94080

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

We have examined the Registration Statement on Form S-8 (the "Registration Statement") to be filed by Fluidigm Corporation, a Delaware corporation, with the Securities and Exchange Commission on or about the date hereof, in connection with the registration under the Securities Act of 1933, as amended, of 1,000,000 shares of your common stock, par value \$0.001 per share (the "Shares"), reserved for future issuance pursuant to the 2011 Equity Incentive Plan (the "Plan"). As your legal counsel, we have reviewed the actions proposed to be taken by you in connection with the issuance and sale of the Shares to be issued under the Plan.

It is our opinion that the Shares, when issued and sold in the manner referred to in the Plan and pursuant to the agreements that accompany the Plan, will be legally and validly issued, fully paid and nonassessable.

We consent to the use of this opinion as an exhibit to the Registration Statement, and further consent to the use of our name wherever appearing in the Registration Statement and any amendments thereto.

Very truly yours,

WILSON SONSINI GOODRICH & ROSATI
Professional Corporation

/s/ Wilson Sonsini Goodrich & Rosati

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-8 of our report dated February 29, 2016 relating to the financial statements, financial statement schedule, and the effectiveness of internal control over financial reporting, which appears in Fluidigm Corporation's Annual Report on Form 10-K for the year ended December 31, 2015.

/s/ PricewaterhouseCoopers LLP
San Jose, California
March 3, 2016

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (Form S-8) for the registration of 1,000,000 shares of common stock pertaining to the 2011 Equity Incentive Plan of Fluidigm Corporation of our report dated February 29, 2016, with respect to the consolidated financial statements and schedule of Fluidigm Corporation included in its Annual Report (Form 10-K) for the year ended December 31, 2015, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP
February 29, 2016
Redwood City, California