
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**Post-Effective Amendment No. 1
to
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

EXPLANATORY NOTE

This Post-Effective Amendment No. 1 to the Registration Statement on Form S-8 of Fluidigm Corporation (the "Registrant"), filed with the Securities and Exchange Commission on March 3, 2016 (File No. 333-209904), is being filed solely for the purpose of submitting the exhibits included therein as separate exhibits.

PART II INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

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 (previously filed).

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 Post-Effective Amendment No. 1 to the Registration Statement on Form S-8 (File No. 333-209904) to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of South San Francisco, State of California, on March 15, 2016.

Fluidigm Corporation

By: /s/ Vikram Jog

Vikram Jog
Chief Financial Officer

Pursuant to the requirements of the Securities Act of 1933, this post-effective amendment to the Registration Statement on Form S-8 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
(*) Gajus V. Worthington	President, Chief Executive Officer, and Director (Principal Executive Officer)	March 15, 2016
/s/ Vikram Jog Vikram Jog	Chief Financial Officer (Principal Financial and Accounting Officer)	March 15, 2016
(*) Samuel D. Colella	Chairman of the Board of Directors	March 15, 2016
(*) Gerhard F. Burbach	Director	March 15, 2016
(*) Evan Jones	Director	March 15, 2016
(*) Patrick S. Jones	Director	March 15, 2016
(*) John A. Young	Director	March 15, 2016
(*) By: /s/ Vikram Jog Vikram Jog Attorney-In-Fact		March 15, 2016

EXHIBIT INDEX

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OPINION OF WILSON SONSINI GOODRICH & ROSATI,
PROFESSIONAL CORPORATION

March 15, 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, as amended (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 15, 2016

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Post-effective Amendment No. 1 to the Registration Statement (Form S-8 No. 333-209904) 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

March 15, 2016
Redwood City, California