UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of
The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported)
December 19, 2012

FLUIDIGM CORPORATION
(Exact name of registrant as specified in its charter)

Delaware	**001-34180**	**77-0513190**
(State or other jurisdiction of incorporation)	**(Commission File Number)**	**(IRS Employer Identification No.)**

7000 Shoreline Court, Suite 100
South San Francisco, California 94080
(Address of principal executive offices, including zip code)

(650) 266-6000
(Registrant's telephone number, including area code)

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 7.01 Regulation FD Disclosure.

On December 19, 2012, Fluidigm Corporation issued a press release announcing the introduction of the mRNA sequencing application on its C_1™ Single-Cell Auto Prep System. A copy of the press release is furnished herewith as Exhibit 99.1.

Item 9.01 Financial Statements and Exhibits

(d) Exhibits.

Exhibit No.	Description
99.1	Fluidigm Corporation Press Release dated December 19, 2012

The information furnished in this Current Report under Item 7.01 and the exhibit attached hereto shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such a filing.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

FLUIDIGM CORPORATION

Date: December 19, 2012

By: /s/ Vikram Jog
Vikram Jog
Chief Financial Officer

EXHIBIT INDEX

Exhibit No.	Description
99.1	Fluidigm Corporation Press Release dated December 19, 2012

Exhibit 99.1

FLUIDIGM INTRODUCES mRNA SEQUENCING APPLICATION FOR THE C_1™ SINGLE-CELL AUTO PREP SYSTEM

Simplifies Transcriptome Analysis of Single Cells from Diverse Sample Populations

SOUTH SAN FRANCISCO, Calif. – Dec. 19, 2012 – Fluidigm Corporation (NASDAQ:FLDM) today introduced the mRNA sequencing application on its C_1™ Single-Cell Auto Prep System. With this new C_1 system application, researchers have an easy, end-to-end workflow for detailed transcriptome analysis of 96 single cells to rapidly study differential expression profiles of diverse cell populations. The C_1 mRNA Seq Kits and integrated fluidic circuits (IFCs) enable the parallel processing of up to 96 single-cell cDNA libraries for quantitation of mRNA expression on Illumina sequencers. The protocol and reagent kits are expected to be commercially available in January 2013.

Increasingly, researchers are analyzing the transcriptome at greater depth to uncover new mechanisms of cell development, metabolism and disease. mRNA sequencing has become a valuable tool to help researchers understand how cell sub-populations respond to signals and other environmental cues at critical stages of cell-fate determination or when they acquire aberrant phenotypes. Studying these gene expression patterns in single cells already has dramatically advanced cell biology. Unfortunately, most standard methods, such as microarray profiling or next-generation sequencing, are impractical for single-cell analysis because those technologies require large numbers of cells and are based on complex workflows that are too slow or generate highly variable results.

The C_1 mRNA sequencing workflow was specifically optimized for high throughput single-cell analysis. All aspects of the workflow, including cell capture, staining for cell viability, lysis, reverse transcription and amplification are consolidated on C_1 system IFCs. The C_1 system workflow requires as few as 200 cells, utilizes as little as 10 picograms per cell, and requires no reagent mixing, fragmentation or purification. Researchers use the BioMark™ HD system to conduct routine quality control on the cDNA library in an effective and cost-efficient manner before running it on an Illumina sequencing system. This provides a reliable and standardized workflow for global gene expression analysis.

“mRNA sequencing is a powerful tool to sequence and quantify all messenger RNA in an unbiased and hypothesis-free approach. However, very few laboratories have been able to conduct single-cell mRNA sequencing studies in a meaningful and reproducible way. By enabling this application on the Fluidigm C_1 system, we’ve simplified the workflow to only three hours of hands-on time and at one-eighth the cost of other library preparation methods,” said Candia Brown, Fluidigm’s Director of Product Marketing in the Single-Cell Genomic Business. “By automating the workflow and reducing the sample preparation cost, we are enabling virtually any laboratory to run larger scale, transcriptome-wide studies.”

The C_1 Single-Cell mRNA sequencing application enables:

- Measurement of expression levels of genes, alleles and spliced variants,
- Comparison of expression profiles between individual cells and populations,
- Mapping of transcription initiation sites,
- Characterization of alternate splicing patterns,
- Evaluation of post-transcriptional activity, and
- Discovery of new transcripts and gene fusions.

The complete mRNA sequencing application includes the C_1 Single-Cell Integrated Fluidic Circuit Array and C_1 Reagent Kit, and leverages the Clontech Ultra Low RNA Kit for cDNA Synthesis and the Nextera XT DNA Sample Preparation Kit for library preparation and in-line barcoding. This application is the second application enabled on the C_1 system, which was launched in June 2012. Anticipated future applications include micro RNA analysis and targeted DNA sequencing.

For more information about the C_1 Single-Cell Auto Prep System, please visit www.fluidigm.com/c1system.

Use of Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements relating to Fluidigm's new products, its plans, objectives, expectations and/or strategies relating to such new products, the field of single-cell genomics research and potential developments in the emerging market. Forward-looking statements are subject to numerous risks and uncertainties that could cause actual results to differ materially from currently anticipated results, including challenges inherent in developing, manufacturing, and launching new products and risks relating to research and development activities and the growth of emerging markets. Information on these and additional risks affecting Fluidigm's business and operating results are contained in its filings with the Securities and Exchange Commission, including its most recently filed Quarterly Report on Form 10-Q for the quarter ended September 30, 2012. These forward-looking statements speak only as of the date hereof and Fluidigm disclaims any obligation to update these statements.

About Fluidigm

Fluidigm (NASDAQ:FLDM) develops, manufactures and markets microfluidic systems for growth markets in the life science and agricultural biotechnology, or Ag-Bio, industries. Fluidigm's proprietary microfluidic systems consist of instruments and consumables, including integrated fluidic circuits (IFCs), assays and other reagents. These systems are designed to significantly simplify experimental workflow, increase throughput and reduce costs, while providing the excellent data quality demanded by customers. Fluidigm actively markets four microfluidic systems, including thirteen different IFCs, to leading academic institutions, diagnostic laboratories, and pharmaceutical, biotechnology and Ag-Bio companies. Fluidigm products are marketed for research purposes only (not for diagnostic use).

For more information, please visit www.fluidigm.com.

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