FORM 3

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

OMB APPROVAL

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Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

Name and Address of Reporting Person* Whitaker Raymond J		2. Date of Ev Requiring Sta (Month/Day/Y 02/09/2011	tement	3. Issuer Name and Ticker or Trading Symbol FLUIDIGM CORP [FLDM]					
(Last)	(First) (Middle)			Relationship of Reporting Person(s) to Issuer (Check all applicable) X Director 10% Owner		(Mor	5. If Amendment, Date of Original Filed (Month/Day/Year)		
45 ROCKEFE			X Director Officer (give title	Other (spe	cify 6. In		t/Group Filing (Check		
(Street)		_		below)	below)	Appl	icable Line) Form filed b	y One Reporting Person	
l ` ′	W YORK NY 10111							y More than One	
,		_					Reporting P		
(City)	(State) (Zip)								
		Table I - N	on-Deriva	ative Securities Benefic	ially Owned				
1. Title of Security (Instr. 4)				2. Amount of Securities Beneficially Owned (Instr. 4)	3. Ownersh Form: Direct or Indirect ((Instr. 5)	t (D) (Instr		Beneficial Ownership	
Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)									
1. Title of Derivative Security (Instr. 4)		2. Date Exerc Expiration D (Month/Day/	ate	3. Title and Amount of Securities Underlying Derivative Security (Instr. 4)		4. Conversion or Exercise	5. Ownership Form:	6. Nature of Indirect Beneficial Ownership (Instr. 5)	
		Date Exercisable	Expiration Date	Title	Amount or Number of Shares	Price of Derivative Security	Direct (D) or Indirect (I) (Instr. 5)		
Series E Preferred Warrant (Right to Buy)		(1)	(2)	Common Stock	11,924(1)(3)	24.22	I	See footnotes ⁽⁴⁾⁽⁵⁾	
Series E Preferred Stock		(1)	(6)	Common Stock	47,400(1)(3)	0	I	See footnotes ⁽⁴⁾⁽⁵⁾	
Series C Preferred Stock		(7)	(7)	Common Stock	320,063(3)	0	I	See footnotes ⁽⁴⁾⁽⁵⁾	
Series D Preferred Stock		(7)	(7)	Common Stock	66,991 ⁽³⁾	0	I	See footnotes ⁽⁴⁾⁽⁵⁾	
Series E Preferred Warrant (Right to Buy)		(1)	(2)	Common Stock	11,924(1)(3)	24.22	I	See footnotes ⁽⁵⁾⁽⁸⁾	
Series E Preferred Stock		(1)	(6)	Common Stock	47,400(1)(3)	0	I	See footnotes ⁽⁵⁾⁽⁸⁾	
Series C Preferred Stock		(7)	(7)	Common Stock	320,063(3)	0	I	See footnotes ⁽⁵⁾⁽⁸⁾	
Series D Preferred Stock		(7)	(7)	Common Stock	66,991 ⁽³⁾	0	I	See footnotes ⁽⁵⁾⁽⁸⁾	
Stock Option (Right to Buy)		(9)	(9)	Common Stock	8,670(3)	8.38	D		
Stock Option (Right to Buy)		(10)	(10)	Common Stock	8.670 ⁽³⁾	4.45	D		

Explanation of Responses:

- 1. Reflects the automatic conversion of each share of Series E Preferred Stock into 1.3 shares of Common Stock to occur upon the closing of the Issuer's initial public offering.
- 2. Expires immediately prior to the closing of the Issuer's initial public offering.
- 3. Reflects a 1-for-1.73 reverse stock split of the Issuer's outstanding shares effected February 3, 2011.
- 4. EuclidSR Partners, L.P., is the record holder of the securities reported on Lines 1, 2, 3 and 4 of Table 2.
- 5. Mr. Whitaker, the reporting person who is a member of the Board of Directors of the Issuer shares voting and investment power with Graham D.S. Anderson, Milton J. Pappas and Stephen K. Reidy, each of whom are General Partners of EuclidSR Associates, L.P., the General Partner of EuclidSR Biotechnology Partners. Each General Partner of EuclidSR Associates, L.P. and EuclidSR Biotechnology Associates, L.P. disclaims beneficial ownership of the shares except to the extent of their pecuniary interest therein.
- 6. Each share has no expiration date.
- 7. Reflects the automatic conversion of each share of Series C Preferred Stock and Series D Preferred Stock into one share of Common Stock to occur upon the closing of the Issuer's initial public offering. Each share has no expiration date.
- 8. EuclidSR Biotechnology Partners, L.P., is the record holder of the securities reported on Lines 5, 6, 7 and 8 of Table 2.
- 9. 1/12th of the shares subject to such Option shall vest on each monthly anniversary of January 28, 2011 (the "Vesting Commencement Date"), such that the Option will be fully vested on the first annual anniversary of the Vesting Commencement Date. The Option shall expire on January 6, 2021.
- 10. The Option fully vested on January 28, 2011. The Option shall expire on January 28, 2020.

Remarks:

Exhibit List ----- Exhibit 24 - Power of Attorney

/s/ Gajus V. Worthington, attorney-in-fact

02/09/2011

** Signature of Reporting Person

Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

- * If the form is filed by more than one reporting person, see Instruction 5 (b)(v).
- ** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.

POWER OF ATTORNEY

The undersigned, as a Section 16 reporting person of Fluidigm Corporation (the "Company"), hereby constitutes and appoints the officers of the Company and the responsible attorneys and paralegals of Wilson Sonsini Goodrich & Rosati, P.C., and each of them, the undersigned's true and lawful attorney-in-fact to:

- 1. complete and execute Forms ID, 3,4 and 5 and other forms and all amendments thereto as such attorney-in-fact shall in his or her discretion determine to be required or advisable pursuant to Section 16 of the Securities Exchange Act of 1934 (as amended) and the rules and regulations promulgated thereunder, or any successor laws and regulations, as a consequence of the undersigned's ownership, acquisition or disposition of securities of the Company; and
- 2. do all acts necessary in order to file such forms with the Securities and Exchange Commission, any securities exchange or national association, the Company and such other person or agency as the attorney-in-fact shall deem appropriate.

The undersigned hereby ratifies and confirms all that said attorney-in-fact and agents shall do or cause to be done by virtue hereof. The undersigned acknowledges that the foregoing attorney-in-fact, in serving in such capacity at the request of the undersigned, are not assuming, nor is the Company assuming, any of the undersigned's responsibilities to comply with Section 16 of the Securities Exchange Act of 1934 (as amended).

This Power of Attorney shall remain in full force and effect until the undersigned is no longer required to file Forms ID, 3, 4 and 5 with respect to the undersigned's holdings of and transactions in securities issued by the Company, unless earlier revoked by the undersigned in a signed writing delivered to the Company and the foregoing attorney-in-fact.

IN WITNESS WHEREOF, the undersigned has caused this Power of Attorney to be executed as of this 4th day of February, 2011.

Signature: /s/ Raymond J. Whitaker

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Raymond J. Whitaker