

Item 1.01 Entry into a Material Definitive Agreement.

On March 9, 2009, Microfluidics International Corporation (the "Company") executed an Offer Letter to Peter F. Byczko, C.P.A. (the "Letter") in conjunction with Mr. Byczko's appointment as Vice President of Finance and Chief Accounting Officer. Mr. Byczko executed the Letter on March 12, 2009. The information with respect to the Letter, set forth in Item 5.02(c) below, is hereby incorporated by reference into this Item 1.01.

A copy of the Press Release announcing the appointment is set forth as Exhibit 99.1 to this report.

Item 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers.

(c) On March 30, 2009 the Company announced the appointment of Mr. Byczko to serve as its Vice President of Finance and Chief Accounting Officer. Mr. Byczko's appointment of Vice President of Finance was effective March 12, 2009 and his appointment as Chief Accounting Officer is effective March 31, 2009.

Mr. Byczko was mostly recently the Director of Financial Operations and Development at Open Solutions, a leading provider of integrated computer systems and software for financial institutions around the world. Prior to Open Solutions, Mr. Byczko was a Senior Project Manager for Control Solutions International, a global provider of internal audit and risk management solutions, where he led a number of high-profile client engagements including CA, Hewlett-Packard and Bristol-Myers Squibb. Mr. Byczko has also served in senior management positions in the areas of financial reporting, acquisitions and treasury and practiced as a Certified Public Accountant with various national and regional accounting firms from 1989 to 1995. Mr. Byczko holds a B.S. in accounting and finance from Nichols College.

In conjunction with the appointment of Mr. Byczko as Vice President of Finance and Chief Accounting Officer, Mr. Byczko and the Company executed the Letter. Under the terms of the Letter, Mr. Byczko will receive a base salary of \$145,000 per year (the "Base Salary"). The Base Salary is eligible for annual review and adjustment based on comparable market data and Company and individual performance ("KRA's"). Mr. Byczko is eligible for a variable bonus of up to \$20,000, annualized, based upon achieving specific goals for the twelve month period. The variable bonus will be based on the Company's EBITDA for fiscal year 2009 and achievement of individual KRA's to be established.

The Letter states that the Company will grant Mr. Byczko an option to purchase 25,000 shares of the Company's common stock. This grant, which will vest at the rate of twenty five percent (25%) per year, is to be granted pursuant to, and subject to the terms and conditions of, the Company's 2006 Stock Plan. Additional yearly options can be granted to Mr. Byczko by the Company's Compensation Committee.

Mr. Byczko will be eligible to participate in the Company's employee benefits plans as they may exist from time to time, including health insurance (including medical, dental, and vision), long term disability, term life insurance, and a 401(k) plan. Mr. Byczko will accrue three weeks vacation during each of the first five years of his employment with the Company.

If Mr. Byczko is terminated by the Company either without cause, or due to a change in control, he will receive a severance package of (60) days. Mr. Byczko's receipt of the severance package is subject to Mr. Byczko signing a release statement that will include non-disclosure, non-disparagement and non-compete clauses.

Mr. Byczko, as a condition to his employment with the Company, signed a Patent and Trade Secrets Agreement.

The description of the Letter provided above is qualified in its entirety by reference to the full text of such Letter, a copy of which is filed as Exhibit 10.1 to this Report and incorporated by reference in this Item 5.02(c).

Item 9.01 Financial Statements and Exhibits.

(d) The following exhibits are hereby filed as part of this Current Report on Form 8-K:

Number	Exhibit
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10.1	Letter dated March 9, 2009 from Microfluidics International Corporation to Peter F. Byczko
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99.1	Press Release dated March 31, 2009
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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.

Dated: March 31, 2009

MICROFLUIDICS INTERNATIONAL CORPORATION

By: /s/ Michael C. Ferrara

Name: Michael C. Ferrara

Title: Chief Executive Officer and President

EXHIBIT INDEX

Exhibit Description
Number

10.1 Letter dated March 9, 2009 from Microfluidics International Corporation to Peter F. Byczko
99.1 Press Release dated March 31, 2009
