UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

FORM 8-K/A

CURRENT REPORT

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

Date of Report (Date of Earliest Event Reported):

April 20, 2011

Cytokinetics, Incorporated

(Exact name of registrant as specified in its charter)

Delaware

000-50633 (Commission

File Number)

(State or other jurisdiction of incorporation)

280 East Grand Avenue, South San Francisco, California

(Address of principal executive offices)

Registrant's telephone number, including area code:

Not Applicable

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:

[] 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))

94-3291317

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

94080

(Zip Code)

(650) 624 - 3000

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Item 5.03 Amendments to Articles of Incorporation or Bylaws; Change in Fiscal Year.

On April 18, 2011, pursuant to the Securities Purchase Agreement entered into between Cytokinetics, Incorporated (the "Company") and Deerfield Private Design Fund II, L.P., Deerfield Private Design International II, L.P., Deerfield Special Situations Fund, L.P., and Deerfield Special Situations Fund International Limited (collectively, "Deerfield") dated April 18, 2011, the Company filed a Certificate of Designation of Series A Convertible Preferred Stock (the "Series A Preferred Stock") with the Delaware Secretary of State classifying and designating the rights, preferences and privileges of the Series A Preferred Stock (the "Certificate of Designation"). The form of the Certificate of Designation was attached as Exhibit 4.5 to the Current Report on Form 8-K filed by the Company on April 18, 2011 (the "Original Report"). Please see the disclosure set forth under Item 1.01 of the Original Report, which is incorporated by reference into this Item 5.03.

This Amended Current Report on Form 8-K/A (the "Amended Report") amends and supplements the Original Report regarding the Company's entry into the Securities Purchase Agreement, Deerfield agreed to purchase (i) 5,300,000 shares of the Company's common stock and (ii) 8,070 shares of the Series A Preferred Stock. The Amended Report adds Item 5.03, which was not included in the Original Report as the event triggering disclosure under Item 5.03 had not yet occurred at the time the Original Report was filed. Items 1.01 and 9.01 of the Original Report are not amended.

SIGNATURES

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.

April 20, 2011

Cytokinetics, Incorporated

By: /s/ Sharon A. Barbari

Name: Sharon A. Barbari Title: Executive Vice President, Finance and Chief Financial Officer