

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT

*Under
The Securities Act of 1933*

CYTOKINETICS, INCORPORATED

(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

94-3291317
(I.R.S. Employer
Identification Number)

280 East Grand Avenue
South San Francisco, CA 94080
(Address of principal executive offices)

2004 EQUITY INCENTIVE PLAN, AS AMENDED

(Full title of the plan)

Robert I. Blum
President and Chief Executive Officer
Cytokinetics, Incorporated
280 East Grand Avenue
South San Francisco, CA 94080
(650) 624-3000

(Name, address, and telephone number, including area code, of agent for service)

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

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Maximum Amount to be Registered (1)	Proposed Maximum Offering Price Per Share (2)	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
2004 Equity Incentive Plan, as amended, Common Stock \$0.001 par value	2,300,000 shares	\$2.75	\$6,325,000	\$450.97

- (1) Represents an additional 2,300,000 shares of Common Stock available for issuance under the Company's 2004 Equity Incentive Plan, as amended, as approved by the Company's board of directors on March 22, 2010 and by the Company's stockholders at the Annual Meeting of Stockholders held on May 20, 2010 in South San Francisco, California. (2) Estimated in accordance with Rule 457(h) solely for the purpose of calculating the total registration fee. No options have been granted with respect to such shares. The computation is based upon the average of the high and low prices of the Common Stock as reported on The NASDAQ Global Market on July 30, 2010.
- (2) Estimated in accordance with Rule 457(h) solely for the purpose of calculating the total registration fee. No options have been granted with respect to such shares. The computation is based upon the average of the high and low prices of the Common Stock as reported on The NASDAQ Global Market on July 30, 2010.

**Statement Under General Instruction E
Registration of Additional Securities**

Unless as noted herein, the contents of Cytokinetics, Incorporated's (the "Company" or the "Registrant") Form S-8 Registration Statement (File No. 333-115146) are incorporated by reference into this Registration Statement.

PART II
INFORMATION REQUIRED IN REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents and information filed by the Company with the Securities and Exchange Commission are hereby incorporated by reference in this Registration Statement (excluding any portions of any Form 8-K that are not deemed “filed” pursuant to the General Instructions of Form 8-K):

- (1) The Company’s Annual Report filed on Form 10-K for the fiscal year ended December 31, 2009, filed on March 11, 2010.
- (2) The Company’s Definitive Proxy Statement on Schedule 14A, filed on March 31, 2010.
- (3) The Company’s Quarterly Report filed on Form 10-Q for the fiscal quarter ended March 31, 2010, filed on May 7, 2010.
- (4) The Company’s Quarterly Report filed on Form 10-Q for the fiscal quarter ended June 30, 2010, filed on August 4, 2010.
- (5) The Company’s Current Reports on Form 8-K dated January 11, 2010; January 25, 2010; January 27, 2010; February 3, 2010; February 23, 2010; February 26, 2010; March 10, 2010; March 16, 2010; March 19, 2010; April 28, 2010; April 29, 2010; May 18, 2010; May 24, 2010; May 27, 2010; July 22, 2010; July 26, 2010; and July 28, 2010.
- (6) The description of the Company’s Common Stock contained in the Company’s Registration Statement on Form 8-A filed pursuant to the Exchange Act, as amended, and as declared effective on April 29, 2004.

All documents filed by the Company pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934 on or after the date of this Registration Statement and prior to the filing of a post-effective amendment which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold shall be deemed to be incorporated by reference in this Registration Statement and to be part hereof from the date of filing of such documents.

Item 5. Interests of Named Experts and Counsel.

Certain members of Wilson Sonsini Goodrich & Rosati, Professional Corporation, and investment partnerships of which such persons are partners, beneficially own 20,474 shares of the Company’s Common Stock.

Item 8. Exhibits.

Exhibit Number	Description
4.1 (1)	Specimen Common Stock Certificate.
4.2 (2)	Warrant for the purchase of shares of common stock, dated October 28, 2005, issued by the Company to Kingsbridge Capital Limited.
4.3 (2)	Registration Rights Agreement, dated October 28, 2005, by and between the Company and Kingsbridge Capital Limited.
4.4 (3)	Registration Rights Agreement, dated as of December 29, 2006, by and between the Company and Amgen Inc.
4.5 (4)	Warrant for the purchase of shares of common stock, dated October 15, 2007, issued by the Company to Kingsbridge Capital Limited.
4.6 (4)	Registration Rights Agreement, dated October 15, 2007, by and between the Company and Kingsbridge Capital Limited.
5.1	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.
10.2 (5)	2004 Equity Incentive Plan, as amended.
23.1	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm.

Exhibit Number	Description
23.2	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (see Exhibit 5.1).
24.1	Power of Attorney (see signature page).

- (1) Incorporated by reference from the Company's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on May 9, 2007.
- (2) Incorporated by reference from the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on January 20, 2006.
- (3) Incorporated by reference from the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on January 3, 2007.
- (4) Incorporated by reference from the Company's Current Report on Form 8-K, filed with the Securities and Exchange Commission on October 15, 2007.
- (5) Incorporated by reference from the Company's Quarterly Report on Form 10-Q, filed with the Securities and Exchange Commission on August 4, 2010.

Item 9. Undertakings.

A. The undersigned Registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of the securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of a prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement;
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

Provided, however, that paragraphs (A)(1)(i) and (A)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the Registration Statement.
- (2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new Registration Statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

- B. The undersigned Registrant hereby undertakes, that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement shall be deemed to be a new Registration Statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- C. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.
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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant, Cytokinetics, Incorporated, a corporation organized and existing under the laws of the State of Delaware, certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of South San Francisco, State of California, on this 4th day of August 2010.

CYTOKINETICS, INCORPORATED

By: /s/ Robert I. Blum
Robert I. Blum
President and Chief Executive Officer
(Principal Executive Officer)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Robert I. Blum and Sharon A. Barbari, jointly and severally, as his or her attorneys-in-fact, with full power of substitution in each, for him or her in any and all capacities to sign any amendments to this Registration Statement on Form S-8, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his or her substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed below by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Robert I. Blum</u> Robert I. Blum	President, Chief Executive Officer and Director (Principal Executive Officer)	August 4, 2010
<u>/s/ Sharon A. Barbari</u> Sharon A. Barbari	Executive Vice President, Finance and Chief Financial Officer (Principal Financial and Accounting Officer)	August 4, 2010
<u>/s/ L. Patrick Gage, Ph.D.</u> L. Patrick Gage, Ph.D.	Chairman of the Board of Directors	August 4, 2010
<u>/s/ Stephen Dow</u> Stephen Dow	Director	August 4, 2010
<u>Denise M. Gilbert, Ph.D.</u>	Director	
<u>A. Grant Heidrich, III</u>	Director	
<u>/s/ John T. Henderson</u> John T. Henderson	Director	August 4, 2010
<u>/s/ Michael Schmertzler</u> Michael Schmertzler	Director	August 4, 2010
<u>/s/ James A. Spudich</u> James A. Spudich, Ph.D.	Director	August 4, 2010

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August 4, 2010

Cytokinetics, Incorporated
280 East Grand Avenue
South San Francisco, California 94080

Re: Registration Statement on Form S-8

Ladies and Gentlemen:

We have examined the Registration Statement on Form S-8 to be filed by you with the Securities and Exchange Commission on or about August 4, 2010 (the "Registration Statement") in connection with the registration under the Securities Act of 1933, as amended, of an aggregate of 2,300,000 shares of your Common Stock (the "Shares"), reserved for issuance pursuant to your 2004 Equity Incentive Plan, as amended (the "Plan"). As your legal counsel, we have reviewed the actions proposed to be taken by you in connection with the proposed issuance and sale of the Shares under the Plan.

It is our opinion that the Shares, when issued and sold in the manner referred to in the Plan, will be duly authorized, 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 March 11, 2010 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in Cytokinetics, Incorporated's Annual Report on Form 10-K for the year ended December 31, 2009.

/s/ PricewaterhouseCoopers LLP

San Jose, California

August 4, 2010