SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-1 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) 2834 (Primary Standard Industrial Classification Code Number) 94-3291317 (I.R.S. Employer Identification Number)

280 East Grand Avenue South San Francisco, California 94080 (650) 624-3000 (Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

> James H. Sabry, M.D. Ph.D. President and Chief Executive Officer Cytokinetics, Incorporated 280 East Grand Avenue South San Francisco, California 94080 (650) 624-3000

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

Copies to:

Michael J. O'Donnell, Esq. Martin J. Waters, Esq. David B. Crawford, Esq. Wilson Sonsini Goodrich & Rosati Professional Corporation 650 Page Mill Road Palo Alto, CA 94304 (650) 493-9300

Alan K. Mendelson, Esq. Patrick A. Pohlen, Esq. Latham & Watkins LLP 135 Commonwealth Drive Menlo Park, CA 94025 (650) 328-4600

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended (the "Securities Act"), check the following box.

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. \boxtimes 333-112261

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If delivery of the prospectus is expected to be made pursuant to Rule 434, check the following box.

CALCULATION OF REGISTRATION FEE

		Proposed
		Maximum
Title of Each Class	Aggregate	Amount of
of Securities to	Offering	Registration
be Registered	Price (1)	Fee (2)
Common Stock \$0.001 par value	\$17,250,000	\$2,185.58

(1) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457 under the Securities Act of 1933.

(2) The Registrant previously registered an aggregate \$86,250,000 worth of its Common Stock on a Registration Statement on Form S-1 (File No. 333-112261), for which a filing fee of \$6,977.63 was previously paid upon the filing of such Registration Statement.

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INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

This Registration Statement is being filed with the Securities and Exchange Commission (the "Commission") pursuant to Rule 462(b) under the Securities Act of 1933, as amended. This Registration Statement relates to the public offering of Common Stock of the Registrant contemplated by the Registration Statement on Form S-1, as amended (File No. 333-112261), originally filed by the Registrant on January 27, 2004 (the "Prior Registration Statement"), and is being filed for the sole purpose of registering additional securities of the same class as were included in the Prior Registration Statement. The contents of the Prior Registration Statement are hereby incorporated by reference.

CERTIFICATE

The Registrant hereby certifies to the Commission that (i) it has instructed its bank to pay the Commission the filing fee set forth on the cover page of this Registration Statement by a wire transfer of such amount to the Commission's account at Mellon Bank as soon as practicable (but no later than the close of business on April 29, 2004, (ii) it will not revoke such instructions, (iii) it has sufficient funds in the relevant account to cover the amount of such filing fee, and (iv) it will confirm receipt of such instructions by its bank during the bank's regular business hours no later than April 29, 2004.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant 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 April 29, 2004.

CYTOKINETICS, INCORPORATED

By: /s/ James H. Sabry, M.D., Ph.D.

James H. Sabry, M.D., Ph.D. President and Chief Executive Officer

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

Signature	Title	Date
/s/ James H. Sabry, M.D., Ph.D.	Director, President and Chief Executive Officer (Principal Executive Officer)	Amril 20, 2004
James H. Sabry, M.D., Ph.D.		April 29, 2004
/s/ Robert Blum	Chief Financial Officer and Senior Vice	
Robert Blum	President, Finance & Corporate Development (Principal Financial and Accounting Officer)	April 29, 2004
*		
Stephen Dow	Director	April 29, 2004
*		
Grant Heidrich, III	Director	April 29, 2004
*		
Charles Homcy, M.D.	Director	April 29, 2004
*		
William J. Rutter, Ph.D.	Director	April 29, 2004
*		
Michael Schmertzler	Director	April 29, 2004
/s/ James A. Spudich, Ph.D.		
James A. Spudich, Ph.D.	Director	April 29, 2004
*By: /s/ James H. Sabry, M.D., Ph.D. James H. Sabry, M.D., Ph.D. Attorney – in – Fact		

The Power of Attorney granted by each director was filed as an exhibit to the Prior Registration Statement.

EXHIBIT INDEX

Exhibit Number	Description
* 1.1	Form of Underwriting Agreement
5.1	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation
23.1	Consent of PricewaterhouseCoopers LLP, Independent Accountants
23.2	Consent of Counsel (included in Exhibit 5.1)
* 24.1	Power of Attorney

* Incorporated by reference from the Prior Registration Statement.

(WILSON SONSINI GOODRICH AND ROSATI LOGO)

650 Page Mill Road Palo Alto, CA 94304-1050 PHONE 650.493.9300 FAX 650.493.6811 WWW.WSGR.COM

April 29, 2004

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

RE: REGISTRATION STATEMENT ON FORM S-1

Ladies and Gentlemen:

We have examined the Registration Statement on Form S-1 filed with the Securities and Exchange Commission on April 29, 2004, as hereafter amended or supplemented (the "Registration Statement"), in connection with the registration under the Securities Act of 1933, as amended, of \$16,445,000 worth of shares of Common Stock (the "Shares") of Cytokinetics, Incorporated (the "Company"). The Shares are to be sold to the underwriters as described in such Registration Statement for sale to the public or issued to the Representatives of the underwriters. As your counsel in connection with this transaction, we have examined the proceedings proposed to be taken in connection with said sale and issuance of the Shares.

As counsel for the Company, we have examined originals or copies, certified or otherwise identified to our satisfaction, of such documents, corporate records, certificates of public officials and other instruments as we have deemed necessary for the purposes of rendering this opinion. In our examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals and the conformity with the originals of all documents submitted to us as copies.

Based on the foregoing, it is our opinion that the Shares, when issued and sold in the manner described in the Registration Statement and in accordance with the resolutions adopted by the Board of Directors of the Company, will be legally and 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, including the Prospectus constituting a part thereof, and any amendments thereto.

> Sincerely, /s/ Wilson Sonsini Goodrich & Rosati WILSON SONSINI GOODRICH & ROSATI Professional Corporation

PALO ALTO AUSTIN KIRKLAND NEW YORK RESTON SALT LAKE CITY SAN FRANCISCO

We hereby consent to the incorporation by reference in this Registration Statement on Form S-1 of our report dated March 10, 2004, except for Note 13 as to which the date is April 26, 2004, relating to the financial statements and our report dated March 10, 2004 relating to the financial statement schedule of Cytokinetics, Incorporated, which appear in the Company's Registration Statement on Form S-1 (No. 333-112261). We also consent to the reference to us under the heading "Experts" in the Registration Statement on Form S-1 (No. 333-112261).

/s/ PricewaterhouseCoopers LLP

San Jose, California April 28, 2004