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

FORM 8-K

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 22, 2009

Cytokinetics, Incorporated

(Exact name of registrant as specified in its charter)

Delaware	000-50633	94-3291317
(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)
280 East Grand Avenue, South San Francisco, California		94080
(Address of principal executive offices)		(Zip Code)

Registrant's telephone number, including area code: (650) 624 - 3000

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))

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Item 8.01 Other Events.

On April 22, 2009, Cytokinetics, Incorporated issued a press release announcing that two abstracts containing non-clinical data relating to GSK-923295, a novel inhibitor of centromere-associated protein E (CENP-E), were presented at the 2009 American Association of Cancer Research (AACR) Annual Meeting held from April 18 - 22, 2009. One poster detailed findings of a pharmacokinetic assessment of GSK-923295 and the other poster detailed pre-clinical assessments of GSK-923295 in breast cancer cells. A copy of the press release is filed as Exhibit 99.1 to this Current Report on Form 8-K, and is incorporated herein by reference.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

The following Exhibit is filed as part of this Current Report on Form 8-K:

Exhibit No. Description

99.1 Press Release, dated April 22, 2009.

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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.

Cytokinetics, Incorporated

April 22, 2009

By: /s/ Sharon A. Barbari

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

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Exhibit No.	Description
99.1	Press release, dated April 22, 2009

Contact:

Christopher S. Keenan
Director, Investor & Media Relations
(650) 624-3000

CYTOKINETICS ANNOUNCES NON-CLINICAL DATA RELATING TO GSK-923295 PRESENTED AT THE 2009 AMERICAN ASSOCIATION OF CANCER RESEARCH ANNUAL MEETING

Results Support Ongoing Phase I Clinical Trial of Novel CENP-E Inhibitor

South San Francisco, CA, April 22, 2009 – Cytokinetics, Incorporated (Nasdaq: CYTK) announced today that two abstracts containing non-clinical data relating to GSK-923295, a novel inhibitor of centromere-associated protein E (CENP-E), were presented at the 2009 American Association of Cancer Research (AACR) Annual Meeting held from April 18 — 22, 2009 in Denver, CO. One poster detailed findings of a pharmacokinetic assessment of GSK-923295 and the other poster detailed pre-clinical assessments of GSK-923295 in breast cancer cells.

Poster Presentations at the 2009 AACR Annual Meeting:

The poster titled, "Exploratory Methods for Assessment of Therapeutic Exposures and Schedules of GSK923295A, a Novel Mitotic Checkpoint Inhibitor," was presented on Wednesday, April 22, 2009. The objective of this study was to establish relationships between preclinical exposure and efficacy of GSK-923295 and to translate these relationships into potential doses and schedules for clinical use. The authors concluded that *in vitro* exposures of GSK-923295 were predictive of *in vivo* efficacy in a murine xenograft model. In addition, GSK-923295 accumulated in xenograft tumor tissue, which may enhance anti-tumor activity in this species. This analysis suggested that clinical doses above 200 mg/m^2 may be required to observe potential GSK-923295 efficacy in humans and, depending on emerging safety data, more frequent dosing using a 21-day cycle may be a potentially therapeutic clinical schedule. More specifically, the most efficacious dose schedule in mice (qdx3 every week) would translate to dosing approximately days 1, 4, and 7 every 21 days in man.

The poster titled, "Small Molecular Inhibitor of the Centromere-Associated Protein E (CENP-E), GSK923295A Inhibits Cell Growth in Breast Cancer Cells," was presented on Wednesday, April 22, 2009. This study was designed to measure cellular responses to GSK-923295 in a panel of 50 well-characterized breast cancer cell lines. The authors concluded that GSK-923295 inhibits cell growth and induces cell apoptosis in sensitive breast cancer cells. In addition, basal B sub-type breast cancer cell lines are more sensitive than luminal sub-type or non-transformed human mammary epithelial cultures. Also, the authors concluded that several signaling pathways, specifically PI3K/AKT signaling, Ephrin receptor signaling, PTEN signaling and apoptosis signaling pathways, are involved in cellular response of GSK-923295 in breast cancer cells ($p < 0.01$).

Development Status of GSK-923295 and Background on CENP-E

GSK-923295 is a small-molecule inhibitor of centromere-associated protein E (CENP-E), and the third novel drug candidate to arise from Cytokinetics' broad strategic alliance with GlaxoSmithKline (GSK). In August 2007, GSK initiated a first-time-in-humans Phase I clinical trial of GSK-923295. This Phase I clinical trial is an open-label, non-randomized, dose-finding trial designed to investigate the safety, tolerability, pharmacodynamics and pharmacokinetic profile of GSK-923295 in patients with advanced, refractory solid tumors. As reported at the 2008 EORTC-NCI-AACR International Symposium, to date, the maximum-tolerated dose in this Phase I clinical trial has not been reached and the plasma pharmacokinetics of GSK-923295 appear dose-proportional and exhibit low intra-patient and modest inter-patient variability.

CENP-E plays an essential role in chromosome movement during early mitosis and integrates mitotic spindle mechanics with regulators of the mitotic checkpoint; hence CENP-E is directly involved in coupling the mechanics of mitosis with the mitotic checkpoint signaling machinery, regulating cell-cycle transition from metaphase to anaphase. CENP-E is also essential for prometaphase chromosome movements that contribute to metaphase chromosome alignment. These processes are essential to cell proliferation. CENP-E is expressed exclusively in proliferating cells and is abundant during mitosis; it is absent from non-proliferating cells, including neurons. Inhibition of CENP-E induces cell cycle arrest in mitosis with bipolar mitotic spindles and misaligned chromosomes leading to subsequent apoptosis. GSK-923295 is the first drug candidate to enter human clinical trials that specifically targets CENP-E.

About Cytokinetics

Cytokinetics is a clinical-stage biopharmaceutical company focused on the discovery and development of novel small molecule therapeutics that modulate muscle function for the potential treatment of serious diseases and medical conditions. Cytokinetics' cardiac muscle contractility program is focused on cardiac muscle myosin, a motor protein essential to cardiac muscle contraction. Cytokinetics' lead compound from this program, CK-1827452, a novel small molecule cardiac muscle myosin activator, is in Phase II clinical trials for the treatment of heart failure. Amgen Inc. has obtained an option for an exclusive license to develop and commercialize CK-1827452, subject to Cytokinetics' development and commercialization participation rights. In April 2008, Cytokinetics announced the selection of a potential drug candidate, CK-2017357, directed towards skeletal muscle contractility which may be developed as a potential treatment for diseases and medical conditions associated with skeletal muscle weakness. In January 2009, Cytokinetics announced the selection of a potential drug candidate directed towards smooth muscle contractility which may be developed as a potential treatment for diseases associated with pulmonary arterial hypertension and bronchoconstriction.

Cytokinetics' cancer program is focused on mitotic kinesins, a family of motor proteins essential to cell division. Cytokinetics is developing two drug candidates that have arisen from this program, *ispinesib* and SB-743921, each an inhibitor of kinesin spindle protein. In addition, Cytokinetics and GlaxoSmithKline are conducting research and development activities focused on GSK-923295, an inhibitor of centromere-associated protein E.

All of these drug candidates and potential drug candidates have arisen from Cytokinetics' research activities and are directed towards the cytoskeleton. The cytoskeleton is a complex biological infrastructure that plays a fundamental role within every human cell. Additional information about Cytokinetics can be obtained at www.cytokinetics.com.

This press release contains forward-looking statements for purposes of the Private Securities Litigation Reform Act of 1995 (the "Act"). Cytokinetics disclaims any intent or obligation to update these forward-looking statements, and claims the protection of the Act's safe harbor for forward-looking statements. Examples of such statements include, but are not limited to, statements relating to Cytokinetics' and its partners' research and development activities, including the design and conduct of clinical trials; the results of non-clinical research studies and clinical trials relating to GSK-923295 and the significance of such results; and the properties and potential benefits of GSK-923295 and Cytokinetics' other drug candidates and potential drug candidates. Such statements are based on management's current expectations, but actual results may differ materially due to various risks and uncertainties, including, but not limited to, potential difficulties or delays in the development, testing, regulatory approvals for trial commencement, progression or product sale or manufacturing, or production of Cytokinetics' drug candidates that could slow or prevent clinical development or product

approval, including risks that current and past results of clinical trials or preclinical studies may not be indicative of future clinical trials results, patient enrollment for or conduct of clinical trials may be difficult or delayed, Cytokinetics' drug candidates may have adverse side effects or inadequate therapeutic efficacy, the U.S. Food and Drug Administration or foreign regulatory agencies may delay or limit Cytokinetics' or its partners' ability to conduct clinical trials, and Cytokinetics may be unable to obtain or maintain patent or trade secret protection for its intellectual property; GSK may decide to postpone or discontinue development activities for GSK-923295; Cytokinetics may incur unanticipated research and development and other costs or be unable to obtain additional financing necessary to conduct development of its products; standards of care may change rendering Cytokinetics' drug candidates obsolete; others may introduce products or alternative therapies for the treatment of indications Cytokinetics' drug candidates and potential drug candidates may target; and risks and uncertainties relating to the timing and receipt of payments from its partners, including option fees, milestones and royalties on future potential product sales under Cytokinetics' collaboration agreements with such partners. For further information regarding these and other risks related to Cytokinetics' business, investors should consult Cytokinetics' filings with the Securities and Exchange Commission

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