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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):

December 7, 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 December 6, 2009, Cytokinetics, Incorporated issued a press release announcing that an abstract summarizing clinical trial data regarding SB-743921 was presented at the 2009 American Society of Hematology (ASH) Annual Meeting and Exposition held December 5-8, 2009 at the Ernest N. Morial Convention Center in New Orleans, Louisiana. SB-743921 is a novel, small molecule inhibitor of kinesin spindle protein (KSP), a mitotic kinesin essential for proper cell division. 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 December 6, 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

December 7, 2009

By: /s/ Sharon Barbari

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

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Exhibit Index

<u>Exhibit No.</u>	<u>Description</u>
99.1	Press release, dated December 6, 2009

Contacts:

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

**CYTOKINETICS ANNOUNCES CLINICAL TRIAL DATA REGARDING SB-743921 PRESENTED  
AT THE 2009 AMERICAN SOCIETY OF HEMATOLOGY ANNUAL MEETING AND EXPOSITION**

**South San Francisco, CA, December 6, 2009** – Cytokinetics, Incorporated (Nasdaq: CYTK) announced today that a poster summarizing clinical trial data regarding SB-743921 was presented at the 2009 American Society of Hematology (ASH) Annual Meeting and Exposition held December 5-8, 2009 at the Ernest N. Morial Convention Center in New Orleans, Louisiana. SB-743921 is a novel, small molecule inhibitor of kinesin spindle protein (KSP), a mitotic kinesin essential for proper cell division.

“We are pleased by the results emerging from this Phase I/II clinical trial, especially in patients with Hodgkin Lymphoma,” stated Andrew A. Wolff, MD, FACC, Cytokinetics’ Senior Vice President of Clinical Research and Development and Chief Medical Officer. “The clinical activity as well as the favorable tolerability profile of SB-743921 that have been observed in the Phase I portion of this clinical trial strengthen our belief that this novel drug candidate warrants further development in patients with lymphomas and we look forward to advancing this program under a potential partnership.”

**Poster Presentation at the 2009 American Society of Hematology (ASH) Annual Meeting and Exposition:**

The poster titled, “A Phase I/II Trial of the Kinesin Spindle Protein (KSP) Inhibitor SB-743921 Dosed Q14D without and with Prophylactic G-CSF in Non-Hodgkin (NHL) or Hodgkin Lymphoma (HL)” was presented on Saturday, December 5, 2009 by Owen A. O’Connor, M.D., Ph.D., Deputy Director of Clinical Research and Cancer Treatment at The Cancer Institute and Chief of the new Division of Hematologic Malignancies and Medical Oncology in the department of Medicine, New York University Langone Medical Center, New York, NY. This poster summarized the Phase I portion of a multi-center, international Phase I/II open-label, non-randomized dose-finding clinical trial evaluating SB-743921 in patients with non-Hodgkin or Hodgkin Lymphoma who have progressed or relapsed on standard therapy. The primary objectives of this clinical trial were to determine the dose-limiting toxicities (DLTs) and the maximum-tolerated dose (MTD) of SB-743921 administered as a 1-hour infusion on days 1 and 15 of a 28-day cycle, first without and then with prophylactic granulopoietic factor support (i.e., granulocyte colony-stimulating factor or G-CSF) and to assess the safety and tolerability of SB-743921 on this schedule. The secondary objectives were to characterize the pharmacokinetics of SB-743921 administered on this schedule and to evaluate the effect of SB-743921 on biomarkers of cell proliferation in patients with accessible tumors.

The authors concluded that the MTD of SB-743921 given on this schedule with G-CSF support was 9 mg/m<sup>2</sup>. The main DLT of SB-743921 on this schedule with G-CSF support was thrombocytopenia and neutropenia. The authors noted that a greater dose-density was achieved with SB-743921 given on a once every two week schedule without prophylactic G-CSF (i.e., 6 mg/m<sup>2</sup> = 0.43 mg/m<sup>2</sup>/day) than a once every 21 days schedule (i.e., 4 mg/m<sup>2</sup> = 0.19 mg/m<sup>2</sup>/day). Dose-density with G-CSF on the once every two week schedule was equal to 0.64 mg/m<sup>2</sup>. Grade 3 or 4 toxicities other than myelosuppression were infrequent; in particular, there was no evidence of neuropathy or alopecia greater than Grade 1. An efficacy signal was observed at doses at or above 6 mg/m<sup>2</sup> in Hodgkin Lymphoma patients. Of the 55 patients evaluable for efficacy, four partial responses (three patients with Hodgkin Lymphoma and one with indolent non-Hodgkin Lymphoma) were observed. The duration of the response in the patients with a partial response was between 8 weeks and 28 weeks. Best response as a percentage reduction in the sum of the product of diameters for the dominant lesion ranged from 53% to 71%. The small numbers of patients in each of the non-Hodgkin Lymphoma subtypes limited the assessment of activity in those populations. The authors concluded that further evaluation of SB-743921 in selected Hodgkin Lymphoma populations as a single agent, and in combination with other promising drug candidates, is warranted.

**About Cytokinetics**

Cytokinetics is a clinical-stage biopharmaceutical company focused on the discovery and development of small molecule therapeutics that modulate muscle function for the potential treatment of serious diseases and medical conditions. Cytokinetics’ lead drug candidate from its cardiac muscle contractility program, *omecamtiv mecarbil* (formerly CK-1827452), is in Phase II clinical development for the potential treatment of heart failure. Amgen Inc. holds an exclusive license worldwide (excluding Japan) to develop and commercialize *omecamtiv mecarbil* and related compounds, subject to Cytokinetics’ specified development and commercialization participation rights. Cytokinetics is independently developing CK-2017357, a skeletal muscle activator, as a potential treatment for diseases and conditions associated with aging, muscle wasting or neuromuscular dysfunction. CK-2017357 is in Phase I clinical development. Cytokinetics is also conducting non-clinical development of compounds that inhibit smooth muscle contractility and which may be useful as potential treatments for diseases and conditions such as systemic hypertension, pulmonary arterial hypertension or bronchoconstriction. In addition, prior Cytokinetics’ research generated three anti-cancer drug candidates in Phase I clinical development: *ispinesib*, SB-743921 and GSK-923295. Cytokinetics is seeking a partner for *ispinesib* and SB-743921. GSK-923295 is being developed by GlaxoSmithKline in collaboration with Cytokinetics. 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](http://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 clinical trial results for SB-743921, the significance and utility of such results, and the advancement of SB-743921 under a potential partnership, and the properties and potential benefits of SB-743921 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; Amgen’s and GlaxoSmithKline’s decisions with respect to the design, initiation, conduct, timing and continuation of development activities for *omecamtiv mecarbil* and GSK-923295, respectively; Cytokinetics may incur unanticipated research and development and other costs or be unable to obtain additional financing necessary to conduct development of its products; Cytokinetics may be unable to enter into future collaboration agreements for its drug candidates and programs on acceptable terms, if at all; 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 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.*