
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):

July 22, 2010

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 July 22, 2010, Cytokinetics, Incorporated issued a press release announcing that a poster summarizing data from a Phase I clinical trial of CK-2017357, a novel fast skeletal muscle troponin activator, was presented in the Late Breaking News Poster Presentation Session at the XII International Congress on Neuromuscular Diseases, which was held July 17-22, 2010 at the Centro Congressi, Università degli Studi di Napoli Federico II, in Naples, Italy.

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 the Current Report on Form 8K:

Exhibit No. Description

99.1 Press Release, dated July 22, 2010.

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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.

July 22, 2010

Cytokinetics, Incorporated

By: /s/ Sharon A. Barbari

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

Exhibit Index

| <u>Exhibit No.</u> | <u>Description</u> |
|--------------------|------------------------------------|
| 99.1 | Press release, dated July 22, 2010 |

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

**CYTOKINETICS ANNOUNCES PRESENTATION OF PHASE I DATA RELATING TO CK-2017357
AT THE XII INTERNATIONAL CONGRESS ON NEUROMUSCULAR DISEASES**

***Results Demonstrate that Novel Mechanism of Company's Fast Skeletal Muscle Troponin Activator
Translates to
Potentially Clinically Relevant Effects on Muscle Performance in Humans***

South San Francisco, CA, July 22, 2010 – Cytokinetics, Incorporated (Nasdaq: CYTK) announced today that a poster summarizing data from a Phase I clinical trial of CK-2017357, a novel fast skeletal muscle troponin activator, was presented in the Late Breaking News Poster Presentation Session at the XII International Congress on Neuromuscular Diseases, which was held July 17-22, 2010 at the Centro Congressi, Università degli Studi di Napoli Federico II, in Naples, Italy.

“We are pleased to share the encouraging results from this first-time-in-humans clinical trial with the neuromuscular disease community,” stated Andrew A. Wolff, MD, FACC, Cytokinetics’ Senior Vice President of Clinical Research and Development and Chief Medical Officer. “These data validate the mechanism of CK-2017357 and serve to translate the novel mechanism into potentially clinically relevant pharmacodynamic effects in healthy volunteers. In addition, they support the advancement of our novel drug candidate in our two ongoing Phase IIa, hypothesis-generating Evidence of Effect clinical trials, one enrolling patients with amyotrophic lateral sclerosis and the other enrolling patients with symptoms of claudication. We look forward to learning whether the pharmacodynamic effects observed in the healthy volunteers in this study may be recapitulated in patients suffering from neuromuscular dysfunction and other forms of muscle impairment.”

Poster Presentation at the XII International Congress on Neuromuscular Diseases

The poster titled “CK-2017357, a Novel Activator of Fast Skeletal Muscle, Increases Isometric Force Evoked by Electrical Stimulation of the Anterior Tibialis Muscle in Healthy Male Subjects” was presented yesterday by Andrew A. Wolff, MD, FACC of Cytokinetics, Inc. This poster presented data from Part B of Cytokinetics’ first-time-in-humans Phase I clinical trial of CK-2017357. The objective of Part B of this trial was to determine the change in the force-frequency profile of the tibialis anterior muscle and its relationship to the CK-2017357 plasma concentration after oral administration of CK-2017357 to healthy male volunteers. The authors concluded that CK-2017357 significantly increased the mean placebo-corrected normalized peak force produced in response to transcutaneous electrical stimulation of the tibialis anterior muscles of healthy volunteers in a dose-, concentration-, and frequency-dependent manner. CK-2017357 was generally well-tolerated; all adverse events were mild except for one incidence of pharyngitis of moderate severity, and no serious adverse events were reported. The authors concluded that the mechanism of action of CK-2017357, as described in pre-clinical models, can be translated into statistically significant and potentially clinically important increases in skeletal muscle performance in healthy volunteers. These results support further evaluation of CK-2017357 in neuromuscular diseases, such as amyotrophic lateral sclerosis (ALS) and other diseases or conditions associated with muscle weakness or fatigue, such as claudication associated with peripheral artery disease.

Development Status of CK-2017357

Cytokinetics recently announced data from two Phase I clinical trials evaluating CK-2017357. The first trial was a two-part, single-dose trial. Part A of this trial was designed to assess the safety, tolerability and pharmacokinetic profile of increasing single doses of this drug candidate in healthy male volunteers and to determine its maximum-tolerated dose and associated plasma concentrations. The maximum tolerated single dose of CK-2017357 in Part A of the trial was 2000 mg. Part B of this trial was designed to assess the pharmacodynamic effects, versus placebo, of CK-2017357 on skeletal muscle function after single oral doses of 250, 500 and 1000 mg, and to assess the relationship of the effects observed to the associated plasma concentrations of CK-2017357, also in healthy male volunteers. In Part B, CK-2017357 produced concentration-dependent, statistically significant increases versus placebo in the force developed by the tibialis anterior muscle. Further results from Part B of this trial are described above. In both Part A and Part B, CK-2017357 was well-tolerated and no serious adverse events were reported.

The second trial was a multiple-dose, Phase I clinical trial of CK-2017357 designed to investigate the safety, tolerability and pharmacokinetic profile of CK-2017357 after multiple oral doses to steady state in healthy male volunteers. This trial evaluated doses that produced plasma concentrations in the range associated with pharmacodynamic activity in Part B of the single-dose Phase I clinical trial. At steady state, both the maximum plasma concentration and the area under the CK-2017357 plasma concentration versus time curve from before dosing until 24 hours after dosing were generally dose-proportional. In general, systemic exposure to CK-2017357 in this trial was high and inter-subject variability was low. In addition, these multiple-dose regimens of CK-2017357 were well-tolerated, and no serious adverse events were reported. The company believes that the results of these trials support progression into Phase IIa “Evidence of Effect” (EoE) clinical trials in patients amyotrophic lateral sclerosis (ALS) and in patients with symptoms of claudication associated with peripheral artery disease.

CK-2017357 is currently the subject of a Phase IIa clinical trials program and has been granted orphan-drug designation by the United States Food and Drug Administration for the potential treatment of ALS. Cytokinetics is currently conducting two Phase IIa EoE clinical trials: one in patients with ALS and one in patients with claudication associated with peripheral artery disease.

Background on Cytokinetics’ Skeletal Muscle Contractility Program

CK-2017357, a fast skeletal muscle troponin activator, is the lead drug candidate from the company’s skeletal muscle contractility program. CK-2017357 selectively activates the fast skeletal troponin complex by increasing its sensitivity to calcium, leading to an increase in skeletal muscle force. This mechanism of action has demonstrated encouraging pharmacological activity in preclinical models that may relate to the potential treatment of diseases associated with aging, muscle wasting or neuromuscular dysfunction. Skeletal muscle contractility is driven by the sarcomere, the fundamental unit of skeletal muscle contraction. It is a highly ordered cytoskeletal structure composed of skeletal muscle myosin, the cytoskeletal motor that is directly responsible for converting chemical energy into mechanical force, as well as actin, and a set of regulatory proteins, troponins and tropomyosin, which make the actin-myosin interaction dependent on changes in intracellular calcium levels. Cytokinetics’ skeletal muscle contractility program is focused to the discovery and development of small molecule skeletal sarcomere activators and leverages Cytokinetics’ expertise developed in its ongoing discovery and development of cardiac sarcomere activators, including the cardiac myosin activator *omecamtiv mecarbil*, now in clinical development as a potential treatment for heart failure. Skeletal sarcomere activators have demonstrated pharmacological activity in preclinical models that may lead to new therapeutic options for diseases associated with aging, muscle wasting and neuromuscular dysfunction. The clinical effects of muscle wasting, fatigue and loss of

mobility can range from decreased quality of life to, in some instances, life-threatening complications. By directly improving skeletal muscle function, a small molecule activator of the skeletal sarcomere may potentially enhance physical performance and quality of life in aging patients.

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 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 currently the subject of a Phase IIa clinical trials program and has been granted orphan-drug designation by the United States Food and Drug Administration (FDA) for the potential treatment of amyotrophic lateral sclerosis. 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 or bronchoconstriction. In addition, prior Cytokinetics research generated three anti-cancer drug candidates that have progressed into clinical development: *ispinesib*, SB-743921 and GSK-923295. All of these drug candidates and potential drug candidates are 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 conduct, design and results of clinical trials for CK-2017357, the significance and utility of clinical trial results for CK-2017357, and the properties and potential benefits of CK-2017357 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 decisions with respect to the design, initiation, conduct, timing and continuation of development activities for omeclamtiv mecarbil; 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; competitive products or alternative therapies may be developed by others 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.

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