Cytokinetics Announces Data From Phase I Multiple Dose Clinical Trial of CK-2017357

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Results From Phase I Clinical Trials Program Support Movement Into Phase II

SOUTH SAN FRANCISCO, CA, Jan 27, 2010 (MARKETWIRE via COMTEX) -- Cytokinetics, Incorporated (NASDAQ: CYTK) announced results from its Phase I, randomized, double-blind, placebo-controlled, multiple-dose clinical trial of oral CK-2017357. The primary objective of this clinical trial was to determine the safety and tolerability of CK-2017357 after multiple oral doses to steady state in healthy male volunteers. The secondary objective was to evaluate the pharmacokinetic profile of CK-2017357 after multiple oral doses to steady state.

In this Phase I clinical trial, two cohorts, each comprised of 12 healthy males, were randomized 2:1 to receive daily morning doses of oral CK-2017357 versus matching placebo for seven days. The CK-2017357 dose was 250 mg in Cohort 1 and 375 mg in Cohort 2. At steady state, which was achieved at both dose levels by the sixth day of treatment, both the maximum CK-2017357 plasma concentration (Cmax) and the area under the CK-2017357 plasma concentration versus time curve from dosing until 24 hours after dosing (AUC24h) were generally dose proportional and exhibited only modest accumulation compared to the values measured after the first dose. 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 there were no serious adverse events.

"These results, in combination with the single dose Phase I data presented earlier this month, are encouraging because they demonstrate that with continued daily oral dosing, CK-2017357 plasma concentrations can be achieved and maintained in a range that has been shown to increase skeletal muscle function in humans," stated Andrew A. Wolff, MD, FACC, Cytokinetics' Senior Vice President of Clinical Research and Development and Chief Medical Officer. "The low inter-subject variability and modest accumulation we observed during multiple dosing in healthy volunteers in this study suggests that during chronic outpatient administration, plasma concentrations of CK-2017357 may be unlikely to exceed those that have been well-tolerated by healthy volunteers after single doses up to 2000 mg. We believe these data support movement into Phase II Evidence of Effect trials in patients with neuromuscular diseases and other conditions that may limit mobility."

Background on CK-2017357 and Skeletal Muscle Activators

CK-2017357 is a fast skeletal muscle troponin activator and is the lead drug candidate from the company's skeletal sarcomere activator 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, 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 Phase II clinical development as a potential treatment for heart failure. Skeletal sarcomere activators have demonstrated pharmacological activity 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.

Market Potential for CK-2017357 and Skeletal Muscle Activators

Several conditions that could benefit from a skeletal muscle activator are grievous and severe. Limited options exist for the treatment of amyotrophic lateral sclerosis (ALS), which afflicts between 20,000 and 30,000 people in the United States. ALS is associated with a 3-year mortality rate of 50%, largely because of respiratory failure due to diminished strength in the skeletal muscles responsible for breathing. In addition, myasthenia gravis, a chronic disease characterized by a defect in the transmission of nerve impulses to skeletal muscles, afflicts approximately 60,000 patients in the United States. Patients with disorders and conditions with a higher prevalence could also benefit from enhanced skeletal muscle functional performance, including patients with cachexia, claudication and sarcopenia. Cachexia, a syndrome characterized by a drastic and unintentional loss of body mass, is estimated to be prevalent in 15%-35% of heart failure patients and in approximately 50% of cancer patients. Claudication, which usually refers to cramping pains in the legs caused by peripheral arterial disease, is a condition that impacts between 1 million and 3 million people in the United States each year. Sarcopenia, which is an age-related loss of muscle mass, strength, and function, is estimated to impact the lives of over 25-30% of the U.S. population over the age of 65 and can result in additional injuries and medical conditions due to limited mobility.

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. 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. 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 initiation, conduct, design and results of clinical trials; the significance and utility of results of clinical trials with CK-2017357, including the potential significance of the results of Phase I clinical trial results in predicting results in patients; and the properties and potential benefits of Cytokinetics' drug candidates and potential drug candidates, such as CK-2017357. 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 omecamtiv 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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