Cytokinetics Announces Orphan Drug Designation Granted to CK-2017357 for the Treatment of Amyotrophic Lateral Sclerosis

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SOUTH SAN FRANCISCO, CA, Mar 10, 2010 (MARKETWIRE via COMTEX) -- Cytokinetics, Incorporated (NASDAQ: CYTK) announced today that its fast skeletal muscle troponin activator, CK-2017357, has been granted orphan-drug designation by the U.S. Food and Drug Administration (FDA) for the potential treatment of amyotrophic lateral sclerosis (ALS), also commonly known as Lou Gehrig's Disease. CK-2017357 is the lead drug candidate that has emerged from the company's skeletal sarcomere activator program. Cytokinetics plans to initiate a Phase II Evidence of Effect clinical trial for CK-2017357 in ALS patients in the first half of 2010.

Orphan-drug designation is granted by the FDA Office of Orphan Drug Products Development to novel drugs or biologics that may treat a condition affecting less than 200,000 persons in the United States or occurs in more than 200,000 persons and for which there is no reasonable expectation that the cost of development and distribution of the drug will be recovered. The designation offers a number of potential incentives, which may include a seven-year period of U.S. marketing exclusivity from the date of marketing authorization, funding for clinical studies, study design assistance, waiver of FDA user fees, and tax credits for clinical research.

"We are pleased that the FDA has granted orphan drug status to CK-2017357 for the potential treatment of ALS. This designation indicates their recognition that this novel drug candidate may address significant unmet medical needs in patients suffering from this grievous and uniformly fatal disease," said Andrew A. Wolff, M.D, Senior Vice President and Chief Medical Officer of Cytokinetics. "With the planned initiation of our Phase II Evidence of Effect trial in patients with ALS, we look forward to continuing to work closely with regulators, as well as with our clinical investigators and key opinion leaders in the field of ALS, to advance this promising drug candidate through clinical development."

Background on Amyotrophic Lateral Sclerosis

Amyotrophic lateral sclerosis (ALS) is a progressive, neurodegenerative disease that afflicts 20,000 to 30,000 people in the United States. Approximately 5,600 new cases of ALS are diagnosed each year. The average life expectancy of an ALS patient is approximately three to five years and only 10% of patients survive for more than 10 years. Death is usually due to respiratory failure because of diminished strength in the skeletal muscles responsible for breathing. Few treatment options exist for these patients, resulting in a high unmet need for new therapeutic options to address the symptoms and modify the disease progression of this grievous illness.

Development Status of CK-2017357

Cytokinetics recently announced data from two Phase I clinical trials evaluating CK-2017357. The first trial is a two-part, single-dose, Phase I clinical trial of CK-2017357. Part A of this trial is designed to assess the safety, tolerability and pharmacokinetic profile of increasing single doses of this drug candidate in healthy volunteers and to determine its maximum-tolerated dose and plasma concentration. To date, single doses up to 2000 mg have been administered without intolerable adverse events being observed. Part B of this trial was designed to assess the pharmacodynamic effects 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 volunteers. In Part B, CK-2017357 produced concentration-dependent, statistically significant increases versus placebo in the force developed by the tibialis anterior, the muscle evaluated in Part B of this trial. 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. The trial evaluated doses that produced plasma concentrations in the range associated with pharmacodynamic activity in Part B of the single-dose Phase I study. 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 these results, in combination with the single-dose Phase I clinical trial data, support movement into planned Phase II Evidence of Effect clinical trials in patients with neuromuscular diseases and other conditions that may limit mobility, specifically amyotrophic lateral sclerosis (ALS) and claudication.

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 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 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 has been the subject of Phase I clinical trials. 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 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 the results of clinical trials and preclinical studies; the potential benefits of orphan drug designation;, 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 FDA or foreign regulatory agencies may delay or limit Cytokinetics' or its partners' ability to conduct clinical trials, the FDA may not grant CK-2017357 orphan drug market exclusivity even if it is approved for marketing, 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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