



Cytokinetics Announces First Publication on Smooth Muscle Myosin Inhibitors in The Journal of Pharmacology and Experimental Therapeutics

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Findings Demonstrate the Potential Therapeutic Application of Inhibitors of Smooth Muscle Myosin for the Treatment of Hypertension

SOUTH SAN FRANCISCO, CA, Sep 27, 2011 (MARKETWIRE via COMTEX) -- Cytokinetics, Incorporated (NASDAQ: CYTK) announced the publication of preclinical research relating to its program directed to the inhibition of smooth muscle myosin as a novel therapeutic approach for the potential treatment of hypertension in the October 2011 issue of The Journal of Pharmacology and Experimental Therapeutics. This publication reveals, for the first time in a peer-reviewed journal, the role of inhibitors of smooth muscle myosin in preclinical models of hypertension.

"We are excited to have Cytokinetics' novel scientific research relating to inhibitors of smooth muscle myosin published in this prestigious journal," stated Fady I. Malik, MD, PhD, FACC, Cytokinetics' Vice President of Biology and Therapeutics. "This publication summarizes pioneering work performed by our research team to leverage our expertise in the biology of muscle function and establishes this novel mechanism as a potential approach to treating patients with hypertension."

The publication titled "Inhibition of Smooth Muscle Myosin as a Novel Therapeutic Target for Hypertension" discusses the potential application for therapies that directly inhibit smooth muscle myosin based on work in preclinical models of hypertension. In this publication, the authors compared the efficacy in conscious dogs with renal-induced hypertension of CK-2018488, a small molecule direct inhibitor of smooth muscle myosin, to that of a calcium channel blocker, amlodipine. Dogs were instrumented chronically for the measurement of arterial pressure, cardiac output and regional blood flow and hypertension induced. In the hypertensive state, mean arterial pressure increased from 101 \pm 3.8 to 142 \pm 1.9 mmHg. At the doses selected, CK-2018488 and amlodipine similarly increased cardiac output (30 \pm 11% vs. 33 \pm 6.4%) and similarly reduced mean arterial pressure (-22 \pm 3.6% vs. -16 \pm 3.4%) and total peripheral resistance (-36 \pm 5.9% vs. -37 \pm 5.8%). However, CK-2018488 had the greatest vasodilator effect in the renal bed, where renal blood flow increased by 46 \pm 9.0%, versus 11 \pm 3.4% for amlodipine ($p < 0.01$). CK-2018488 produced significantly less vasodilation in the limb, where iliac blood flow did not change; in contrast, it rose by 48 \pm 12% with amlodipine ($p < 0.01$). The authors noted that the minimal effects of CK-2018488 on limb blood flow could limit the development of peripheral edema, an adverse side effect of calcium channel blockers. Additionally, in a rodent model of hypertension, oral administration of this smooth muscle myosin inhibitor resulted in a sustained antihypertensive effect. Thus, the authors concluded that the preferential effect of smooth muscle myosin inhibition on renal blood flow may make this drug mechanism particularly appealing, since many patients with hypertension have renal insufficiency, and patients with heart failure could benefit from afterload reduction coupled with enhanced renal blood flow.

Background on Cytokinetics' Smooth Muscle Contractility Program

Cytokinetics' smooth muscle contractility research program is directed to smooth muscle myosin, the motor protein responsible for the contraction of the smooth muscle cells that surround airways in the lungs and the blood vessels that control blood pressure. By inhibiting the function of the myosin motor central to the contraction of smooth muscle, potent small molecules arising from this program may directly contribute to the relaxation of contracted smooth muscle. Cytokinetics' smooth muscle myosin inhibitors have demonstrated encouraging pharmacological activity in preclinical models that may relate to uses for the potential treatment of diseases such as asthma, chronic obstructive pulmonary disease (COPD) and systemic hypertension. Cytokinetics continues to conduct research and non-clinical development of its smooth muscle myosin inhibitors.

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' 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 II clinical trials program and has been granted orphan-drug designation by the U.S. Food and Drug Administration for the potential treatment of amyotrophic lateral sclerosis, a debilitating disease of neuromuscular impairment in which CK-2017357 demonstrated potentially clinically relevant pharmacodynamic effects in a Phase IIa trial. Cytokinetics is also conducting research and non-clinical development of compounds that inhibit smooth muscle contractility and which may be useful as potential treatments for diseases and conditions associated with excessive smooth muscle contraction, such as bronchoconstriction associated with asthma and chronic obstructive pulmonary disorder (COPD). 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' research and development activities, including the significance and utility of pre-clinical research results, and the potential for smooth muscle myosin inhibition as a therapeutic approach for treatment of hypertension; and the properties and potential benefits of Cytokinetics' compounds. 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' compounds 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' compounds 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 research and development of its compounds on acceptable terms, if at all; Cytokinetics may be unable to enter into future collaboration agreements for its compounds and programs on acceptable terms, if at all; standards of care may change,

rendering Cytokinetics' compounds obsolete; competitive products or alternative therapies may be developed by others for the treatment of indications Cytokinetics' compounds 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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