Cytokinetics Announces Non-Clinical Data Relating to GSK-923295 Presented at the 2009 AACR-NCI-EORTC International Conference

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Data Support Hypothesis That GSK-923295 May Be Active in Combination With Other Chemotherapeutics in the Clinical Setting

SOUTH SAN FRANCISCO, CA, Nov 19, 2009 (MARKETWIRE via COMTEX) -- Cytokinetics, Incorporated (NASDAQ: CYTK) announced today that abstracts summarizing non-clinical data relating to GSK-923295, an inhibitor of centromere-associated protein E (CENP-E), were presented at the AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics held November 15-19, 2009 in Boston, Massachusetts.

GSK-923295 is currently being studied in a Phase I, first time in humans clinical trial sponsored by GlaxoSmithKline and designed to evaluate the safety, tolerability, pharmacodynamics and pharmacokinetic profile of this novel drug candidate in patients with solid tumors.

"We are pleased that these data could be shared with the scientific community at the AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics," stated David J. Morgans, PhD, Cytokinetics' Executive Vice President of Preclinical Research and Development. "These results underscore the potential for GSK-923295 in combination with other innovative cancer drug candidates. We look forward to further exploring the potential for this novel drug candidate with GlaxoSmithKline as we together evaluate data from this ongoing clinical trial."

Presentations at the AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics

A poster titled "Synergistic Interaction Between CENP-E inhibitor GSK923295 and MEK inhibitor GSK1120212" was presented by Yan Y. Degenhardt, Ph.D., GlaxoSmithKline on Tuesday, November 17, 2009. This poster presentation summarized a non-clinical study evaluating the combination of the CENP-E inhibitor, GSK-923295, and a MEK inhibitor, GSK-1120212, to determine if this combination might improve clinical efficacy over either compound as a single agent in selected tumors. This study identified multiple genes along the MAPK pathway as hits in a synthetic lethal siRNA library screen for GSK-923295, suggesting that inhibiting the MAPK pathway may enhance sensitivity of cells to GSK-923295. The combination of these two drug candidates was tested by fixed-ratio dosing in 5 colon cell lines, 15 lung cell lines and 8 pancreas lines. Synergy between these two drug candidates was observed in most of the cell lines using one or more judging criteria; there was no association with genetic background (RAS/PIK3CA). Finally, as measured by caspase assay, more apoptosis was induced in the presence of both drugs than either alone.

A poster and oral presentation titled "RNAi-directed Identification of Chemosensitizers of GSK923295 Response" was presented by Holly Yin, Ph.D., Associate Investigator, Pharmaceutical Genomics Division of The Translational Genomics Research Institute, Phoenix, AZ on Wednesday, November 18. The poster and oral presentation summarized a non-clinical study designed to identify chemosensitizers for GSK-923295. The authors concluded that RNAi phenotype profiling of non-small cell lung cancer cells identified significant pathways that suggest synergistic opportunities with GSK-923295. Combination synergy was observed with small molecule MAPK inhibitors targeting genes that were validated from the HT-RNAi screen. New gene targets were identified that are sensitizing candidates for GSK-923295 and that provide a rationale for continued investigation in future clinical studies. This study suggests that both siRNA knockdown and drug synergy can be successfully applied towards the development of clinical therapeutics.

Development Status of GSK-923295 and Background on CENP-E

GSK-923295 is a small-molecule inhibitor of centromere-associated protein E (CENP-E), and the third novel drug candidate to arise from Cytokinetics' broad strategic alliance with GlaxoSmithKline (GSK). In August 2007, GSK initiated a first-time-in-humans, Phase I clinical trial of GSK-923295. This trial is an open-label, non-randomized, dose-finding trial designed to investigate the safety, tolerability, pharmacodynamics and pharmacokinetic profile of GSK-923295 in patients with advanced, refractory solid tumors.

CENP-E plays an essential role in chromosome movement during early mitosis and integrates mitotic spindle mechanics with regulators of the mitotic checkpoint; hence CENP-E is directly involved in coupling the mechanics of mitosis with the mitotic checkpoint signaling machinery, regulating cell-cycle transition from metaphase to anaphase. CENP-E is also essential for prometaphase chromosome movements that contribute to metaphase chromosome alignment. These processes are essential to cell proliferation. CENP-E is expressed exclusively in proliferating cells and is abundant during mitosis; it is absent from non-proliferating cells, including neurons. Inhibition of CENP-E induces cell cycle arrest in mitosis with bipolar mitotic spindles and misaligned chromosomes leading to subsequent apoptosis. GSK-923295 is the first drug candidate to enter human clinical trials that specifically targets CENP-E.

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.

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 Safe Harbor for forward-looking statements contained in the Act. Examples of such statements include, but are not limited to, statements relating to the initiation, scope, design, conduct and results of Cytokinetics' and its partners' research and development programs, including the significance of results of non-clinical studies relating to GSK-923295, and the potential benefits of GSK-923295 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; 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.

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