Cytokinetics Announces Data Relating to GSK-923295 Presented at the 2008 American Association of Cancer Research Annual Meeting

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SOUTH SAN FRANCISCO, CA, Apr 16, 2008 (MARKET WIRE via COMTEX News Network) -- Cytokinetics, Incorporated (NASDAQ: CYTK) announced today that three abstracts relating to GSK-923295 were presented at the 2008 American Association of Cancer Research (AACR) Annual Meeting held this week in San Diego, CA. An oral presentation highlighted interim clinical data from the first-time-in-humans clinical trial of GSK-923295, a novel inhibitor of centromere-associated protein E (CENP-E). In addition, two poster presentations highlighted non-clinical data relating to GSK-923295. One poster detailed findings in a preclinical model of human neuroblastoma and the other summarized in vitro research related to a specific biomarker that may predict the sensitivity of tumors to this drug candidate.

Oral Presentation at 2008 AACR Annual Meeting

An oral presentation entitled, "A Phase I and First-Time-in-Human Study of the Centromere-Associated Protein E (CENP-E) Inhibitor GSK923295A in Patients with Advanced Solid Tumors," containing interim data from an ongoing Phase I clinical trial evaluating GSK-923295, was presented on April 15, 2008. The primary objective of this clinical trial is to determine the maximum tolerated dose (MTD), dose-limiting toxicities (DLTs), safety profile and pharmacokinetics of GSK-923295 in these patients. The secondary objectives are to assess the clinical activity of GSK-923295, to evaluate the pharmacodynamic effect of GSK-923295 on biomarkers in pre-treatment and post-treatment tumor biopsies, to explore associations between biochemical and genetic characteristics of archival tumor specimens and clinical activity, and to explore pharmacogenomic associations between genetic variants in drug metabolizing enzymes and drug transport genes. The clinical trial has a two-stage design. Stage 1 is designed to determine the MTD and DLTs and to evaluate pharmacokinetics on days 1 and 15 in cycle 1. In stage 2, the MTD cohort will be expanded to 15 to 20 patients to further explore the safety, tolerability, pharmacodynamics and pharmacokinetic profile of GSK-923295.

In this interim analysis, 6 of 8 patients experienced adverse events (AEs). Only three percent of these AEs were reported to be grade 3 and no grade 4 AEs were reported. No pattern of AEs was observed. To date, a DLT of grade 3 liver enzyme (AST) elevation was observed in one patient at 80 mg/m2 and, as determined by the protocol, the cohort receiving that dosing level has been expanded from 3 to 6 patients. The authors concluded that the pharmacokinetics of GSK-923295 were generally dose-proportional over the dose range of 10-80 mg/m2 and that intrapatient pharmacokinetics on days 1 and 15 were similar.

Poster Presentations at 2008 AACR Annual Meeting

A poster entitled, "Targeted Inhibition of the Centromere-Associated Protein E (CENP-E) with GSK923295A is Effective in Preclinical Models of Human Neuroblastoma," was presented on April 14, 2008. The authors of this abstract concluded that CENP-E is a rational target for neuroblastoma as increased expression is associated with both tumor progression in a transgenic mouse model driven by the gene MYCN and with high risk disease in humans. The authors also concluded that GSK-923295 is effective in vitro and in vivo against neuroblastoma. Finally, the authors noted that biomarkers associated with sensitivity had yet to be identified; however, analyses are ongoing to identify predictors of response.

A second poster entitled, "High Level Amplification of c-MYC is Associated with Sensitivity to a Small Molecule Inhibitor of CENP-E, GSK923295A," was presented on April 15, 2008. This non-clinical study was designed to identify potential biomarkers that may identify sensitivity to GSK-923295. The authors concluded that the proliferation of cell lines from a diversity of tumor types was inhibited by GSK-923295 and that CENP-E transcript levels did not correlate with sensitivity to GSK-923295. In their study, amplification of the c-MYC gene was observed only in lung cell lines that are sensitive to GSK-923295. Sensitivity in cell lines to GSK-923295 correlated with sensitivity to paclitaxel. Cancers of the ovary and breast with higher levels of c-MYC transcript were more sensitive to paclitaxel. In summary, the authors concluded that c-MYC amplification and/or over-expression is a potential biomarker that could be used to select patients more likely to respond to GSK-923295.

Background on CENP-E

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 a failure to satisfy the mitotic checkpoint and to achieve proper chromosome alignment leading to cell cycle arrest in mitosis and subsequent apoptosis GSK-923295 is the first drug candidate to enter human clinical trials that specifically targets CENP-E.

Background on Mitotic Kinesin Inhibitors

Since their introduction more than 40 years ago, anti-mitotic drugs (taxanes and vinca alkaloids) have advanced the treatment of cancer and are commonly used for the treatment of several tumor types. However, these drugs have demonstrated limited treatment benefit against certain cancers. In addition, these drugs target tubulin, a cytoskeletal protein involved not only in mitosis and cell proliferation, but also in other important cellular functions. Inhibition of these other cellular functions produces dose-limiting toxicities such as peripheral neuropathy, an impairment of peripheral nervous system function. Neuropathies are thought to result when these drugs interfere with the dynamics of microtubule filaments that are responsible for the long-distance transport of important cellular components within nerve cells.

Mitotic kinesins are proteins essential to mitosis, and, unlike tubulin, are not present in non-dividing cells. Cytokinetics believes that drugs that inhibit CENP-E and other mitotic kinesins may represent the next generation of anti-mitotic cancer drugs by arresting mitosis and cell proliferation without

impacting unrelated, normal cellular functions, thereby avoiding many of the toxicities commonly experienced by patients treated with existing anti-mitotic drugs.

Background on Cytokinetics and GlaxoSmithKline Strategic Alliance

In June 2001, Cytokinetics and GlaxoSmithKline (GSK) entered into a broad strategic alliance to discover, develop and commercialize novel small molecule therapeutics targeting mitotic kinesins for applications in the treatment of cancer and other diseases. The strategic alliance has generated three drug candidates in clinical development, ispinesib and SB-743921, both inhibitors of kinesin spindle protein, and GSK-923295, an inhibitor of CENP-E. In June 2007, Cytokinetics announced a further one-year extension of the strategic alliance's research term, which began in June 2001, to continue activities focused towards translational research directed to CENP-E. Under a November 2006 amendment to its collaboration and license agreement with GSK, Cytokinetics assumed responsibility for the costs and activities associated with the continued development of ispinesib and SB-743921, subject to GSK's option to resume responsibility for some or all development and commercialization activities associated with each of these novel drug candidates, exercisable during a defined period. GSK-923295, now in a Phase I clinical trial in advanced solid tumors, is being developed under the strategic alliance by GSK. Cytokinetics will receive royalties from the sale of any products arising from the strategic alliance that GSK progresses to commercialization. For products that GSK progresses in development, Cytokinetics retains a product-by-product option to co-fund certain later-stage development activities, thereby providing Cytokinetics an opportunity to increase its potential royalties and obtain co-promotion rights for the applicable products in North America.

About Cytokinetics

Cytokinetics is a biopharmaceutical company focused on the discovery, development and commercialization of novel small molecule drugs that may address areas of significant unmet clinical needs. Cytokinetics' development efforts are primarily directed to advancing multiple drug candidates through clinical trials with the objective of determining the intended pharmacodynamic effect or effects in two principal diseases: heart failure and cancer. Cytokinetics' cardiovascular disease program is focused to cardiac myosin, a motor protein essential to cardiac muscle contraction. Cytokinetics' lead compound from this program, CK-1827452, a novel small molecule cardiac myosin activator, entered Phase II clinical trials for the treatment of heart failure in 2007. Under a strategic alliance established in 2006, Cytokinetics and Amgen Inc. are performing joint research focused on identifying and characterizing activators of cardiac myosin as back-up and follow-on potential drug candidates to CK-1827452. Amgen has obtained an option for an exclusive license to develop and commercialize CK-1827452, subject to Cytokinetics' development and commercial participation rights. Cytokinetics' cancer program is focused on mitotic kinesins, a family of motor proteins essential to cell division. Under a strategic alliance established in 2001, Cytokinetics and GlaxoSmithKline (GSK) are conducting research and development activities focused on the potential treatment of cancer. Cytokinetics is developing two novel drug candidates that have arisen from this program, ispinesib and SB-743921, each a novel inhibitor of kinesin spindle protein (KSP), a mitotic kinesin. Cytokinetics believes that ispinesib has demonstrated clinical activity in Phase II monotherapy clinical trials in breast cancer, ovarian cancer and non-small cell lung cancer and recently initiated an additional Phase I/II clinical trial of ispinesib as monotherapy as a first-line treatment in chemotherapy-naive patients with locally advanced or metastatic breast cancer on a more dose-dense schedule than previously studied. Cytokinetics is also conducting a Phase I/II trial of SB-743921 on a similar more dose-dense schedule in non-Hodgkin and Hodgkin lymphomas. GSK has obtained an option for the joint development and commercialization of ispinesib and SB-743921. Cytokinetics and GSK are conducting collaborative research activities directed to the mitotic kinesin centromere-associated protein E (CENP-E). GSK-923295, a CENP-E inhibitor, is being developed under the strategic alliance by GSK, subject to Cytokinetics' option to co-fund certain later-stage development activities and to co-promote any resulting approved drug in North America. GSK began a Phase I clinical trial with GSK-923295 in 2007. All of these 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. Cytokinetics' focus on the cytoskeleton enables it to develop novel and potentially safer and more effective classes of drugs directed at treatments for cancer and cardiovascular disease. Additional information about Cytokinetics can be obtained at www.cytokinetics.com.

This press release contains forward-looking statements within the meaning 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 Cytokinetics' and its partners' research and development programs, including the conduct of clinical trials, the utility of c-MYC as a potential biomarker for predicting GSK-923295 response, the potential benefits of Cytokinetics' drug candidates and potential drug candidates, and the enabling capabilities of Cytokinetics' cytoskeletal focus. 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 approval, production and marketing of Cytokinetics' drug candidates that could slow or prevent clinical development, product approval or market acceptance, 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 clinical trials may be difficult or delayed, Cytokinetics' drug candidates may have unexpected 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 and maintain patent or trade secret protection for its intellectual property; GSK may decide to postpone or discontinue development efforts for GSK-923295, Cytokinetics may incur unanticipated research and development and other costs or be unable to obtain additional financing if necessary, standards of care may change or others may introduce products or alternative therapies for the treatment of indications Cytokinetics' drug candidates and potential drug candidates currently or potentially target, and risks and uncertainties relating to the timing and receipt of funds under Cytokinetics' collaborations. 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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