Cytokinetics Announces Non-Clinical Poster Presentation Regarding Ispinesib at the 2006 Annual Meeting of American Society of Hematology

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Cellular Data Demonstrates Therapeutic Potential in the Treatment of Multiple Myeloma

SOUTH SAN FRANCISCO, Calif., Dec. 11 /PRNewswire-FirstCall/ -- Cytokinetics, Incorporated (Nasdaq: CYTK -) announced today that a poster summarizing non-clinical data evaluating ispinesib (SB-715992), a novel inhibitor of the mitotic kinesin, kinesin spindle protein (KSP), in cellular models of multiple myeloma was presented today at the 2006 Annual Meeting of the American Society of Hematology (ASH) in Orlando, Florida.

Poster Presentation at ASH

A poster entitled, "Inhibition of Kinesin Spindle Protein Induces Apoptosis and Overcomes Drug Resistance in Models of Multiple Myeloma," was presented by Qing Chen, Ph.D. and Robert Z. Orlowski, M.D., Ph.D., The University of North Carolina at Chapel Hill Lineberger Comprehensive Cancer Center, Chapel Hill, NC. The study involving cellular models of multiple myeloma was designed to evaluate whether cell cycle arrest induced by inhibition of KSP with ispinesib may have a therapeutic potential in the treatment of multiple myeloma. The authors concluded that these studies demonstrate that KSP inhibition with ispinesib was able to induce growth arrest and apoptosis in myeloma cells, and overcome resistance to both conventional drugs and novel agents such as bortezomib. Moreover, the preferential activity against transformed plasma cells with sparing of normal bone marrow cells provides a strong rationale for translation of ispinesib into the clinic for evaluation as a potential treatment of relapsed and refractory multiple myeloma.

Clinical Trials for Ispinesib

Ispinesib has been the subject of a broad clinical trials program under the sponsorship of GlaxoSmithKline (GSK) and is also being developed in collaboration with the National Cancer Institute (NCI). GSK has sponsored three Phase II clinical trials, one evaluating ispinesib as second- or third-line treatment for patients with locally advanced or metastatic breast cancer, one evaluating ispinesib as second-line treatment for patients with non-small cell lung cancer and one evaluating ispinesib as second-line treatment for patients with advanced ovarian cancer. In addition, GSK has sponsored three dose-escalating Phase Ib clinical trials. Each of these clinical trials was designed to evaluate the safety, tolerability, and pharmacokinetics of ispinesib in combination with a leading anti-cancer therapeutic, one in combination with carboplatin, the second in combination with capecitabine, and the third in combination with docetaxel. The NCI has sponsored five additional Phase II clinical trials evaluating the potential efficacy of ispinesib in the second-line treatment of patients with colorectal cancer, in the first-line treatment of patients with hepatocellular cancer, in the first- line treatment of patients with melanoma, in the first-line or second-line treatment of patients with head and neck cancers, and in the second-line treatment of patients with hormone-refractory prostate cancer. The NCI is continuing patient enrollment in two additional Phase I clinical trials designed to evaluate the safety, tolerability, and pharmacokinetics of ispinesib on an alternative dosing schedule. One clinical trial is enrolling patients with advanced solid tumors that have failed to respond to all standard therapies and the other clinical trial is enrolling patients with acute leukemia, chronic myelogenous leukemia or advanced myelodysplastic syndromes. In addition, the NCI plans to initiate a Phase II clinical trial to evaluate the potential efficacy of ispinesib as second-line treatment of patients with renal cell cancer and a Phase I clinical trial evaluating ispinesib as monotherapy in pediatric patients with relapsed or refractory solid tumors.

Background on Mitotic Kinesin Inhibitors

Since their introduction over 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 essential to mitosis and, unlike tubulin, appear to have no role in unrelated cellular functions. Cytokinetics believes that drugs that inhibit KSP and centromere-associated protein E (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.

About Cytokinetics

Cytokinetics is a biopharmaceutical company focused on the discovery, development and commercialization of novel small molecule drugs that specifically target 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, cardiovascular disease and other diseases. Under a strategic alliance established in 2001, Cytokinetics and GSK are conducting research and development activities focused towards the potential treatment of cancer and other indications. Cytokinetics and GSK are continuing collaborative research focused to translational research directed to the mitotic kinesin CENP-E. GSK-923295, a CENP-E inhibitor, is being developed under the strategic alliance by GSK; GSK expects to begin clinical trials with GSK-923295 in 2007. Cytokinetics is responsible for the development of ispinesib and SB-743921, each a novel inhibitor of the mitotic kinesin KSP. Ispinesib has been the subject of a broad clinical trials program comprising nine Phase II clinical trials as well as six Phase I or Ib clinical trials. Cytokinetics plans to conduct additional clinical trials with ispinesib and is conducting a Phase I/II trial of SB-743921 in non-Hodgkin's lymphoma. Cytokinetics' unpartnered cardiovascular disease program is the second program to leverage the company's expertise in cytoskeletal pharmacology. Cytokinetics recently completed a Phase I clinical trial with CK-1827452, a novel small molecule cardiac myosin activator, and is advancing CK-1827452 in both intravenous and oral formulations for the treatment of heart failure. Additional information about Cytokinetics can be obtained at http://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 expected initiation, timing, scope and targeted indications of clinical trials within of Cytokinetics' and its partners' clinical development and research programs, the potential benefits of Cytokinetics' drug candidates and potential drug candidates and the enabling capabilities of our biological focus. Such statements are based on management's current expectations, but actual results may differ materially due to various factors. Such statements involve risks and uncertainties, including, but not limited to, those risks and uncertainties relating to decisions by GSK to postpone or discontinue research and/or development efforts for GSK-923295 or the NCI to postpone or discontinue one or more of its clinical trials for ispinesib, difficulties or delays in patient enrollment for clinical trials, unexpected adverse side effects or inadequate therapeutic efficacy of Cytokinetics' drug candidates, and other potential difficulties or delays in development, testing, regulatory approval, production and marketing of Cytokinetics' drug candidates that could slow or prevent clinical development, product approval or market acceptance (including the risks relating to uncertainty of patent or trade secret protection for Cytokinetics' intellectual property, Cytokinetics' ability to obtain additional financing if necessary and unanticipated research and development and other costs), the conduct of activities and continued funding under Cytokinetics' collaborations and the implementation and maintenance of procedures, policies, resources and infrastructure relating to compliance with new or changing laws, regulations and practices. For further information regarding these and other risks related to Cytokinetics' business, investors should consult Cytokinetics' filings with the Securities and Exchange Commission.