Cytokinetics Announces the Presentation of Clinical Trials Data at the 2006 Annual Meeting of the American Society of Clinical Oncology

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South San Francisco, CA, June 5, 2006 - Cytokinetics, Inc. (Nasdaq: CYTK) announced today that data for ispinesib (SB-715992) and SB-743921, from clinical trials being conducted by GlaxoSmithKline (GSK) or the National Cancer Institute (NCI), were presented in oral and poster sessions at the 2006 Annual Meeting of the American Society of Clinical Oncology (ASCO) in Atlanta, Georgia. The presentations related to four clinical trials: a Phase II clinical trial evaluating ispinesib in patients with metastatic colorectal cancer, a Phase Ib clinical trial evaluating ispinesib in combination with carboplatin, a Phase I clinical trial evaluating a new dosing schedule for ispinesib and a Phase I clinical trial for SB-743921.

Ispinesib and SB-743921 are novel, chemically-distinct, small molecule inhibitors of kinesin spindle protein (KSP), a mitotic kinesin essential for proper cell division. Both drug candidates have arisen from a broad strategic collaboration between Cytokinetics and GSK to discover, develop and commercialize novel small molecule therapeutics targeting human mitotic kinesins for applications in the treatment of cancer and other diseases.

Ispinesib

The poster entitled, "A Randomized Phase II Non-Comparative Study of Ispinesib Given Weekly or Every Three Weeks in Metastatic Colorectal Cancer: A California Cancer Consortium Study (CCC-P)," was presented by A.B. El-Khoueiry, University of Southern California/Norris Comprehensive Cancer Center, Los Angeles, CA, on June 3, 2006. The primary objective of this clinical trial was to evaluate the response rate of patients with metastatic colorectal cancer treated with ispinesib as monotherapy. The secondary objectives were to determine time to tumor progression, progression free survival (PFS), overall survival and toxicity. Patients were randomized to receive ispinesib 7 mg/m2 on Days 1, 8, and 15 of a 28 day schedule (Arm A) or 18 mg/m2 every 21 days (Arm B). A total of 64 patients were enrolled into this trial (33 in Arm A; 31 in Arm B). The median number of cycles was 2 for each arm. Eight patients had stable disease (3 in Arm A; 5 in Arm B) and 49 had progressive disease (25 in Arm A; 24 in Arm B). Response data were not available in seven patients as they went off treatment too early to assess response. PFS was 49 days in Arm A (95% CI: 44 to 51) and 37 days in Arm B (95% CI: 35 to 42 days). The authors concluded that ispinesib did not manifest an objective response rate on the two schedules evaluated in heavily pretreated patients with colorectal cancer. The most common grade 3/4 toxicities in Arm A included neutropenia (n=3), nausea (n=3), vomiting(n=2) and fatigue (n=2). The most common grade 3/4 toxicity in Arm B was neutropenia (n=20), only one of which was febrile. The authors concluded that the weekly dose given for 3 weeks every 28 days (Arm A) appeared to have a more favorable toxicity profile compared to the once every 21 day schedule (Arm B).

The poster entitled, "Phase I Study of Ispinesib in Combination with Carboplatin in Patients with Advanced Solid Tumors," was presented by Suzanne F. Jones, Sarah Cannon Research Institute, Nashville, TN, on Sunday, June 4, 2006. The primary objectives of this clinical trial were to evaluate the safety and tolerability of the combination of ispinesib with carboplatin, to determine the optimally tolerated regimen (OTR) and to characterize the pharmacokinetics profiles of ispinesib and carboplatin when administered together. In this clinical trial, 28 patients were enrolled and treated at six dose levels. The OTR was determined to be ispinesib at 18 mg/m2 (the maximum tolerated dose (MTD) for ispinesib when administered as a monotherapy) and carboplatin at a target AUC of 6 mg/ml min, both administered on a once every 21 days(Q21D) schedule. Dose limiting toxicities (DLTs) included prolonged (> 5 days) grade 4 neutropenia, grade 4 thrombocytopenia and grade 3 febrile neutropenia. At the OTR, ispinesib concentrations were not affected by carboplatin. The best response was a partial response (PR) at cycle 2 in one patient with breast cancer; a total of 13 patients (46%) had a best response of stable disease (SD) with durations ranging from 3 to 9 months.

The poster entitled, "A Phase I Dose Escalation Trial of Ispinesib (SB-715992) Administered Days 1-3 of a 21-day Cycle in Patients with Advanced Solid Tumors," was presented by Elizabeth I. Heath, Karmanos Cancer Institute, on Sunday, June 4, 2006. The primary objectives of this clinical trial were to assess the safety and tolerability of ispinesib and to determine the DLT and MTD at this dosing regimen. Twenty-seven patients with various tumor types were enrolled. Grade 3 and grade 4 toxicities were noted at 4 mg/m2, including neutropenia and leukopenia. At 6 mg/m2, grade 3 neutropenia was reported and at 8 mg/m2, grade 3 neutropenia and leukopenia were reported. As a result, 6 mg/m2 was further evaluated as a potential MTD. In this clinical trial, stable disease was reported in two patients with renal cell carcinoma and a minor response was noted in one patient with bladder cancer.

SB-743921

The oral presentation entitled "Phase I Study to Determine Tolerability and Pharmacokinetics (PK) of SB-743921, a Novel Kinesin Spindle Protein (KSP) Inhibitor" was presented by Dr. Kyle Holen, University of Wisconsin Comprehensive Cancer Center, Madison, Wisconsin on June 3, 2006. The primary objectives of this clinical trial were to determine the DLTs and to establish the MTD of SB-743921 administered intravenously on a Q21D schedule; secondary objectives included assessment of the safety and tolerability of SB-743921 to characterize the pharmacokinetics of SB-743921 on this schedule and to make a preliminary assessment of the antitumor activity of SB-743921. By study design, dose escalation continued until dose-limiting toxicities were observed. Forty-four patients with a variety of solid tumors were enrolled. The recommended phase II dose of SB-743921 on the Q21D schedule is 4 mg/m2, although dosing did reach 8 mg/m2. The observed toxicities at the recommended Phase II dose were manageable. DLTs in this clinical trial consisted predominantly of neutropenia and elevations in hepatic enzymes and bilirubin. Neutropenia nadir was day 6-8 with recovery by day 15. The median half-life of SB-743921 was 29 hours. Disease stabilization (range 9-45 weeks) was observed in 7 patients. A patient with cholangiocarcinoma had a confirmed PR at the MTD at cycle 10.

"These presentations further the clinical understanding of KSP inhibitors for the treatment of cancer," stated Dr. James Sabry, Cytokinetics' Chief Executive Officer. "These data are consistent with previously reported data which underscores the potential combinability of ispinesib with currently used chemotherapeutics. We are encouraged by the clinical activity as measured by tumor shrinkage in each of the Phase Ib combination trial with ispinesib and carboplatin and the Phase I trial of SB-743921 in cholangiocarcinoma. These results add to the growing clinical experience with KSP inhibitors and may be helpful in designing other Phase II and Phase III clinical trials."

Background on KSP 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 the peripheral nervous system. Neuropathies 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.

The strategic alliance between Cytokinetics and GSK has yielded two novel drug candidates, ispinesib (SB-715992) and SB-743921. Ispinesib and SB-743921 are structurally distinct small molecule compounds that modulate cell proliferation and promote cancer cell death by specifically inhibiting kinesin spindle protein (KSP). KSP is a mitotic kinesin that is essential for cell proliferation, a process which when unregulated, results in tumor growth. Mitotic kinesins are essential to mitosis, and, unlike tubulin, appear to have no role in unrelated cellular functions. We believe that drugs that inhibit KSP 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, avoiding many of the toxicities commonly experienced by patients treated with existing anti-mitotic drugs.

About Ispinesib

Ispinesib is a novel small molecule inhibitor of Kinesin Spindle Protein (KSP), a mitotic kinesin protein essential for proper cell division. Ispinesib is the first drug candidate in clinical development that has arisen from a broad strategic collaboration between Cytokinetics and GSK to discover, develop and commercialize novel small molecule therapeutics targeting human mitotic kinesins for applications in the treatment of cancer and other diseases. GSK is conducting a broad clinical trials program for ispinesib designed to study this drug candidate in multiple tumor types, combination regimens and dosing schedules. GSK is currently evaluating ispinesib in two Phase II clinical trials being conducted in patients with each of ovarian and breast cancers and two Phase Ib clinical trials designed to evaluate ispinesib in combination with each of carboplatin and capecitabine.

In addition to the ongoing studies being conducted by GSK, the National Cancer Institute (NCI) is sponsoring five other Phase II clinical trials evaluating ispinesib in other tumor types, including head and neck, hepatocellular, colorectal and prostate cancers and melanoma. In addition, the NCI plans to conduct an additional Phase II clinical trial in patients with renal cell carcinoma. The NCI is also conducting two other Phase I clinical trials evaluating a new schedule of ispinesib, one in leukemia and another in advanced solid tumors.

About SB-743921 SB-743921, Cytokinetics' second KSP inhibitor to enter clinical trials under the strategic alliance with GSK, is structurally distinct from ispinesib, Cytokinetics' most advanced drug candidate. In September 2005, Cytokinetics and GSK announced an amendment to their original agreement to support further expansion of the development activities for SB-743921. Under the terms of the amendment, Cytokinetics is responsible for leading and funding development activities to explore the potential application of SB- 743921 for the treatment of non-Hodgkin's lymphoma (NHL), Hodgkin's disease and multiple myeloma, subject to GSK's option to resume responsibility for development and commercialization activities for SB-743921 for these indications during a defined period. Cytokinetics' development activities will be conducted in parallel with GSK's development activities for SB-743921 in other indications and for ispinesib. In April 2006, Cytokinetics announced the initiation of a Phase I/II clinical trial of SB-743921 in patients with NHL, in connection with an expanded development program for SB-743921. This Phase I/II clinical trial is an open-label, non-randomized study to investigate the safety, tolerability, pharmacokinetic, and pharmacodynamic profile of SB-743921, administered as a one-hour infusion on days 1 and 15 of a 28-day schedule, and to assess the potential efficacy of the maximum tolerated dose of SB-743921 administered on this schedule in patients with NHL.

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. Cytokinetics has developed a cell biology driven approach and proprietary technologies to evaluate the function of many interacting proteins in the complex environment of the intact human cell. Cytokinetics employs its PUMA(TM) system and Cytometrix(TM) technologies to enable early identification and automated prioritization of compounds that are highly selective for their intended protein targets without other cellular effects, and may therefore be less likely to give rise to clinical side effects. Cytokinetics and GSK have entered into a strategic alliance to discover, develop and commercialize small molecule therapeutics targeting human mitotic kinesins for applications in the treatment of cancer and other diseases. Ispinesib (SB-715992), SB-743921 and GSK-923295 are being developed under the strategic alliance with GSK. GSK is conducting Phase II and Ib clinical trials for ispinesib, a Phase I clinical trial for SB-743921, and Cytokinetics is conducting a Phase I/II trial of SB- 743921 in NHL. Cytokinetics' unpartnered cardiovascular disease program is the second program to leverage the company's expertise in cytoskeletal pharmacology. Cytokinetics is conducting a Phase I clinical trial with intravenous CK-1827452, a novel small molecule cardiac myosin activator, for the intravenous treatment of heart failure and also has selected CK-1827452 as a potential drug candidate for the treatment of chronic heart failure via oral administration. 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 about our partners' planned clinical research and development activities and statements regarding the potential benefits of our drug candidates and potential drug candidates, the enabling capabilities of our proprietary technologies and the benefits of data obtained from completed clinical trials. 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 the NCI to postpone or discontinue development efforts for one or more compounds, difficulties or delays in patient enrollment for clinical trials, unexpected adverse side effects or inadequate therapeutic efficacy of our 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 protection for Cytokinetics' intellectual property or trade secrets, 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.