Synta Pharmaceuticals Initiates Phase 2 Clinical Trial of STA-9090 in Non-Small Cell Lung Cancer

December 17, 2009
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Results demonstrating STA-9090 has potent activity against key pathways of lung cancer cell growth, proliferation, and resistance support use in this disease

LEXINGTON, Mass., Dec 17, 2009 (BUSINESS WIRE) -- Synta Pharmaceuticals Corp. (NASDAQ: SNTA), a biopharmaceutical company focused on discovering, developing, and commercializing small molecule drugs to treat severe medical conditions, today announced that it has initiated a Phase 2 clinical study of STA-9090 in non-small cell lung cancer (NSCLC). This is the fifth clinical study to be initiated on STA-9090, a potent, synthetic, small molecule Hsp90 inhibitor with a novel chemical structure.

"Accumulating evidence supports the view of non-small cell lung cancer as a group of malignant diseases driven by distinct genetic abnormalities. Hsp90 is recognized as a potential therapeutic target in NSCLC due to its role in regulating numerous oncogenes that are believed to play an important role in the cause and development of NSCLC," said Mark Socinski, M.D., University of North Carolina, a co-principal investigator on the trial. "The potency, broad activity and acceptable side effect profile seen to date in both preclinical and early clinical studies with STA-9090 suggest that there may be a therapeutic role for this promising compound in the treatment of NSCLC."

"Results presented at the AACR meeting in April 2009 and the Molecular Targets and Cancer Therapeutics meeting in November 2009 demonstrated that the Hsp90 inhibitor STA-9090 has greater potency compared to the first generation Hsp90 inhibitors, such as 17-AAG, to destabilize critical oncoproteins and components of their signaling pathways, including EGFR, ERBB2, KRAS, BRAF and MET," said Geoffrey Shapiro, M.D., Ph.D., Dana Farber Cancer Institute, the other co-principal investigator on the trial. "These preclinical results, along with early clinical data from the Phase 1 solid tumor trials, where instances of prolonged stable disease and responses per RECIST criteria have been observed, support initiation of a proof-of-concept study of STA-9090 in NSCLC."

"STA-9090 is highly effective at inhibiting many of the key lung cancer cell growth and proliferation pathways as well as known mechanisms of resistance to EGFR inhibitors," said Vojo Vukovic, M.D., Ph.D., Senior Vice President and Chief Medical Officer, Synta Pharmaceuticals. "This includes activity against c-MET and the T790M mutation of EGFR, both of which have been shown to drive resistance to multiple therapies. This potent activity, together with the responses, safety profile, and clinical activity seen in our ongoing trials, provide a strong rationale for studying STA-9090 in NSCLC. We are excited to work closely with leaders in the field to explore the potential for clinical benefit."

Synta also announced that additional preclinical results on STA-9090 in lung cancer will be presented at the American Association for Cancer Research-International Association for the Study

of Lung Cancer (AACR-IASLC) Joint Conference on Molecular Origins of Lung Cancer on January 12, 2010 in Coronado, California.

STA-9090 is currently in four Phase 1 and Phase 1/2 trials. Synta expects to report results from these studies and initiate trials in multiple other indications in the first half of 2010.

Study Design in NSCLC

The open-label, multi-center Phase 2 study is designed to evaluate the efficacy and safety of STA-9090 in patients with stage IIIB or IV non-small cell lung cancer who have received prior treatment with either an approved tyrosine kinase inhibitor or chemotherapy. The trial will enroll up to approximately 70 patients in a two-stage design. Patients will be stratified into cohorts based on certain genetic characteristics of their cancer, and STA-9090 will be administered as an intravenous infusion once per week for three consecutive weeks, followed by a one week rest period (four week cycle). Patients tolerating STA-9090 may continue on treatment until disease progression. Tumor assessments, per RECIST criteria, will be performed at baseline and every other cycle. The primary objective of the trial is to assess efficacy based on progression-free survival; additional objectives include assessing tumor response rates, overall survival, the safety and tolerability of STA-9090 in this patient population, and the impact of treatment with STA-9090 on certain biomarkers.

About STA-9090

STA-9090 is a novel, synthetic, small-molecule Hsp90 inhibitor, with a chemical structure unrelated to the first-generation, ansamycin family of Hsp90 inhibitors (e.g., 17-AAG). In preclinical studies, STA-9090 has shown potency up to 100 times greater than the first-generation Hsp90 inhibitors as well as activity against a wider range of kinases. In *in vitro* and *in vivo* models, STA-9090 has shown potent activity against a wide range of cancer types, including lung, prostate, colon, breast, gastric, pancreatic, melanoma and certain hematologic cancers - as well as potent activity against cancers resistant to imatinib (Gleevec(R)), sunitinib (Sutent(R)), erlotinib (Tarceva(R)), and dasatanib (Sprycel(R)). In clinical trials, the most common side effects of STA-9090 were fatigue and gastrointestinal toxicities, which were manageable and reversible.

About Hsp90

Hsp90 is a chaperone protein required for the proper folding and activation of other cellular proteins, particularly kinases. Many of these "client proteins" of Hsp90 - such as Akt, BCR-ABL, BRAF, c-KIT, c-MET, EGFR, FLT3, HER2, HIF-1a, PDGFR, VEGFR - have been shown to be critical to cancer cell growth, proliferation, and survival and are the targets of clinically validated cancer drugs. In preclinical studies, inhibiting Hsp90 causes the degradation of multiple client proteins and leads to cancer cell death. Because mutated kinases, which no longer respond to treatment with kinase inhibitors, remain dependent on Hsp90 for their activity, inhibiting Hsp90 offers the potential for treating cancers that have become resistant to targeted therapies such as kinase inhibitors.

About Non-Small Cell Lung Cancer

Lung cancer is the leading cause of cancer-related mortality in the United States. In 2009 the American Cancer Society estimates there will be 219,440 new cases and 159,390 deaths from lung cancer in the United States alone, with 80-90% of lung cancers of the non-small cell type. The five-year relative survival rate varies from 16% for patients diagnosed with regional metastatic stage

disease to 2% for patients diagnosed with distant metastatic stage disease. (Source and further information: American Cancer Society, http://cts.businesswire.com/ct/CT?id=smartlink&url=http%3A%2F%2Fwww.cancer.org&esheet=6122993&lan=en_US&anchor=http%3A%2F%2Fwww.cancer.org&index=1&md5=adcebfbe4c9c503024769aaa3ca922b8.)

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Safe Harbor Statement

This media release may contain forward-looking statements about Synta Pharmaceuticals Corp. Such forward-looking statements can be identified by the use of forward-looking terminology such as "will," "would," "should," "expects," "anticipates," "intends," "plans," "believes," "may," "estimates," "predicts," "projects," or similar expressions intended to identify forward-looking statements. Such statements, including statements relating to the timing, developments, progress and plans of our clinical and preclinical programs, reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such forward-looking statements, including those described in "Risk Factors" of our Form 10-K for the year ended December 31, 2008 as filed with the Securities and Exchange Commission. Synta undertakes no obligation to publicly update forward-looking statements, whether because of new information, future events or otherwise, except as required by law.

SOURCE: Synta Pharmaceuticals Corp.

Synta Pharmaceuticals Corp.
Rob Kloppenburg, 781-541-7125

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