Synta Announces Encouraging STA-9090 Clinical Results Presented at ASCO

June 7, 2010

- STA-9090 well-tolerated in Phase 1 solid tumor studies at dose levels up to 216mg/m^2 -

- Promising single-agent clinical activity observed across multiple tumor types -

LEXINGTON, Mass., Jun 07, 2010 (BUSINESS WIRE) --Synta Pharmaceuticals Corp. (NASDAQ: SNTA) announced that clinical results for two Phase 1 trials of STA-9090 in solid tumors, as well as 12 month updated survival results from the SYMMETRY trial of elesclomol in metastatic melanoma, were presented at the 2010 Annual Meeting of the American Society of Clinical Oncology (ASCO). STA-9090 is a potent, second generation, small molecule Hsp90 inhibitor that has shown strong activity in a broad range of preclinical solid and hematologic cancer models, including models highly resistant to treatment. The chemical structure of STA-9090 is unrelated to the first generation, ansamycin family of Hsp90 inhibitors (e.g., 17-AAG or IPI-504).

"The Phase 1 solid tumor results presented at ASCO demonstrate that STA-9090 is well-tolerated and has promising clinical activity," said Jonathan Goldman, M.D., Premier Oncology and lead author on the Phase 1 trial with once-weekly dosing schedule. "Importantly, there has been no evidence of the severe hepatic or commonly occurring ocular toxicity that has been observed with other Hsp90 inhibitors. We have been encouraged by the evidence of single-agent clinical activity: several patients who had progressed or failed to respond to multiple prior therapies experienced substantial tumor shrinkage and prolonged disease control with STA-9090; more than half of all evaluable patients experienced disease control. The scientific rationale for Hsp90 inhibition in cancer is very strong and the clinical data presented at ASCO suggest that STA-9090 may be the first compound to realize the potential of this target."

"Based on the favorable safety profile and evidence of single-agent clinical activity, we believe that STA-9090 is the leading Hsp90 program in clinical development today, with exciting potential across a number of cancer indications," said Vojo Vukovic, M.D., Ph.D., Senior Vice President and Chief Medical Officer, Synta Pharmaceuticals. "With eight trials currently underway and up to 15 expected by the end of the year, we have a robust clinical program designed to identify the patient populations likely to derive the greatest benefit from treatment with STA-9090, either as a single-agent or in combination."

STA-9090 is currently being evaluated in four Phase 2 trials in solid tumor cancers - non-small cell lung cancer, gastrointestinal stromal tumors, colorectal cancer, and gastric cancer - and two trials in hematologic cancers. The two Phase 1 solid tumor trials are expected to complete in 2010. Preliminary Phase 2 results are expected later in 2010.

Synta also presented 12 month survival data from the Phase 3 SYMMETRY trial of elesclomol in metastatic melanoma. The results are consistent with earlier data presented at Melanoma XIII which demonstrate a differential response to treatment with elesclomol based on level of baseline lactate

dehydrogenase (LDH). One or more clinical trials of elesclomol are expected to initiate in the second half of 2010.

All Synta posters presented at ASCO are available at www.syntapharma.com.

STA-9090 well-tolerated in Phase 1 once-weekly dosing solid tumor trial with encouraging signs of activity

Poster Presentation: June 5, 8:00 a.m. - 12:00 p.m. CT; Developmental Therapeutics; General Poster Session, Board 15, First author: Jonathan W. Goldman, M.D., Premiere Oncology, Santa Monica, CA.
Title: A Phase 1 dose-escalation study of the Hsp90 inhibitor STA-9090 administered once weekly in patients with solid tumors.
Permanent Abstract Number: 2529
Poster Discussion: June 5, 12:30 p.m. CT; Lesley Seymour, M.D., Queen's University, Kingston, Ontario, Canada.
Title: Developmental Therapeutics, Clinical Pharmacology and Immunotherapy
Location: E354b

STA-9090 was well-tolerated at dose levels of 7-216 mg/m^2 administered on a once-weekly schedule. Dose-limiting toxicities of asthenia/fatigue and diarrhea were transient and reversible and there was no evidence of severe hepatic or ocular toxicities. Stable disease (SD) was seen in 23 of 42 evaluable patients, with 16 patients achieving SD for more than sixteen weeks (3 additional patients achieved SD at week 8 and remain on treatment). Two case studies were presented: a 66 year old male with bronchoalveolar non-small cell lung cancer who progressed on six prior treatment regimens with treatment duration on prior regimens of 2-4 months. This patient experienced 25% reduction in target lesion size following treatment with STA-9090 and remained on treatment for 13 months. A 49 year old male with a gastrointestinal stromal tumor (GIST), who had progressed on five prior treatment regimens, experienced an 18% reduction in target lesion size following treatment with STA-9090 and remained on treatment for 8 months. In addition, a patient with colon cancer achieved confirmed partial response (PR) per RECIST criteria, and three patients are continuing on study treatment.

STA-9090 in Phase 1 twice-weekly dosing solid tumor trial - encouraging signs of activity, MTD not achieved

Poster Presentation: June 7, 8:00 a.m. - 12:00 p.m. CT; Developmental Therapeutics; General Poster Session, Board 17C, First author: James M. Cleary, M.D., Dana-Farber Cancer Institute, Boston, MA.
Title: A Phase 1 dose-escalation study of the Hsp90 inhibitor STA-9090 administered twice weekly in patients with solid tumors.
Permanent Abstract Number: 3083

Enrollment continues with STA-9090 well-tolerated at doses of 2-50 mg/m^2.26 of 36 patients were evaluable for response as of March 15, 2010. The safety profile to date has been consistent with the results of the Phase 1 once-weekly dosing trial. Signs of clinical activity have included one patient with melanoma who achieved a confirmed partial response and 10 patients with stable disease. The maximum tolerated dose (MTD) has not yet been reached.

12 Month Survival Data - Phase 3 SYMMETRY trial of elesclomol in metastatic melanoma

Poster Presentation: June 6, 8:00 a.m. - 12:00 p.m. CT; Melanoma/Skin Cancers; General Poster Session, Board 50B, First author: Vojo Vukovic, M.D., Ph.D., Synta Pharmaceuticals.
Title: Phase 3, randomized, double-blind study of elesclomol and paclitaxel versus paclitaxel alone in stage IV metastatic melanoma (MM): 1-year OS update.
Permanent Abstract Number: 8550

Updated results are consistent with previously presented results (6-month follow-up): LDH remains an important predictor of Progression Free Survival (PFS) and Overall Survival (OS) outcome. SYMMETRY data continues to mature with time from last patient enrolled to data cutoff less than the median OS in the normal LDH patient population. The adverse event profile in the treatment arm (elesclomol + paclitaxel) was comparable to the control arm (paclitaxel alone) indicating that elesclomol is well-tolerated. The clinical observations regarding correlation of LDH levels with treatment outcomes are consistent with the underlying mechanism of action of elesclomol. Elesclomol disrupts energy metabolism in cancer cell mitochondria, and has been shown to be more active in cells where energy production occurs primarily through mitochondrial respiration (normoxic conditions; normal LDH) and less active in cells where energy production occurs primarily through glycolysis (hypoxic conditions; high LDH).

About STA-9090

STA-9090 is a potent, second generation, small-molecule Hsp90 inhibitor, with a chemical structure unrelated to the first-generation, ansamycin family of Hsp90 inhibitors (e.g., 17-AAG or IPI-504). 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, gastrointestinal stromal tumors (GIST), melanoma, AML, chronic myeloid leukemia, Burkitt's lymphoma, diffuse large B-cell lymphoma, and multiple myeloma - as well as potent activity against cancers resistant to imatinib (Gleevec$^{(R)}$), sunitinib (Sutent$^{(R)}$), erlotinib (Tarceva$^{(R)}$), and dasatinib (Sprycel$^{(R)}$).

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, KIT, MET, EGFR, FLT3, HER2, PDGFRA, 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 Elesclomol

Elesclomol induces programmed cell death (apoptosis) in cancer cells by disrupting cancer cell energy production and metabolism. In laboratory studies, elesclomol has been observed to increase the level of reactive oxygen species in cancer cells beyond sustainable levels, triggering the

mitochondrial apoptosis pathway. This mechanism of action represents a novel way of selectively targeting and killing cancer cells.

About Synta Pharmaceuticals

Synta Pharmaceuticals Corp. is a biopharmaceutical company focused on discovering, developing, and commercializing small molecule drugs to extend and enhance the lives of patients with severe medical conditions, including cancer and chronic inflammatory diseases. Synta has a unique chemical compound library, an integrated discovery engine, and a diverse pipeline of clinical- and preclinical-stage drug candidates with distinct mechanisms of action and novel chemical structures. All Synta drug candidates were invented by Synta scientists using our compound library and discovery capabilities. For more information, please visit www.syntapharma.com.

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