Synta Receives $80 Million Upfront Payment from GlaxoSmithKline

December 5, 2007

Payment Received Following Expiration of Hart-Scott-Rodino Waiting Period

LEXINGTON, Mass.--(BUSINESS WIRE)--Dec. 5, 2007--Synta Pharmaceuticals Corp. (NASDAQ: SNTA) announced today that it has received an upfront non-refundable cash payment of $80 million from GlaxoSmithKline (GSK) following expiration of the waiting period imposed by the Federal Trade Commission (FTC) under the Hart Scott Rodino Antitrust Improvements Act for their collaboration agreement for the joint development and commercialization of elesclomol entered into on October 8, 2007. Elesclomol is a first-in-class, small-molecule, oxidative stress inducer that is currently in a global, pivotal Phase 3 trial in metastatic melanoma - the SYMMETRY(SM) trial.

About Elesclomol (Formerly STA-4783)

Elesclomol is a novel, injectable, investigational drug candidate that is believed to kill cancer cells by elevating oxidative stress levels beyond a breaking point, triggering programmed cell death.

In a double-blind, randomized, controlled Phase 2b clinical trial in 81 patients with metastatic melanoma, elesclomol in combination with paclitaxel met the primary endpoint - doubling the median time patients survived without their disease progressing - compared to paclitaxel alone ($p = 0.035$). The most common adverse events in the elesclomol plus paclitaxel group included fatigue, alopecia, constipation, nausea, hypoaesthesia, arthralgia, insomnia, diarrhea, and anemia.

Synta is conducting a pivotal, confirmatory Phase 3 clinical trial of elesclomol in combination with paclitaxel in metastatic melanoma (the SYMMETRY trial). Synta announced in November 2007 that it had successfully completed the Special Protocol Assessment (SPA) process, reaching agreement with the FDA on the design, conduct, and planned analyses of the trial.

Phase 2 trials in other indications, and in combination with other agents, are planned. Elesclomol has received Fast Track designation from the FDA for development in metastatic melanoma.

About Oxidative Stress and Apoptosis

Oxidative stress in cells is the presence of elevated levels of reactive oxygen species (ROS) such as oxygen radicals and hydrogen peroxide. ROS can be generated by many stimuli, including ordinary cell metabolism, exposure to heat or radiation, or attack by bacteria or viruses. Normal cells have a strong anti-oxidant capacity that regulates the levels of ROS. Cancer cells, however, typically operate at a much higher level of oxidative stress than normal cells and have a greatly diminished anti-oxidant capacity. This diminished capacity to clear ROS leaves them vulnerable to further increases in oxidative stress. When ROS levels exceed a critical threshold, continued survival of the cell becomes unsustainable and programmed cell death (apoptosis) is initiated.

In a series of in vitro and in vivo experiments, elesclomol has been shown to rapidly cause a dramatic increase in the level of ROS inside cancer cells and induce apoptosis. At similar doses and exposure, elesclomol has little to no impact on non-cancer cells. The high selectivity for targeting cancer cells may explain the favorable safety profile observed in preclinical experiments, including a therapeutic index - the ratio of maximum tolerated dose to efficacious dose - significantly higher than many commonly-used chemotherapies.

Elevated oxidative stress induces apoptosis through the mitochondrial pathway. In addition to potent induction of oxidative stress and apoptosis in cancer cells as a single agent, elesclomol has been shown to enhance the activity of other anti-cancer agents that act through the mitochondrial pathway. These include commonly used first-line agents such as paclitaxel, docetaxel, gemcitabine, and rituximab.

Oxidative stress induction represents a novel anti-cancer strategy - a novel way of differentiating, and selectively killing, cancer cells vs. normal 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. Synta has a partnership with GlaxoSmithKline for the joint development and commercialization of its lead investigational drug candidate, elesclomol, which is in a global, pivotal Phase 3 clinical trial for the treatment of metastatic melanoma. For more information, please visit www.syntapharma.com.

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 and progress 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-Q for the quarter ended September 30, 2007 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.

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