Synta Announces Publication of First Patent Application Covering its Hsp90-inhibitor Drug Conjugate (HDC) Platform

October 31, 2013

LEXINGTON, Mass.--(BUSINESS WIRE)--Oct. 31, 2013-- Synta Pharmaceuticals Corp. (NASDAQ: SNTA) today announced the publication of the Company's first patent application covering its proprietary Hsp90-inhibitor Drug Conjugate (HDC) platform, which leverages the Company's expertise in chaperone biology and medicinal chemistry to create a new class of anti-cancer therapies.

The patent application covers Synta's proprietary HDC technology, including composition of matter claims covering over 400 HDC compounds synthesized by Synta to date, methods for identifying therapeutically effective compounds, and methods of use against a wide range of diseases and conditions.

Hsp90 is a chaperone protein required by many cancer cells to maintain the stability and function of numerous proteins that drive cancer cell growth, survival, and metastasis. Small molecule inhibitors of Hsp90, including Synta's drug candidate ganetespib as well as first-generation inhibitors such as 17-AAG and its derivatives, are retained in tumors for as much as 20 times longer than in blood or normal tissue [1, 2]. These properties are believed to be due to overexpression of an active form of Hsp90 in cancer cells as compared to normal tissues, and have been recently applied for tumor imaging [3, 4].

HDCs are drugs consisting of an Hsp90 inhibitor (targeting moiety) joined to an anti-cancer agent (payload) via a cleavable chemical linker optimized for controlled release of payload drug inside cancer cells. Because HDCs are small molecules, they diffuse into the cell passively, avoiding reliance on cell surface antigens or transporters, as is required by other delivery mechanisms such as antibody-drug conjugates (ADCs).

The longer retention of Hsp90 inhibitors in tumors results in higher concentration and longer duration of active payload drug inside cancer cells than occurs with standard administration of unconjugated chemotherapy or other payloads. This enhanced delivery creates the potential for greater cancer cell killing and reduced side effects.

Synta has developed over 400 HD-Conjugated chemotherapeutics, kinase inhibitors, hormone therapies, immunomodulators, and epigenetic modifiers, creating the potential for next-generation compounds in each of these categories. Examples include HD-Conjugated bendamustine, temozolomide, doxorubicin, 5-FU, pemetrexed, SN-38, topotecan, vorinostat, panobinostat, fulvestrant, abiraterone, lenalidomide, pomalidomide, docetaxel, carboplatin, bortezomib, sunitinib, and sorafenib.

Proof-of-concept has been demonstrated in preclinical models of cancer, showing both improved delivery, including greatly increased concentration and duration of payload in tumors as compared to

plasma and normal tissues, as well as significantly improved anti-tumor activity compared to administration of unconjugated payload in animal models of cancer.

“We are excited about realizing the potential of this new class of anti-cancer therapies,” said Safi R. Bahcall, Ph.D., President and CEO of Synta. “We plan to selectively partner certain HDC therapeutic classes, in order to advance the potential to improve delivery of both approved and investigational anti-cancer agents across a broad range of oncology indications.”

The HDC patent application, PCT/US2013/036783, published as International Patent Application No. WO/2013/158644.

References

1. J.L. Eiseman et al. Cancer Chemother Pharmacol. 2005 Jan;55(1):21-32
2. K.P. Foley et al. AACR-NCI-EORTC Conference. 2009 (abstr #C91)
3. G. Chiosis, L. Neckers, ACS chemical biology. 2006;1(5):279-284
4. J. F. Gerecitano et al., J Clin Oncol. 31, 2013 (suppl; abstr 11076)

About Ganetespib

Ganetespib, an investigational drug candidate, is a selective inhibitor of heat shock protein 90 (Hsp90), a molecular chaperone which controls the folding and activation of a number of client proteins that drive tumor development and progression. Many solid and hematologic tumors are dependent on Hsp90 client proteins including proteins involved in “oncogene addiction” (ALK, HER2, mutant BRAF and EGFR, androgen receptor, estrogen receptor, and JAK2); proteins involved in resistance to chemotherapy and radiation therapy (ATR, BCL2, BRCA1/2, CDK1/4, CHK1, survivin, and WEE1); proteins involved in angiogenesis (HIF-1alpha, VEGFR, PDFGR, and VEGF); and proteins involved in metastasis (MET, RAF, AKT, MMPs, HIF-1alpha, and IGF-1R). In preclinical models, inhibition of Hsp90 by ganetespib results in the inactivation, destabilization, and eventual degradation of these cancer-promoting proteins. Ganetespib is being evaluated in trials in lung cancer, breast cancer, and other tumor types. The most common adverse event seen to date has been transient, mild or moderate diarrhea, which has been manageable with standard supportive care. Information on these trials can be found at www.clinicaltrials.gov.

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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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 our HDC partnership plans, 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, 2012 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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