Updated Results from Phase 2b/3 GALAXY Trial Show Promising Improvement in Survival from the Addition of Ganetespib to Docetaxel in Second-Line Non-Small Cell Lung Cancer

September 29, 2012

– Data presented at ESMO 2012 Congress –

– Results support advancing to Phase 3 stage of GALAXY trial –

– Ganetespib shown to have potent anti-angiogenic properties –

– Synta to host reception to discuss results, today, at 6:00 p.m. CEST (12:00 p.m. EDT), webcast to begin at 6:30 p.m. CEST (12:30 p.m. EDT) –

VIENNA--(BUSINESS WIRE) -- Sep. 29, 2012 --Synta Pharmaceuticals Corp. (NASDAQ: SNTA) today announced results from an interim analysis of the Phase 2b portion of the GALAXY trial, a global, randomized, multi-center Phase 2b/3 study designed to evaluate the efficacy and safety of the Company's lead Hsp90 inhibitor, ganetespib, as second-line treatment for advanced non-small cell lung cancer (NSCLC). The results showed good tolerability for the combination of ganetespib (G) and docetaxel (D), as well as meaningful improvements in overall survival (OS) in adenocarcinoma patients receiving docetaxel plus ganetespib compared to those receiving docetaxel alone. The results were presented by Suresh Ramalingam, MD, Professor, Hematology & Medical Oncology, and Director, Translational Thoracic Malignancies Program, of the Winship Cancer Institute of Emory University, in a poster session at the European Society for Medical Oncology 2012 Congress in Vienna, Austria. A copy of the poster is available at http://www.syntapharma.com/documents/Ganetespib_GALAXY_ESMO_2012_Poster.pdf.

The GALAXY trial is based on a two-stage, operationally adaptive design. The first-stage, randomized, open-label, 240-patient Phase 2b portion of the trial is enrolling Stage IIIB/IV NSCLC patients who have progressed following one prior line of therapy, and is designed to identify the patient population, defined by biomarker or other disease characteristic, for advancement into the Phase 3 portion of the trial.

An interim analysis was planned for when approximately 80% of the target 240 adenocarcinoma patients had been enrolled. A total of 187 patients were enrolled at the time of analysis, of which 172 patients had been entered into the clinical database at the time of data cutoff.

"The preliminary results from GALAXY indicate that the addition of ganetespib to docetaxel is well tolerated and may improve outcomes in patients compared to docetaxel alone," said Dr. Ramalingam, a Principal Investigator of the study. "This includes promising improvements in survival seen across the broad adenocarcinoma population as well as in key predefined patient populations. A well-tolerated combination regimen that extends survival associated with salvage therapy in NSCLC will meet a much awaited need to improve the current standard of care."

Targeting the dependence of cancer cell growth and proliferation pathways on the Hsp90 chaperone represents a new way to interrupt cancer cell signaling and reduce tumor aggressiveness. Hsp90 inhibition by ganetespib simultaneously inhibits multiple critical cancer-promoting pathways, including pathways responsible for tumor metastasis, angiogenesis, and resistance to conventional therapies.

“Chaperone inhibition offers a third approach to targeting cancer growth pathways, distinct from kinase inhibitors or antibodies, which target a single oncogenic driver. Ganetespib may be the first compound to unlock the true potential of chaperone inhibition, effectively changing the biology of tumors,” said Dean Fennell, PhD, FRCP, FRCPI, Professor of Thoracic Medical Oncology at the University Hospitals of Leicester, also a Principal Investigator of the GALAXY trial. “The magnitude and consistency of improvement that has been observed in this analysis exceeded our expectations for trials of this stage. We are all looking forward to the final clinical and molecular profiling results from this portion of the GALAXY trial, and to bringing this exciting compound to patients.”

“The objective of the interim analysis presented today was to identify the best choice of patient population and trial design for transitioning to the Phase 3 stage of the study,” said Safi R. Bahcall, PhD, President and CEO of Synta. “The broad-based activity seen in the results presented today support advancing into the Phase 3 stage in all adenocarcinoma patients. The results have yielded a rich data set which we are using to optimize and de-risk the Phase 3 stage of the program. We are hopeful that this next stage of development will lead to a new treatment option for patients fighting this devastating disease.”

Enrollment completion of the Phase 2b stage of the GALAXY trial and the transition to the Phase 3 stage are expected later this year. Based on current assumptions, the Company anticipates that Phase 3 will enroll approximately 500 adenocarcinoma patients, with overall survival as a primary endpoint. Biomarker findings and other patient selection and treatment experience from the Phase 2b stage will be incorporated into the design of the Phase 3 stage. An announcement with additional Phase 3 details is anticipated later this year, following discussion with regulatory agencies.

Results in Detail

Patients in the GALAXY trial are randomized 1:1 to receive ganetespib plus docetaxel or docetaxel alone. Patients in both arms receive a standard regimen of docetaxel 75 mg/m2 on day 1 of a 21-day cycle; patients in the combination arm receive in addition ganetespib 150 mg/m2 on days 1 and 15. Treatment continues until disease progression per RECIST 1.1 criteria.

Based on a target enrollment of 240 adenocarcinoma patients, GALAXY is 88% powered to detect an improvement in PFS from 3 to 4.5 months, and 73% powered to detect an improvement in OS from 6 to 8.5 months, both key secondary endpoints. Primary endpoints are PFS in elevated LDH patients and mutant KRAS patients, two subpopulations of particular interest at the initiation of the Phase 2b portion of the study. All powering assumptions are based on a 1-sided alpha of 0.05.

Activity – All adenocarcinoma patient population

At the time of the September 10th data cutoff for the interim analysis, 172 adenocarcinoma patients had been entered into the clinical database, with 88 patients receiving D and 84 patients receiving G+D. The median follow-up from the 172 patients in this analysis set is 3.26 months. Baseline characteristics were balanced between the D and G+D arms. An additional analysis was planned for

patients with a minimum of 6 months of follow-up, those patients enrolled before March 20th (n=38, D vs. n=39, G+D). The median follow-up from the 77 patients in this data set is 6.32 months. Overall survival results are described in the table below. Median survival for the docetaxel control arm was consistent with historical results for docetaxel. Median survival had not yet been reached (NR) for the combination arm.

	All adeno pts Sep cutoff (N=172)	**All adeno pts Mar cutoff (N=77)**
Overall survival		
Hazard ratio	**0.688**	**0.568**
C.I. (90%)	(0.417, 1.135)	(0.312, 1.032)
p-Value	0.183	0.056
Median (G+D vs D)	NR vs 7.4 mo	NR vs 7.4 mo

Hazard ratio (HR) is an estimate of comparative risk between the two treatment groups. A hazard ratio of 1 can be interpreted as no decrease in risk, while a hazard ratio of 0.688 can be thought of as a 31.2% reduction in risk of occurrence for the event as compared to the control group. All p-values are calculated using the 1-sided stratified log-rank test for survival endpoints and using Fisher's Exact test for response rate.

Progression free survival in the full data set was 2.8 months vs. 4.2 months (p=0.076) and overall response rate was 8% vs. 16% (p=0.078) for D vs. G+D, respectively.

Activity – primary subpopulation analyses

The GALAXY trial specifies two co-primary endpoint subpopulations, patients with mutant KRAS and patients with elevated baseline serum of LDH, and four stratification factors –smoking status, ECOG Performance Status, time since diagnosis of advanced disease, and LDH level.

Survival outcomes for these primary subpopulations (D vs. G+D):

LDH		Elevated	Normal
	N	49	123
	Hazard ratio	**0.67**	**0.69**
	C.I. (90%)	(0.33,1.37)	(0.33,1.40)
	p-Value	0.18	0.19
KRAS		Mutant	Wild-type
	N	38	94
	Hazard ratio	**0.41**	**0.72**
	C.I. (90%)	(0.15,1.16)	(0.36,1.45)
	p-Value	0.07	0.22

Results for the primary endpoint subpopulations, while preliminary, suggest that ganetespib activity is broad-based, rather than restricted to one of these biomarker-defined subpopulations.

Survival outcomes for the remaining populations defined by the specified stratification factors (D vs. G+D):

Time since diagnosis advanced disease		>6 mo	</=6 mo
	N	108	51
	Hazard ratio	**0.37**	**1.83**
	C.I. (90%)	(0.18,0.77)	(0.80,4.19)
	p-Value	0.01	0.89
Smoking status		Never/past	Current
	N	130	42
	Hazard ratio	**0.48**	**1.61**
	C.I. (90%)	(0.26,0.90)	(0.67,3.89)
	p-Value	0.02	0.81
ECOG PS		0	1
	N	80	92
	Hazard ratio	**0.75**	**0.72**
	C.I. (90%)	(0.33,1.73)	(0.38,1.35)
	p-Value	0.29	0.19

Results for the subpopulations as well as results for analyses of activity by other patient characteristics or biomarkers create useful information for optimizing the design of the Phase 3 portion of the trial. Tumor tissue samples have been collected from over 90% of patients, and additional biomarker analyses are ongoing.

Non-adenocarcinoma patients

Prior to an amendment of the GALAXY trial protocol in April 2012, a total of 69 non-adenocarcinoma patients were enrolled, of which 60 patients were of squamous cell histology. No evidence of benefit and possible safety concerns were observed in this patient population, including cases of hemoptysis. These observations are consistent with clinical observations of VEGF inhibitors in this patient population, and preclinical results showing that ganetespib inhibits production of VEGF in tumor cells. The study was amended to enroll adenocarcinoma-only patients.

Safety

The adverse event profile was comparable between both arms. The proportion of adenocarcinoma patients with at least one adverse event (AE) was 69% vs. 90%; with grade 3 or 4 AEs was 37% vs. 56%; with AEs leading to treatment discontinuation was 8% vs. 15%; and with AEs with outcome of

death were 8% vs. 7%, for D (N=86) vs. G+D (N=81), respectively. The most common AEs, all grades were neutropenia (50% vs. 49%), diarrhea (12% vs. 42%) and fatigue (20% vs. 31%), for D vs. G+D, respectively. Diarrhea and fatigue were predominantly grade 1 and grade 2; the incidence of grade 3 or 4 diarrhea was 0% vs. 4% and grade 3 or 4 fatigue was 2% vs. 5% in D vs. G+D, respectively. The most common grade 3 or 4 AEs were neutropenia (34% vs. 35%), febrile neutropenia (2% vs. 10%), and fatigue (2% vs. 5%). Compared to other Hsp90 inhibitors, there were relatively few reported incidences of ocular toxicity, 4 (5%) in the G+D arm and 1 (1%) in the D arm, all of which were transient and grade 1 or 2. None of the cases were described as visual impairment.

Ganetespib and angiogenesis

The Company also announced preliminary results from an ongoing investigator-sponsored trial demonstrating that treatment with ganetespib leads to inhibition of expression of HIF-1a and other drivers of tumor growth in patient tumors. HIF-1a plays a master role in driving multiple processes of tumor aggressiveness, including metastasis, angiogenesis, immunosuppression, stem cell immortalization, and resistance to chemotherapy, radiotherapy, and immunotherapy.

"Ganetespib has shown promising ability to change tumor biology," said Bassel El-Rayes, MD, Associate Professor, Hematology and Medical Oncology, Winship Cancer Institute of Emory University. "In an ongoing trial evaluating ganetespib in patients with rectal cancer, we have biopsied tumors from patients before and after treatment. We observed significant inhibition of HIF-1a, STAT-3, and VEGF, key drivers of tumor metastasis and angiogenesis, in patients who were treated with ganetespib. These results are consistent with preclinical experiments in which we demonstrated ganetespib significantly inhibits VEGF synthesis in cancer cells and disrupts tumor vasculature. Collectively, the results suggest ganetespib provides a novel approach to inhibiting angiogenesis compared to currently used agents: suppressing VEGF production rather than targeting VEGF signaling."

Reception and Webcast

Synta will also be hosting a reception to discuss the interim results of the GALAXY trial on Saturday, September 29, 2012 from 6:00 p.m. *(12:00 p.m. EDT)* to 9:00 p.m. *(3:00 p.m. EDT)* Central European Summer Time. The event will include management presentations and discussion with key opinion leaders, followed by a question and answer session.

The reception will be webcast beginning at 6:30 p.m. CEST *(12:30 p.m. EDT)* which, along with an accompanying slide presentation and replay of the event, will be available on the home page of the Company's website, www.syntapharma.com.

About Ganetespib

Ganetespib is a potent inhibitor of heat shock protein 90 (Hsp90) that is structurally unrelated to first-generation, ansamycin-related Hsp90 inhibitors. In preclinical experiments, ganetespib has shown activity in multiple tumor models both as a single agent and in combination with certain widely used cancer agents. Company-sponsored clinical trials with ganetespib include 1) the GALAXY Phase 2b/3 trial evaluating ganetespib in combination with docetaxel as second-line treatment of non-small cell lung cancer (NSCLC), 2) the CHIARA Phase 2 trial evaluating ganetespib monotherapy in ALK+ NSCLC, and 3) the ENCHANT Phase 2 trial evaluating ganetespib as first-line treatment for HER2+ and triple-negative metastatic breast cancer. In addition, ganetespib is being evaluated in

investigator-sponsored trials including lung, breast, prostate, gastric, pancreatic, and colorectal cancers as well as ocular melanoma, acute myeloid leukemia and multiple myeloma. Information on these trials can be found at www.clinicaltrials.gov.

About the GALAXY Trial™

The GALAXY (**G**anetespib **A**ssessment in **L**ung c**A**ncer with doceta**X**el) trial is a randomized Phase 2b/3 trial comparing the combination of ganetespib and docetaxel versus docetaxel alone in patients with Stage IIIB/IV NSCLC who have received one prior systemic therapy. More information about the GALAXY trial can be found at www.clinicaltrials.gov (NCT01348126).

About Hsp90

Hsp90 is a molecular chaperone required for the proper folding and activation of many cancer-promoting proteins, and is recognized as a key facilitator of cancer cell growth and survival. Many of the “client proteins” of Hsp90 – such as ALK, AKT, BCR-ABL, BRAF, KIT, MET, EGFR, FLT3, HER2, HIF-1alpha, PDGFRA, VEGFR 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.

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.

Safe Harbor Statement

This media release contains 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 and progress of our GALAXY trial, our clinical development plans for ganetespib and the anticipated design of the Phase 3 portion of the GALAXY trial, 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. Those risks and uncertainties include whether the results from the interim analysis of the Phase 2b portion of the GALAXY trial will be consistent with future data from the Phase 2b portion and the Phase 3 stage of the trial; whether the results at the conclusion of the Phase 2b portion of the trial will demonstrate safety and statistically significant efficacy; challenges with respect to patient enrollment or other delays in our clinical development plans; as well as other risks and uncertainties described in the "Risk Factors" section of our Form 10-K for the year ended December 31, 2011, as filed with the Securities and Exchange Commission, including those under the heading “Risks Related to the Development and Regulatory Approval of our Drug Candidates.” 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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