June 1, 2012

Onconova Presents Clinical Trial Data for Oral Rigosertib at ASCO Annual Meeting

Two Clinical Trials Assessed Oral Safety and Bioavailability

JUNE 1, 2012 – NEWTOWN, PA & PENNINGTON, NJ: Onconova Therapeutics, Inc. announced that two presentations regarding the development of an oral formulation of rigosertib (Estybon®, ON 01910.Na) for patients with solid tumors and myelodysplastic syndromes (MDS) will be presented at the American Society of Clinical Oncology (ASCO) Annual Meeting, June 1-5, in Chicago, Illinois.

Safety and efficacy of oral rigosertib in patients with solid tumors will be presented on Saturday, June 2, by Daniel Bowles, M.D., University of Colorado School of Medicine, and colleagues. On Monday, June 4, a poster presentation will describe the bioavailability of orally-administered rigosertib in MDS patients. Azra Raza, M.D. and Rami Komrokji, M.D. and their colleagues conducted this study at Columbia University Medical Center and the H. Lee Moffitt Cancer Center, respectively.

Collectively, these presentations form the basis for further development of oral rigosertib in solid tumor and MDS patients. Recently, Onconova initiated a Phase II trial named ONTARGET (**O**ral O**N** 01910.Na in **T**r**A**nsfusion-**R**equirin**G** patients with my**E**lodysplas**T**ic syndrome), studying a transfusion-dependent low-risk MDS patient population.

Rigosertib, which employs a novel mechanism of action, has been shown to be active in both solid tumors and hematologic cancers. The intravenous formulation of rigosertib is in a pivotal Phase III trial (designated ONTIME, **ON** 01910.Na **T**rial **I**n **M**yelodysplastic Syndrom**E**), which is evaluating rigosertib in high-risk MDS patients. Rigosertib also is being evaluated in several Phase I and II clinical trials at major medical centers in the USA and abroad. Overall, rigosertib has been administered to more than 600 cancer patients in clinical trials either as a single agent or in combination with chemotherapy.

ASCO Presentations Concerning Rigosertib (ON 01910. Na):
Saturday, June 2:
Poster Discussion Session: 4:45 – 5:45 PM, Room S406;
Poster Session: 1:15 – 5:15 PM, Room S405
Session Category: Developmental Therapeutics – Experimental Therapeutics
Sub-category: New Targets, New Technologies

Abstract #3017: "Phase I study of oral rigosertib in patients with advanced solid tumors"

D.W. Bowles[1], J. Diamond[1], E. Lam[1], W.A. Messersmith[1], C. Weekes[1], S. Leong[1], L. Gore[1], C. Lieu[1], E. Freas[1], C. Ren[2], F.Wilhelm[2], S.G. Eckhardt[1], A. Jimeno[1]

[1] University of Colorado School of Medicine, Aurora, CO

[2] Onconova Therapeutics, Inc., Newtown, PA

Twenty-five patients with histologically confirmed solid tumors refractory to standard therapy were given escalating doses of oral rigosertib twice daily. Doses were increased according to a schedule until the appearance of grade 2 or grade 3/4 toxicities. The maximum tolerated dose (MTD) of oral rigosertib administered twice daily continuously is 560 mg. Dysuria was identified as a potential dose-limiting adverse event and a reported toxicity. The investigators found that dysuria could be successfully managed by ensuring oral hydration and administering sodium bicarbonate. The antitumor activity in this study supported past observations of rigosertib efficacy in other solid tumor clinical trials. Pharmacokinetic (PK) data reveal plasma levels with oral rigosertib were above the predicted pharmacodynamically active levels. Final safety and efficacy results, plasma and urinary PK relationships, and mutational analyses from archival tissue will be presented.

Monday, June 4:
General Poster Session: 8 AM – 12 Noon, S Hall A2
Session Category: Developmental Therapeutics – Experimental Therapeutics

Abstract #3081: "A Phase 1 Study to Assess Oral Bioavailability of a Novel Oral Soft Gelatin Capsule Formulation of Rigosertib (ON 01910.Na) Under Fasted and Fed Conditions in Patients with Myelodysplastic Syndromes"

A. Raza[1], R.S. Komrokji[2], R. Brooks[1], J.E. Lancet[2], A.F. List[2], C. Ren[3], D.R. Taft[4], F. Wilhelm[3] , M. Maniar[3]

[1]Columbia University Medical Center, New York, NY

[2]Malignant Hematology, H. Lee Moffitt Cancer Center & Research Institute, Tampa, FL

[3]Onconova Therapeutics Inc, Newtown, PA

[4]Arnold & Marie Schwartz College of Pharmacy and Health Sciences, Brooklyn, NY

In this Phase I study, the investigators found orally-delivered rigosertib to be well tolerated and readily bioavailable under fasting conditions. Observations of clinical activity includedreductions of bone marrow blasts in high-risk MDS patients who were refractory to hypomethylating agents and reductions red blood cell (RBC) transfusions in transfusiondependent patients, with a transition to transfusion independence. This trial and subsequent evaluations could demonstrate that oral administration of rigosertib is preferred over intravenous infusion.

About Rigosertib
Rigosertib (Estybon®, ON 01910.Na) is a small molecule inhibitor of critical pathways important in the growth and survival of cancer cells. Extensive Phase I-III studies with rigosertib have been conducted at leading institutions in the U.S. and abroad in more than 600 patients with solid tumors and hematological cancers, including MDS and acute myeloid leukemia (AML). Based on data from clinical studies that explored various doses and regimens of intravenous rigosertib, the most common adverse events that were reported in 20-35% of patients were: fatigue, abdominal cramping, pain, nausea, gas, vomiting, and diarrhea. A multi-site Phase III ONTIME trial in MDS patients is being conducted under a Special Protocol Assessment (SPA) from the U.S. Food and Drug Administration (FDA) and is being supported by an award from the Therapeutics Acceleration Program of The Leukemia and Lymphoma Society. Both the FDA and European Medicines Agency have granted Orphan Drug Designation for the use of rigosertib in MDS. The rigosertib clinical program in solid tumors is also advancing. In a Phase II/III adaptive design trial, ONTRAC is a Phase II/III, multicenter, randomized, controlled study to compare the efficacy and safety of gemcitabine alone vs. rigosertib combined with gemcitabine in patients with previously untreated metastatic pancreatic cancer.

Currently Enrolling Clinical Trials with Rigosertib:

About ONTIME

ONTIME (**ON** 01910.Na **T**rial **I**n **M**yelodysplastic Syndrom**E**) is a pivotal Phase III, multicenter, randomized trial, comparing rigosertib plus best supportive care (BSC) to BSC alone, in high-risk MDS patients with excess blasts (5% to 30% bone marrow blasts), who are refractory, intolerant to, or have relapsed after azacitidine or decitabine treatment. ONTIME is enrolling patients in the United States and five countries in the EU. Additional information about this trial is available at www.clinicaltrials.gov. The ClinicalTrials.gov identifier for ONTIME is NCT01241500.

About ONTRAC

ONTRAC (**ON** 01910.Na **TR**ial in Patients with **A**dvanced Pancreatic **C**ancer) is a Phase II/III, multicenter, randomized, controlled study to compare the efficacy and safety of gemcitabine alone vs. rigosertib combined with gemcitabine in patients with previously untreated metastatic pancreatic cancer. The trial is expected to enroll pancreatic cancer patients in both the United States and India. The primary end point of the study is overall survival and the secondary end points are progression-free survival, objective response rate, safety/tolerability, and quality of life. The ClinicalTrials.gov identifier for ONTRAC is NCT01360853.

About ONTARGET

ONTARGET (**O**ral O**N** 01910.Na in **T**r**A**nsfusion-**R**equirin**G** patients with my**E**lodysplas**T**ic syndrome) is a Phase II, randomized, two-arm study that will assess the efficacy and safety of oral rigosertib in transfusion-dependent low or intermediate-1 MDS patients, based on IPSS classification. Primary end points of the study are transfusion independence and erythroid response. The ClinicalTrials.gov identifier for ONTARGET is NCT01584531.

About Onconova Therapeutics, Inc.

Onconova Therapeutics, based in Newtown, PA and Pennington, NJ, discovers and develops novel small molecule therapeutics directed against targets involved in signal transduction, cellcycle, and DNA repair. In addition to rigosertib, Onconova is developing two other clinical trialstage products: ON 01210.Na (Ex-RAD®), a radioprotectant, and ON 013105, a novel anticancer agent initially directed to refractory lymphoma, including mantle cell lymphoma. For additional information, please visit http://www.onconova.com.

Contacts:
Kathryn Morris
PR On Call
845-635-9828
kathryn@proncall.com
Scott Megaffin

Onconova Therapeutics
267-759-3680
smegaffin@onconova.us