



ONCONOVA THERAPEUTICS

Onconova Therapeutics Announces Publication of Phase 1 Results in Leukemia Research Exploring Oral Rigosertib in Combination with Azacitidine in Higher-Risk MDS

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RAS-focused mechanism of action and manageable side effect profile indicate potential promise for oral rigosertib as part of future combination therapies

NEWTOWN, Pa., July 07, 2020 (GLOBE NEWSWIRE) -- Onconova Therapeutics, Inc. (NASDAQ: ONTX), a Phase 3-stage biopharmaceutical company focused on discovering and developing novel products to treat cancer, with an initial focus on myelodysplastic syndromes (MDS), today announced the e-publication of results from a Phase 1 company-sponsored study of oral rigosertib in combination with standard dose azacitidine in the treatment of patients diagnosed with either higher-risk myelodysplastic syndrome (HR-MDS) or acute myeloid leukemia (AML) in the international hematological malignancy journal *Leukemia Research*.

"A key strategy emerging in the treatment of MDS is the identification of safe and effective combinations, particularly those involving oral agents. The results from this Phase 1 study represent Onconova's first efforts to explore oral rigosertib in combination with azacitidine to address the unmet medical need in patients with MDS and AML. We anticipate meeting with the FDA, in conjunction with the pivotal data readout from the INSPIRE Trial, for alignment with the agency on a registration trial for the combination of oral rigosertib plus azacitidine in HMA-naïve HR-MDS," said Steven M. Fruchtmann, M.D., President and CEO of Onconova.

"These results coupled with preliminary data from the phase II studies, support further clinical development of this novel combination with a manageable safety profile and efficacy in patients with MDS both those HMA naïve and after HMA failure," said study principal investigator Lewis R. Silverman, M.D., Director, Translational Research Center for the Myelodysplastic Syndrome, Associate Professor, Medicine, Hematology, and Medical Oncology, The Tisch Cancer Institute at the Icahn School of Medicine at Mount Sinai. "The oral administration of rigosertib is not just more convenient for patients, but may improve treatment compliance, leading to improved clinical outcomes."

This publication reports the results of an open-label, dose-escalating Phase 1 study with the combination oral of rigosertib and standard dose azacitidine administered sequentially to patients diagnosed with HR-MDS following HMA-failure, or relapsed/refractory AML. The study objectives were to assess safety and determine the recommended Phase 2 dose (RP2D) for future studies. The study evaluated three dose cohorts of oral rigosertib with no dose-limiting toxicities reported. In addition, the oral rigosertib/azacitidine combination demonstrated an overall response rate of 7/9 (78%) in patients with HR-MDS and 2/7 (29%) in patients with AML. The Phase 2 part of the study is ongoing. Additional details are available on www.clinicaltrials.gov (NCT01926587).

"We believe this combination could eventually prove very beneficial for patients with higher-risk MDS. In addition to its oral formulation and thus ease of administration, rigosertib is potentially an attractive partner for a variety of combination approaches due to its novel mechanism of action as a RAS mimetic that differentiates it from other MDS therapies," said Richard C. Woodman, M.D., Chief Medical Officer of Onconova.

About Rigosertib

Rigosertib, Onconova's lead candidate, is a proprietary Phase 3 small molecule. A key publication in a preclinical model reported rigosertib's ability to block cellular signaling by targeting RAS effector pathways (Divakar, S.K., et al., 2016: "A Small Molecule RAS-Mimetic Disrupts RAS Association with Effector Proteins to Block Signaling." *Cell* 165, 643). Onconova is currently in the clinical development stage with oral and IV rigosertib, including clinical trials studying single agent IV rigosertib in second-line higher-risk MDS patients (pivotal Phase 3 INSPIRE trial) and oral rigosertib plus azacitidine in HMA naïve and refractory higher-risk MDS patients (Phase 2). Patents covering oral and injectable rigosertib have been issued in the US and are expected to provide coverage until at least 2037.

About Onconova Therapeutics, Inc.

Onconova Therapeutics, Inc. is a Phase 3-stage biopharmaceutical company focused on discovering and developing novel drugs to treat cancer, with an initial focus on myelodysplastic syndromes (MDS). Onconova has a pipeline of proprietary targeted agents designed to work against specific cellular pathways that are important in cancer cells. Advanced clinical trials with the Company's lead compound, rigosertib, are aimed at what the Company believes are unmet medical needs of patients with MDS. Onconova has conducted trials with two other research compounds and has a pre-clinical program with a CDK4/6 and ARK5 inhibitor, ON 123300.

For more information, please visit <https://www.onconova.com>.

Forward-Looking Statements

Some of the statements in this release are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, Section 21E of the Securities Exchange Act of 1934, as amended, and the Private Securities Litigation Reform Act of 1995, and involve risks and uncertainties. These statements relate to Onconova expectations regarding the INSPIRE Trial and Onconova's other development plans. Onconova has attempted to identify forward-looking statements by terminology including "believes," "estimates," "anticipates," "expects," "plans," "intends," "may," "could," "might," "will," "should," "approximately" or other words that convey uncertainty of future events or outcomes. Although Onconova believes that the expectations reflected in such forward-looking statements are reasonable as of the date made, expectations may prove to have been

materially different from the results expressed or implied by such forward-looking statements. These statements are only predictions and involve known and unknown risks, uncertainties, and other factors, including Onconova's ability to continue as a going concern, maintain its Nasdaq listing, the need for additional financing, the success and timing of Onconova's clinical trials and regulatory approval of protocols, our collaborations including the effective termination of the HanX license and securities purchase agreements and plans for partnering certain territories, and those discussed under the heading "Risk Factors" in Onconova's most recent Annual Report on Form 10-K and quarterly reports on Form 10-Q. Any forward-looking statements contained in this release speak only as of its date. Onconova undertakes no obligation to update any forward-looking statements contained in this release to reflect events or circumstances occurring after its date or to reflect the occurrence of unanticipated events.

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