October 29, 2015

Onconova Therapeutics, Inc. to Present New Data on Briciclib and Next-Generation CDK4/6 Inhibitor, ON 123300, at 2015 AACR-NCI-EORTC Meeting

NEWTOWN, Pa., Oct. 29, 2015 (GLOBE NEWSWIRE) -- Onconova Therapeutics, Inc. (NASDAQ:ONTX), a clinical-stage biopharmaceutical company focused on discovering and developing novel products to treat cancer, today announced the presentation of new non-clinical data for two of the Company's proprietary compounds at the 2015 AACR-NCI-EORTC International Conference on Molecular Targets and Cancer Therapeutics, which will be held November 5-9, 2015, in Boston, MA.

A poster relating to the novel eIF4E targeted mechanism of action for briciclib, currently in a dose-escalating Phase 1 clinical trial in patients with advanced solid tumors refractory to current therapies, will be presented by Onconova's collaborators from Harvard University. Another poster will highlight the developmental studies aimed at advancing the Company's novel CDK4/6 inhibitor, ON 123300, towards an Investigational New Drug (IND) Application filing. The presentations are listed below.

Mechanism of action studies for briciclib

Abstract number: B126
Title: Targeted inhibition of eIF4E-mediated translation by the novel small molecule anti-cancer compound, briciclib (ON 013105).
Date: Saturday, 11/7/2015
Time: 12:30 PM — 3:30 PM ET
Location: Session B, Hall C-D

IND-directed studies for next-generation CDK4/6 inhibitor ON 123300

Abstract number: LB-A21
Title: Single-agent activity and favorable pharmaceutical properties of orally bioavailable next-generation CDK4/6 inhibitor, ON 123300.
Date: Friday, 11/6/2015
Time: 12:15 PM — 3:15 PM ET
Location: Session A, Hall C-D

About Onconova Therapeutics, Inc.

Onconova Therapeutics is a Phase 3 clinical-stage biopharmaceutical company focused on discovering and developing novel products to treat cancer. Onconova's clinical and pre-clinical stage drug development candidates are derived from its extensive chemical library and are designed to work against specific cellular pathways that are important in cancer cells, while causing minimal damage to normal cells. In addition to rigosertib, the Company's most advanced product candidate, two other candidates are clinical stage, and several candidates are in pre-clinical stages. For more information, please visit http://www.onconova.com.

About Briciclib

Briciclib is a Phase 1 clinical-stage small molecule that can regulate the levels of an important intracellular regulatory protein, cyclin D1, which is often found at elevated levels in cancer cells. Cyclin D1 expression is regulated through a process termed cap-dependent translation, which requires the function of eukaryotic initiation factor 4E protein, or eIF4E. In vitro evidence indicates briciclib binds to eIF4E, blocking cap-dependent translation of cyclin D1 and other cancer proteins, such as c-MYC, leading to tumor cell death. Onconova is conducting a Phase 1 multisite dose-escalation trial of briciclib in patients with advanced solid tumors refractory to current therapies (NCT02168725). Onconova has completed six of the seven dose-escalation cohorts of patients in this trial. Presentation of Phase 1 data is expected in 2016.

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, which involve risks and uncertainties. These statements relate to future events or Onconova Therapeutics, Inc.'s future operations, clinical development of Onconova's product candidates and presentation of data with respect thereto,

regulatory approvals, expectations regarding the sufficiency of Onconova's cash and other resources to fund operating expenses and capital expenditures, Onconova's anticipated milestones and future expectations and plans and prospects. 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. 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. These statements are only predictions and involve known and unknown risks, uncertainties, and other factors, including Onconova's need for additional financing and current plans and future needs to scale back operations if adequate financing is not obtained, the success and timing of Onconova's clinical trials and regulatory approval of protocols, 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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