



Press Release

For Immediate Release
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The Leukemia & Lymphoma Society[®] and Onconova Therapeutics, Inc. Enter Partnership to Advance Clinical Development of ESTYBON[™] in High Risk Myelodysplastic Syndrome Patients

White Plains, NY and Newtown, PA (June, 1, 2010) - The Leukemia & Lymphoma Society (LLS) and Onconova Therapeutics, Inc., announced today that they are collaborating to support the clinical advancement of ESTYBON[™] (ON 01910.Na) the lead compound under development for treating patients with high-risk myelodysplastic syndrome (MDS).

Through the partnership, LLS will provide up to \$10 million in funding to support a multicenter, randomized, clinical trial of ESTYBON[™] versus best supportive care in adult patients with MDS who have relapsed or become resistant to azacitidine or decitabine. Onconova expects to start patient enrollment for this study in the third quarter of 2010. This is the first approval-track clinical trial to be supported by the LLS Therapy Acceleration Program (TAP).

While there has been recent progress toward improving management of MDS, the syndromes are difficult to manage and therapeutic options are limited for patients who have drug-resistant disease. The only potential cure is stem cell transplantation from a donor. However, patients who have MDS may not be candidates for this option due to their advanced age and underlying bone marrow deficit. Novel therapeutic strategies are needed and to date, ESTYBON[™] has shown clinical promise in multiple trials.

LLS is taking an active role in accelerating development of novel therapies for patients and has committed substantial, multi-year funding to support this collaboration as part of its Therapy Acceleration Program. TAP is a bold initiative designed to advance therapies with strong prospects of providing near-term benefit to patients suffering from blood cancers. LLS is partnering directly with biotechnology companies to improve the timeline for identifying potential breakthrough therapies and advance them along the FDA drug approval pathway.

“With its unique mechanism of action and wide safety margin, ON 01910.Na may offer a new treatment option for high-risk MDS patients. LLS is committed to supporting the development of drugs that have strong therapeutic impact potential for patients with blood cancer,” said Louis J. DeGennaro, LLS chief mission officer.

“We are honored that The Leukemia & Lymphoma Society recognizes the potential of ESTYBON™ and is making a substantial investment with Onconova, in what we hope is a pivotal trial toward the registration of ON 01910.Na for patients with MDS,” said Michael B. Hoffman, Chairman of Board of Directors of Onconova. “Onconova is committed to supporting the LLS mission to impact patients with limited therapeutic options,” further commented Mr. Hoffman.

About MDS

Myelodysplastic syndromes (MDS) are a group of diseases of the blood and marrow, with varying degrees of severity and life expectancy. In the general population, MDS occurs in 5 per 100,000 people. However, among individuals older than age 70, the incidence increases to between 22 and 45 per 100,000, increasing even further with age. Most often, people diagnosed with MDS first seek medical attention because they are experiencing fatigue and shortness of breath. MDS may be a primary (de novo) diagnosis or secondary to cancer treatment with chemotherapy and/or radiation therapy. MDS has been known as “smoldering leukemia,” or “pre-leukemia,” implying that MDS is only serious and problematic if it evolves into AML; this is not the case.

About The Leukemia & Lymphoma Society

The Leukemia & Lymphoma Society® (LLS) is the world’s largest voluntary health agency dedicated to blood cancer. The LLS mission: Cure leukemia, lymphoma, Hodgkin’s disease and myeloma, and improve the quality of life of patients and their families. LLS funds lifesaving blood cancer research around the world and provides free information and support services.

Founded in 1949 and headquartered in White Plains, NY, LLS has chapters throughout the United States and Canada. To learn more, visit www.LLS.org or contact the Information Resource Center at (800) 955-4572, Monday through Friday, 9 a.m. to 6 p.m. ET. www.lls.org.

About Onconova Therapeutics, Inc.

Onconova, based in Newtown, PA and Princeton, NJ, discovers and develops novel small molecule therapeutics with fully differentiated targets involved in signal transduction, cell-cycle, and DNA repair. These candidates are derived from a proprietary library of new chemical entities and non-ATP competitive chemotypes. In addition to ESTYBON™ (ON 01910.Na), Onconova is also developing Ex-RAD™, an injectable and oral radioprotectant, and inhibitors of Plk2, ALK, CDK, JAK, and Bcr-abl pathways and a novel immunoconjugate platform for arming therapeutic antibodies. Currently, Onconova is conducting clinical trials at major centers

in the USA and abroad for three product candidates. For additional information, please visit <http://www.onconova.com>.

About ESTYBON™

ESTYBON™ (ON 01910.Na) is a small molecule inhibitor of critical pathways important in the growth and proliferation of cancer cells. Extensive Phase I and Phase II studies with ESTYBON™ have been conducted in patients with solid tumors and hematological cancers, including MDS, where more than 55 patients have been enrolled in studies conducted at four leading institutions in the USA. The FDA has granted Orphan Drug Designation for the use of ESTYBON™ in MDS. A U.S. Patent covering ON 01910.Na was issued in October 2009 and international patent coverage is expected.