

COMPANY SUMMARY

Onconova’s core competency revolves around a proprietary medicinal chemistry library, which is comprised of more than 125 privileged chemotypes, validated by three products targeting cancer and radiation injury. These three innovative products are in Phase I and Phase II trials in 15 medical institutions in the U.S. and abroad. More than 200 patients and volunteers have been enrolled in these studies. These trials have helped establish the safety, tolerability and efficacy of our first-in-class cancer drugs and the lack of toxicity of our radiation protection agent. Our product pipeline is supported by several pre-clinical product candidates, more than 100 issued patents, and a focused internal R&D engine.

Onconova is targeting unmet indications in blood cancers and solid tumors to ensure rapid approval and first-to-market advantage for its products. Evidence of clinical activity in myelodysplastic syndromes (MDS) in a multi-center proof-of-concept study with key opinion leaders is highly encouraging. The Company is poised to initiate an approval track clinical trial for its lead anti-cancer compound and to obtain a government procurement contract for its radiation drug within the next twelve months. The Company has raised more than \$85 Million from institutional and individual investors, with a significant contribution from non-dilutive grants and government contracts.

BACKGROUND: Onconova Therapeutics Inc., founded in 1998, is a private biopharmaceutical company located in Newtown, PA and Lawrenceville, NJ. The Company’s core technology and products are derived from the work of its founder, Dr. E. P. Reddy, a world-renowned scientist in molecular oncology and Director of the Fels Institute for Cancer Research & Molecular Biology at Temple University.

CLINICAL-STAGE PIPELINE: The Company’s drug candidates are designed to treat a broad range of tumors, including drug-resistant and difficult-to-treat cancers, or to reduce damaging effects of radiation exposure. Onconova currently has three clinical stage products:

Product / Indication	Stage of Development		
	<i>Pre-Clinical</i>	<i>Phase I</i>	<i>Phase II</i>
ON 01910.Na Multiple Cancer Types	Lead Indication MDS		
Ex-RAD™ Radiation Protection	Two Phase I Trials Completed		
ON 013105 Lymphoma	First-in-Man Trial Initiated		

INTELLECTUAL PROPERTY: The Company’s product portfolio is protected by strong patent coverage of composition of matter, processes, and modes of treatment claims. More than 100 U.S. and international patents covering Onconova's compounds have been issued and additional patent applications aimed at extended coverage have been filed.

ON 01910.Na TARGETED ANTI-CANCER AGENT

ON 01910.Na, Onconova's most advanced anti-cancer agent, has been tested in nearly 200 patients with advanced cancers and myelodysplastic syndromes (MDS). ON 01910.Na is a new type of mitotic inhibitor that causes no significant hematological or neurological toxicity. In 2008, the first-in-man study of ON 01910.Na in cancer patients was published in the *Journal of Clinical Oncology*. These studies have revealed a desirable safety profile and a broad spectrum of activity in solid tumors. The lead indication, based on mechanistic rationale and proof of concept studies by key opinion leaders, is MDS, for which the FDA has designated ON 01910.Na as an Orphan Drug. Based on current plans, FDA approval for single agent ON 01910.Na for high risk MDS is expected in 2012. A Phase II study in ovarian cancer has been initiated and combination therapy Phase I trials are underway. An oral dosage form is being developed.

ON 013105 ANTI-CANCER AGENT FOR LYMPHOMA

A critical defect in many cancer cells is dysregulation of cyclin D, a protein essential for normal cell division. Treatment with ON 013105 causes reduction in cyclin D1 by disrupting several pathways. ON 013105 is being evaluated first for a particularly deadly type of non-Hodgkin's lymphoma, mantle cell lymphoma (MCL), which is characterized by the faulty regulation of the cell cycle. MCL will provide "proof of principle," leading to further applications of ON 013105, such as in other B cell lymphomas, multiple myeloma, MDS, and certain solid tumors, all of which share a similar cyclin D1-related mechanism. Phase I trial of ON 013105 is underway at Moffitt Cancer Center (Tampa, FL).

Ex-RAD™ RADIATION PROTECTION AGENT

Ex-RAD™ is a radiation protection drug developed in collaboration with the U.S. Department of Defense. Ex-RAD™ is an enhancer of DNA repair pathways and protects animals against lethal radiation in models of tissue and whole body radiation injury. Two Phase I safety trials in human volunteers have been completed. Under the FDA's Animal Rule for the development of radiation protective agents, Ex-RAD™ could be approved after only Phase I trials, when well-supported by efficacy studies in appropriate animal models. Under this approval scenario, Ex-RAD™ commercialization is anticipated in 2011. An oral formulation is also being investigated.

COMBINATION THERAPY UPSIDE POTENTIAL FOR ON 01910.Na

More than two decades of experimental chemotherapy and targeted oncology have helped establish the paradigm of combination therapy. Since most agents have insignificant or short-lived activity when used as single agents, the optimal benefit from any new therapeutic agent will depend on the ability to combine it effectively and safely with other available therapeutics. Accordingly, new agents, such as ON 01910.Na, which do not have overlapping hematological, neurological or serious gastrointestinal toxicities, should be most useful in combination regimens. ON 01910.Na combines well with five different classes of cancer drugs, including taxanes, topoisomerase inhibitors, DNA-directed drugs, signal transduction modulators and receptor antagonists. Ongoing trials of ON 01910.Na combined with oxaliplatin or gemcitabine have demonstrated good tolerability and remarkable efficacy in advanced, heavily pre-treated colon, ovarian and breast cancer patients and in lymphoma patients. Combination therapy will broaden the potential use of ON 01910.Na and can expand the market for several currently marketed cancer drugs that face patent expiration.

INVESTMENT DRIVERS

Significant milestones and value drivers for investors:

- Approval track trials for ON 01910.Na in MDS is projected within one year;
- Additional government funding of radiation program within one year;
- Productive core chemistry engine for expansion of pipeline.

MANAGEMENT TEAM

- Ramesh Kumar, Ph.D.: President and CEO
 - Since 1998, Co-founder, Resource and Milestone Management
 - >20 Years in Regional Pharmaceutical and Biotechnology Companies
- James Altland, CPA: Sr. V.P., Finance & Corporate Development
 - Since 2007, Accounting, Finance, Business Development
 - Broad Experience in Life Science and Technology Companies
- Manoj Maniar, Ph.D.: Sr. V.P., Product Development
 - Since 2004, Formulation, Development and Regulatory Affairs, India Initiatives
 - Biotechnology, Large Pharma and CRO Companies
- François Wilhelm, M.D., Ph.D.: Chief Medical Officer
 - Development of Pipeline Products
 - >20 Years in Major Pharma (Pfizer, J&J) and Biotechnology Companies

ADVISORY BOARDS

Clinical Advisory Board

Jerome E. Groopman, Chairman	Beth Israel Deaconess Medical Center
Ross C. Donehower	Johns Hopkins Hospital
James F. Holland	Mount Sinai Medical Center
Stephen C. Nimer	Memorial Sloan Kettering Cancer Center
Gail Eckhardt	University of Colorado
Mark Ratain	University of Chicago
David Parkinson	Nodality, Inc.

Scientific Advisory Board

Hilary Koprowski	Thomas Jefferson University
Peter Nowell	University of Pennsylvania
Anna Marie Skalka	Fox Chase Cancer Center
George Vande Woude	Van Andel Research Institute
Peter Vogt	Scripps Institute

FOR ADDITIONAL INFORMATION

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