

THE LUDWIG INSTITUTE AND PRO-PHARMACEUTICALS COLLABORATE TO TEST DAVANAT®'s ABILITY TO ENHANCE THE FUNCTION OF ANTI-TUMOR T LYMPHOCYTES

Pro-Pharmaceuticals' DAVANAT® Targets Galectin Receptors on Cancer Cells and Removes Their Ability to Evade the Immune System

Newton, Mass. (December 15, 2009) -- Pro-Pharmaceuticals, Inc. (OTC:PRWP) today announced that the Brussels Branch of the Ludwig Institute of Cancer Research is testing the ability of DAVANAT® to stop Galectin-3 from blocking the immune system's action on cancer cells. Peer reviewed studies have demonstrated that Galectin-1 and Galectin-3 induce apoptosis (cell death) in immune system T cells ("Galectins," Chapter 7, Wiley, 2008).

Dr. Pierre van der Bruggen's team at the Ludwig Institute in Brussels, Belgium, leaders in cancer immunology research, shows that blocking the action of Galectin-3 improves the efficacy of T cells.

DAVANAT®, the Company's lead compound, is a carbohydrate polymer that targets Galectin receptors that are over-expressed on cancer cells. Current research indicates that Galectins affect cell development and play important roles in cancer, including tumor cell survival, angiogenesis, tumor metastasis and the ability of the cancer cell to evade the immune system.

"Our experimental observations on cultured cells suggest that treatment of cancer patients with DAVANAT® could correct T cell function and that combining DAVANAT® with an anti-cancer vaccine could induce a more efficient and long-lasting anti-tumoral immune response," said Dr. Pierre van der Bruggen.

"Collaborating with The Ludwig Institute represents an exciting opportunity to partner with a premier cancer research institution to further expand the use of DAVANAT®, our novel, Galectin-targeting compound, to treat cancer in combination with a vaccine," said Anatole Klyosov, Ph.D., Chief Scientist, Pro-Pharmaceuticals, Inc. "Our pre-clinical, Phase I and Phase II clinical trials have demonstrated the ability of DAVANAT® to increase patient survival and reduce side effects of chemotherapy. This further validates the mechanism of action of DAVANAT® as well as the critical role Galectins play in tumor progression."

"We are encouraged by the results that DAVANAT® demonstrated in our clinical trials in combination with chemotherapies and biologics," said Theodore Zucconi, Ph.D., Chief Executive Officer, Pro-Pharmaceuticals, Inc. "We plan to continue to validate our initial findings and to expand the use of DAVANAT® to other cancer treatments and types of cancer. We are currently designing a Phase III superiority trial which will be part of our NDA submission to the FDA. We believe our expertise in developing compounds that target Galectin receptors offers opportunities for the advanced treatment of cancer, fibrosis and inflammatory diseases."

The Ludwig Institute

The Ludwig Institute for Cancer Research Ltd (LICR) was established in 1971 by the American business magnate [Mr. Daniel K. Ludwig](#), who bequeathed a substantial proportion of his estate for the endowment of the Institute.

LICR is the largest international non-profit institute dedicated to understanding and controlling cancer. It conducts long-term basic and clinical research programs with approximately 800 scientists, clinicians, and support staff; brings together recognized leaders in many areas of science and oncology, and one of twenty international organizations recognized as producing research articles of extremely high impact. LICR takes responsibility for identifying and characterizing the therapeutic utility of discoveries made in its laboratories by sponsoring and conducting its own clinical trials.

As an important supplement to the Institute's work, Mr. Ludwig also established a trust, known as the Virginia and D.K. Ludwig Fund for Cancer Research, which provides financial support for cancer research at six leading academic institutions in the USA: Pritzker School of Medicine (Chicago, IL), Harvard Medical School (Boston, MA), Johns Hopkins University (Baltimore, MD), Massachusetts Institute of Technology (Cambridge, MA), Memorial Sloan-Kettering Cancer Center (New York, NY), and Stanford University.

Dr. Pierre van der Bruggen is a leading researcher in the Brussels Branch of the Ludwig Institute for Cancer Research. He

has published many papers in academic journals such as Immunity, Science, Cancer Research, Journal of Experimental Medicine, The Journal of Immunology, aiming at immunology of cancer, immunotherapy, and developing cancer vaccines.

About DAVANAT®

DAVANAT®, the Company's lead product candidate, is a carbohydrate polymer that targets Galectin receptors that are over-expressed on cancer cells. Current research indicates that Galectins affect cell development and play important roles in cancer, including tumor cell survival, angiogenesis and tumor metastasis. To date, DAVANAT® has been administered to approximately 100 cancer patients. Data from a Phase II trial for end-stage colorectal cancer patients showed that DAVANAT® in combination with 5-FU extended median survival to 6.7 months with significantly reduced side effects, as compared to 4.6 months for best standard of care as determined by the patients' physicians. These clinical trials also showed that patients experienced fewer serious adverse side effects of the chemotherapy and required less hospitalization.

Pro-Pharmaceuticals, Inc.

Pro-Pharmaceuticals, OTCBB: PRWP, is engaged in the discovery, development and commercialization of carbohydrate therapeutics that target Galectin receptors for advanced treatment of cancer and fibrosis. Initially, the product pipeline is focused on increasing the efficacy and decreasing the toxicity of chemotherapy drugs. The Company is headquartered in Newton, Mass. Additional information is available at www.pro-pharmaceuticals.com.

FORWARD LOOKING STATEMENTS: Any statements in this news release about future expectations, plans and prospects for the Company, including without limitation statements containing the words "believes," "anticipates," "plans," "expects," and similar expressions, constitute forward-looking statements as defined in the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. These forward-looking statements are based on management's current expectations and are subject to a number of factors and uncertainties, which could cause actual results to differ materially from those described in such statements.

More information about those risks and uncertainties is contained and discussed in the "Management Discussion and Analysis of Financial Condition and Results of Operations" and "Risk Factors" sections of the Company's most recent quarterly or annual report and in the Company's other reports filed with the Securities and Exchange Commission. The forward-looking statements represent the Company's views as of the date of this news release and should not be relied upon to represent the Company's views as of a subsequent date. While the Company anticipates that subsequent events may cause the Company's views to change, the Company disclaims any obligation to update such forward-looking statements.

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DAVANAT is a registered trademark of Pro-Pharmaceuticals.