September 9, 2003

Peregrine Researchers Receive Grant From Phillip Morris For Lung Cancer Research

TUSTIN, Calif., Sept. 9 /PRNewswire-FirstCall/ -- Peregrine Pharmaceuticals, Inc. (Nasdaq: PPHM) today announced that researchers at the Keck School of Medicine of the University of Southern California (USC) have received a $464,000 grant from Philip Morris External Research Program to conduct research on the use of Peregrine's Tumor Necrosis Therapy (TNT) for immunotherapy for human lung cancer. The research will be conducted under the direction of Alan L. Epstein, M.D., Ph.D., professor of pathology, at USC's Keck School of Medicine.

This research will focus on the use of TNT to deliver various cytokines and chemokines to human lung cancer tumors for immunotherapy. The research will also focus on identifying how the human body responds to this immunotherapy by observing and measuring various lymphocyte subpopulations activated by the therapy. In addition, experiments will be conducted to determine the effects of administering the immunotherapy in combination with the deletion of various lymphocyte subpopulations. Pre-clinical research conducted at USC has shown that TNT-based immunotherapy combined with the specific deletion of certain lymphocyte subpopulations can arm the body's natural immune system resulting in complete destruction of established solid tumors.

"This research will help us expand the therapeutic value of TNT for the treatment of lung cancer," said Dr. Epstein. "TNT-based radioimmunotherapy has already shown significant efficacy treating patients with advanced lung cancer. Last month, an Iodine-131 radiolabeled TNT monoclonal antibody received marketing approval in the People's Republic of China for the treatment of advanced lung cancer. According to the clinical data provided by the Chinese sponsor, 3.74% of patients treated had complete remissions, 30.84% had partial remissions involving at least 50% shrinkage of their tumors, 55.14% had their disease stabilized (representing no change in the tumor mass) and 10.28% had progressive disease. With the funds from this grant, we will focus our research on ways to expand the utility of the TNT targeting platform to stimulate the body's natural immune system to destroy lung cancer."

About Tumor Necrosis Therapy (TNT)

Tumor Necrosis Therapy (TNT)-based drugs directly target and bind to the dead and dying regions of virtually all solid tumors. Rapidly growing tumors contain a significant proportion of degenerating or dead cells in addition to numerous proliferating viable cancer cells. These dead or dying cells result from incomplete formation of tumor blood vessels and impaired immune cell response. The accumulation of dying cells results in the formation of a dead, or necrotic, core present in virtually all solid tumors beyond a very small size. TNT-based drugs enter and bind to targets only available for binding in the necrotic areas of cancer. Hence, TNT-based therapeutic agents have the potential to deliver therapeutic agents preferentially targeted to virtually all solid tumors.

TNT antibodies bind to universal intracellular antigens, DNA histone complexes, exposed in the necrotic core of malignant solid tumors. While TNT is capable of binding with nuclear histones found in all cells, preclinical studies indicate that TNT antibodies do not penetrate normal cells with an intact cell membrane, making TNT highly specific to necrotic tumor tissue.

Given TNT's high specificity for necrotic tumor cells, TNT antibodies make excellent delivery molecules for a wide variety of anti-cancer killing agents. To date, the TNT technology platform has been used to deliver various killing agents such as radioactive isotopes, cytokines, chemokines and liposomes to solid tumors.

About Peregrine Pharmaceuticals

Peregrine Pharmaceuticals is a biopharmaceutical company focused on the development, commercialization and licensing of unique technologies for the treatment of cancer, primarily based on three collateral targeting technologies. Peregrine's Tumor Necrosis Therapy (TNT), Vasopermeation Enhancement Agents (VEA), and Vascular Targeting Agents (VTA) technologies target cell structures and cell types that are common among solid tumor cancers, giving them broad applicability across various tumor types. The company has received approval from the FDA to start a Cotara™ Phase III clinical trial for brain cancer. Cotara is also being studied in a Phase I trial for colorectal, pancreas, soft tissue sarcoma and biliary cancers at Stanford University. The company is focused on licensing collaborations for all of its technologies under development. The company's Oncolym® technology to treat non-Hodgkin's B-cell lymphoma in Phase I/II of development is available for licensing. The company operates a cGMP contract manufacturing facility for monoclonal antibodies and recombinant proteins through its wholly owned subsidiary Avid Bioservices, Inc. (www.avidbio.com). Copies of Peregrine press releases, SEC filings, current price quotes and other valuable information for investors may be found on the website www.peregrineinc.com.

Safe Harbor Statement: This release may contain certain forward-looking statements that are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Actual events or results may differ from the company's expectations as a result of risk factors discussed in Peregrine's reports on file with the U.S. Securities and Exchange Commission, including, but not limited to, the company's report on Form 10-K for the year ended April 30, 2003.

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CO: Peregrine Pharmaceuticals, Inc.; Phillip Morris

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