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Peregrine Pharmaceuticals Presents Vascular Targeting Agent Technology At BIO 2002

TUSTIN, Calif., Jun 10, 2002 (BW HealthWire) --

Events Recognize Vascular Targeting Agents as New Class of Cancer Therapeutics

Peregrine Pharmaceuticals Inc. (Nasdaq:PPHM) today announced that Dr. Philip Thorpe, professor of pharmacology at the University of Texas Southwestern Medical Center, is presenting an overview of Peregrine's Vascular Targeting Agent (VTA) technology at the BIO 2002 International Biotechnology Convention and Exhibition in Toronto, Ontario. Dr. Thorpe's presentation will highlight the use of VTAs to target and destroy existing tumor blood vessels, differing from anti-angiogenic approaches that inhibit the development of tumor blood vessels. The presentation, titled "Vascular Targeting -- A New Class of Cancer Therapeutics," will take place on Tuesday, June 11, 2002 at 8:30am at the Metro Toronto Convention Centre. BIO 2002 is the world's largest biotechnology gathering, with more than 14,000 industry leaders expected to attend.

"Vascular Targeting Agent technologies are quickly gaining recognition as promising new approaches to cancer therapy," said Edward Legere, president and CEO of Peregrine. "Peregrine is a leader in this exciting new field of cancer research, and we look forward to continuing our development efforts to move a VTA compound into human clinical studies. In line with our business objectives, we are also seeking potential licensing partners interested in accessing Peregrine's proprietary VTA platform."

Dr. Thorpe will also be chairing the First International Conference on Vascular Targeting being held in Boston, Mass., June 12-14. Many of the world's leading scientists in the field of vascular targeting and anti-angiogenesis will gather to discuss the basic science and clinical trials of this emerging approach for cancer treatment.

About VTAs -- The Next Generation of Cancer Therapy

The traditional approach to cancer therapy has focused on targeting and destroying cancer cells. However, drugs that target cancer cells must overcome a significant number of structural barriers in order to succeed. They must first exit from the blood vessels inside the tumor, migrate past the support structures that underlie the vessels and eventually make their way to the tumor cells. These barriers have posed significant challenges to traditional cancer therapies. A potential solution is to attack the tumor blood vessels instead of the tumor cells themselves. The concept of attacking tumor blood vessels to treat cancer can be subdivided into two different classes of drugs, anti-angiogenesis agents and vascular targeting agents. Anti-angiogenesis agents are designed to inhibit tumor angiogenesis, the process of new tumor blood vessel formation. Tumors are able to control and rely on angiogenesis to build a vascular network to access oxygen and nutrients. Anti-angiogenesis agents are able to block the tumor's ability to control angiogenesis, thus halting tumor growth. These agents show promise in being able to halt tumor growth, but they have not been able to eliminate existing large tumor masses. By contrast, vascular targeting agents are designed to destroy the mature, blood-conducting vessels of tumors, thus shutting down the tumor's blood supply, destroying the existing tumor mass.

VTA Mechanism of Action

The Vascular Targeting Agent technology is based on the concept that virtually all detectable tumors rely on a tumor vascular network to obtain oxygen and nutrients. In pre-clinical animal studies, VTAs have shown to be potent anti-cancer agents that act by cutting off the supply of oxygen and nutrients to tumor cells by causing blood clots to form within the tumor's blood supply network. VTAs localize within the tumor vasculature by selectively binding to the flat endothelial cells that line tumor blood vessels. Once the VTA binds to its target, it initiates thrombosis (blood clotting) through a coagulation cascade. VTAs may be very potent anti-tumor agents because they create two amplified processes that have a devastating effect on the tumor. The first process is the initiation of the coagulation cascade, which is a highly amplified, self-sustaining reaction in which a quarter of a million molecules of thrombin and over one billion molecules of fibrin per minute are generated, leading to complete clotting of the tumor blood vessels within a matter of minutes. A second level of amplification occurs at the structural level. Blockage of a single capillary results in the destruction of thousands of tumor cells. As a result, small quantities of VTAs localized in the tumor's vascular system may cause an avalanche of tumor-cell death.

Advantages of Vascular Targeting Agents
-- VTAs kill tumors by cutting off oxygen and nutrients without

causing damage to surrounding healthy tissue.

-- VTAs can potentially be effective against a wide variety of solid tumors, since every solid tumor forms a vascular network to continue growth and tumor vasculature markers are believed to be consistent among various tumor types.

-- VTAs operate at lower dosages than traditional cancer therapies, because they do not need to penetrate the innermost layer of the tumor to have effect. This decreases potential side effects from treatment.

-- Cells targeted by VTAs do not mutate to become drug resistant. Drug resistance caused by the instability and mutability of cancer cells is a significant problem with conventional therapies that must directly target tumor cancer cells.

About Peregrine Pharmaceuticals, Inc.

Peregrine Pharmaceuticals is a biopharmaceutical company focused on the development, commercialization, and licensing of unique technologies for the treatment of cancer, primarily based on its three "collateral targeting technologies." Peregrine's Tumor Necrosis Therapy (TNT), Vasopermeation Enhancement Agents (VEA), and Vascular Targeting Agents (VTA) target cell structures and cell types that are common among solid tumor cancers, giving them broad applicability across various tumor types. The company's lead TNT anti-cancer drug, Cotara™, is currently in a multi-center Phase II clinical trial for brain cancer and Phase I trials for colorectal, pancreas, liver, soft tissue sarcoma and biliary cancers. Final preparations are being made to start a multi-center, multi-national Phase III trial for brain cancer. Peregrine's Oncolym®, for the treatment of non-Hodgkin's B-cell lymphoma, is currently in a multi-center Phase I/II study. Copies of Peregrine press releases, SEC filings, current price quotes and other valuable information for investors may be found on the website http://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, 2001 and on Form 10-Q for the quarter ended January 31, 2002.

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