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Peregrine Pharmaceuticals Announces Patent Grant For Anti-Angiogenic Treatments Using VEGF Inhibition

TUSTIN, Calif., Jan. 13 /PRNewswire-FirstCall/ -- Peregrine Pharmaceuticals (Nasdaq: PPHM) announced today the issuance of U.S. Patent No. 6,524,583, entitled "Antibody Methods for Selectively Inhibiting VEGF," which covers methods for treating a variety of diseases that are dependent on the growth of new blood vessels in a process called angiogenesis. Therapeutic agents covered under the newly issued patent are based on the use of antibodies that bind to and selectively neutralize the blood vessel growth factor VEGF (Vascular Endothelial Growth Factor).

The new patent provides methods for treating cancer, arthritis, eye diseases and other conditions in which VEGF is involved using antibodies that bind VEGF and block its binding to only one of two primary receptors for VEGF. This specific blocking property enhances the therapeutic effect against angiogenesis-dependent disease without significantly altering the function of the other VEGF receptor, which is important for maintaining effective immune responses and healthy bone metabolism.

Unregulated or inappropriate angiogenesis contributes to the development and maintenance of various diseases including malignant tumor formation and metastasis, arthritis, eye diseases and skin disorders such as psoriasis. VEGF is a powerful growth factor with a number of important effects including promotion of blood vessel growth and immune system function. VEGF regulates these functions primarily through binding and activation of two specific receptors. Peregrine's scientists have developed a monoclonal antibody, 2C3, which specifically targets VEGF and blocks its binding to a key receptor.

U.S. Patent No. 6,524,583 extends Peregrine's patent protection to cover the treatment of a range of diseases in addition to the anti-cancer therapies of the company's platform technologies. "These new method claims are a valuable addition to the patent portfolio that covers our anti-VEGF program," said Steve King, Peregrine's president and CEO. "We believe there is significant potential for our anti-angiogenesis and Vascular Targeting Agents in therapeutic areas outside cancer. This new patent expands Peregrine's intellectual property position in diseases other than cancer and may help further opportunities for strategic partnering and business development."

One of Peregrine's principle anti-VEGF agents is a monoclonal antibody that blocks the interaction of Vascular Endothelial Growth Factor with one of its key receptors. VEGF is a primary stimulant of tumor angiogenesis and is also a key player in many other angiogenic-dependent diseases. Peregrine's researchers developed the antibody that specifically blocks VEGF from binding to VEGF receptor 2 (KDR/Flk-1) but not VEGF receptor 1 (FLT-1/flt-1). The majority of other VEGF antibodies block VEGF binding to both receptors. VEGF receptor 2 is the main "angiogenic" receptor, whereas VEGF receptor 1 is utilized for normal cellular function of macrophages and monocytes. An inhibitor of VEGF that selectively blocks the function of VEGF receptor 2 may not interfere with the body's normal immune system function, which is an important part of the body's defense against disease. This is potentially a significant difference of Peregrine's anti-VEGF antibody over other VEGF inhibitors that block VEGF binding to both receptors and may provide an improved safety profile.

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 collateral targeting technologies. Peregrine's Tumor Necrosis Therapy (TNT), Vasopermeation Enhancement Agents (VEA), Vascular Targeting Agents (VTA), anti-Angiogenesis Agents, and anti- Phospholipid 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™ registration clinical trial for brain cancer. Cotara is also being studied in a Phase I trial for colorectal cancer at Stanford University. The company is focused on development and licensing collaborations for all of its technologies under development. 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, Peregrine's report on Form 10-Q for the quarter ended October 31, 2003 and on Form 10-K for the year ended April 30, 2003.

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