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Review of Peregrine's Anti-VEGF Technology Presented at Third Annual Angiogenesis Conference

Peregrine's 2C3 Antibody Therapy Inhibits Pancreatic Tumor Growth by 50% in Pre-Clinical Studies

TUSTIN, Calif., May 18 /PRNewswire-FirstCall/ -- Peregrine Pharmaceuticals, Inc. (Nasdaq: PPHM) announced today that Dr. Rolf Brekken, a scientific advisor to Peregrine, presented an overview and current status of Peregrine's 2C3 anti-angiogenesis antibody program at the Third Annual Angiogenesis Conference in London, England. The review, titled "Selective Inhibition Of VEGFR2 Activity With a Monoclonal Anti-VEGF Antibody," gave a historical overview of past research and an outlook for future research programs for the 2C3 technology. Peregrine's 2C3 antibody works by inhibiting a key tumor blood vessel growth factor known as Vascular Endothelial Growth Factor (VEGF) from inducing the formation of blood vessels in solid tumors. The 2C3 antibody is part of Peregrine's anti-angiogenesis compound family under development for the treatment of cancer and other diseases dependent on aberrant blood vessel formation.

Previously published pre-clinical data presented at the meeting demonstrated that 2C3 could be effective in treating cancer. VEGF-dependent angiogenesis is a key factor in pancreatic tumor growth, metastasis and cancer-related death. One of the studies presented evaluated the effect of 2C3 on the growth of heterotopic (subcutaneous) and orthotopic (tumor in the pancreas) human pancreatic adenocarcinomas in mice. The study utilized magnetic resonance, ultrasound and in vivo fluorescence imaging techniques to evaluate the extent of tumor burden in mice bearing orthotopic pancreatic tumors. Consistent with its anti-angiogenic activity, 2C3 decreased total microvessel density, immature microvessel density, VEGFR2 levels, and vascular perfusion in responsive tumors. 2C3 also controlled the growth of human pancreatic tumor cells injected in the pancreas such that the 2C3 treated mice had primary tumors 50% smaller than tumors in mice that received a control treatment. In addition, 2C3 therapy reduced the number and size of metastatic colonies in the liver as well as the number of mice with metastatic disease. No therapy-related toxicity was observed in any of these studies.

VEGF is a potent growth factor that plays a role in a number of normal processes including blood vessel formation (angiogenesis) and immune system regulation. The 2C3 antibody selectively blocks VEGF binding to one of its two key receptors, VEGF receptor 2, without blocking binding to VEGF receptor 1. VEGF binding to VEGF receptor 2 is believed to be the primary signal involved in new blood vessel formation, including tumor angiogenesis. VEGF binding to VEGF receptor 1 is believed to be involved in other normal VEGF-mediated processes. Anti-angiogenesis agents that selectively block the blood vessel growth function of VEGF without blocking other VEGF-mediated functions may have safety advantages over VEGF inhibition strategies that block all VEGF functions. Additional information regarding Peregrine's 2C3, anti-angiogenesis programs and other useful information can be found on Peregrine's recently released website at http://www.peregrineinc.com .

About Peregrine Pharmaceuticals, Inc.

Peregrine's research and development efforts focus on discovering and developing products that affect blood flow to tumors. Peregrine's vascular research programs fall under several different proprietary platforms including Anti-Phospholipid Therapy (APT), Vascular Targeting Agents (VTAs), anti- Angiogenesis and Vasopermeation Enhancement Agents (VEAs). The company has research collaborations with pharmaceutical and biotechnology companies to develop its VTA platform for therapeutic and diagnostic applications and expects to enter its first APT compound into clinical trials for cancer therapy during calendar year 2004.

Peregrine's vascular agents may also have applications in other angiogenesis-dependent diseases besides cancer such as diabetes, arthritis, skin disorders and eye diseases. Peregrine currently has exclusive rights to over 190 U.S. and foreign patents and patent applications that broadly cover its vascular programs. In addition, the company is currently evaluating its proprietary technology for use in treating non-angiogenesis dependent diseases such as viral infections. The company believes that the pre-clinical data generated by the company and the broad nature of its intellectual property may provide many opportunities for product development, partnering and licensing.

Peregrine's most clinically advanced therapeutic program is based on a targeting platform outside vascular biology. This technology platform is known as Tumor Necrosis Therapy (TNT) and targets dead or dying tumor cells that are common to the majority of different tumor types. Cotara™, the most clinically advanced TNT program, is currently in a Phase I clinical trial for the treatment of colorectal carcinoma at Stanford University Medical Center. In addition, we have received protocol approval from the U.S. Food and Drug Administration ("FDA") to initiate a registration clinical study for the treatment of brain cancer. The company is currently seeking a development or funding partner to move the brain cancer program forward. The company

believes that continuing the clinical development of Cotara™ in tumor types other than brain cancer will add significant value t the program. The company has a research collaboration to develop immunocytokines based on the TNT platform and a TNT-based agent has been developed and approved for the treatment of lung cancer in China under a licensing agreement.

The company also operates a cGMP contract manufacturing facility for monoclonal antibodies and recombinant proteins through its wholly owned subsidiary Avid Bioservices, Inc. (www.avidbio.com). Avid produces clinical trial materials to support Phase I through Phase III clinical trials for biotechnology companies including Peregrine. 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, Peregrine's report on Form 10-Q for the quarter ended January 31, 2004 and on Form 10-K for the year ended April 30, 2003.

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