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Data Presented at AACR Meeting Shows Peregrine's Immunocytokine Fusion Proteins Reduce Growth of B-Cell Lymphoma Tumors by 85% in Preclinical Studies

- New Studies Confirm That Fusion Proteins Made by Combining Cytokines With Peregrine's Anti-PS Antibodies Demonstrate Increased Anti-Tumor Activity With No Observable Toxicity
- These Immunocytokine Fusion Proteins Were Developed Using Peregrine's Proprietary Vascular Targeting Agent (VTA) Technology Platform
- B-Cell Lymphoma Represents a New Potential Disease Category for Peregrine

LOS ANGELES and TUSTIN, Calif., April 18 /PRNewswire-FirstCall/ -- Peregrine Pharmaceuticals, Inc. (Nasdaq: PPHM), a clinical stage biopharmaceutical company developing targeted monoclonal antibodies for the treatment of cancer and hepatitis C virus infection, today reported that data presented at the Centennial Annual Meeting of the American Association for Cancer Research (AACR) showed that fusion proteins combining the anti-cancer cytokines alpha interferon and interleukin 2 (IL-2) with 2aG4, a bavituximab equivalent, demonstrated potent anti-cancer activity in preclinical models of B-cell lymphoma and melanoma. In these studies, the antibody-cytokine fusion proteins generated a robust anti-tumor response without any observable toxicity. These immunocytokine fusion proteins incorporating antibodies that target the blood vessels of tumors are new preclinical candidates under Peregrine's proprietary Vascular Targeting Agent (VTA) technology platform.

The use of VTAs to deliver cytokines specifically to tumor targets is an appealing approach since the anti-cancer utility of cytokines such as interferons and interleukin 2 has been limited by their short half-life and the systemic toxicity seen at high doses. VTA immunocytokines aim to overcome these problems by combining the immunomodulatory activity of the cytokine with the tumor specificity of a targeted antibody.

In these proof of principle studies, VTA immunocytokines were created by combining type I interferon and interleukin 2 with 2aG4, an anti-phospholipid antibody similar to Peregrine's bavituximab. The resulting immunocytokine fusion proteins were capable of selectively targeting tumor blood vessels and displayed potent anti-cancer effects in a number of tumor models without causing any observable toxicity. The studies also showed that different forms of the VTAs could be combined, and that the combination of 2aG4-IL-2 with 2aG4-alpha interferon was significantly more effective in inhibiting tumor growth than either agent alone. In a preclinical model of B-cell lymphoma, tumor growth was inhibited by 85% in the combination-treated group compared with 60% and 65% in animals treated with either 2aG4-IL-2 or 2aG4-alpha interferon, respectively.

"These new data reaffirm the broad potential and versatility of our Vascular Targeting Agent platform for cancer therapy," said Steven W. King, president and CEO of Peregrine. "We have long thought that our anti- phospholipid antibodies would be ideal for the delivery of cytokines for cancer therapy based on their inherent immunostimulatory effects combined with the anti-tumor effects of the cytokines themselves. We are especially pleased with the strong anti-tumor activity observed in a model of B-cell lymphoma, the first non-solid cancer we have successfully addressed using our VTA technology. We are now assessing our options to further develop and commercialize these cytokine fusion proteins for cancer and potentially, viral infections."

The new class of fusion protein agents falls under Peregrine's VTA technology platform for cancer therapy that includes over 200 patents and patent applications covering broad concepts of tumor therapy using agents that target tumor blood vessels. Because interferon is currently part of standard- of-care therapy for virus infections including chronic hepatitis C, Peregrine also intends to assess the utility of the new class as a second-generation treatment for viral infections.

This work was supported by Susan G. Komen for the Cure and a sponsored research agreement with Peregrine Pharmaceuticals Inc.

Number 3539: Inhibition of Tumor Growth by Targeting Cytokines to Phosphatidylserine (PS) on Tumor Vascular Endothelium, Xianming Huang, Dan Ye, Troy Luster, Jin He, Shuzhen Li, Linda Watkin, Janie Iglehart, Philip Thorpe, The University of Texas Southwestern Medical Center at Dallas, Dallas, TX, USA

About Peregrine Pharmaceuticals

Peregrine Pharmaceuticals, Inc. is a biopharmaceutical company with a portfolio of innovative product candidates in clinical trials for the treatment of cancer and hepatitis C virus (HCV) infection. The company is pursuing three separate clinical programs for HCV infection and a range of solid cancers in the U.S. and India with its lead product candidates bavituximab and

Cotara®. Peregrine also has in-house manufacturing capabilities through its wholly owned subsidiary Avid Bioservices, Inc. (www.avidbio.com), which provides development and bio-manufacturing services for both Peregrine and outside customers. Additional information about Peregrine can be found at www.peregrineinc.com.

Safe Harbor Statement: Statements in this press release which are not purely historical, including statements regarding Peregrine Pharmaceuticals' intentions, hopes, beliefs, expectations, representations, projections, plans or predictions of the future are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The forward-looking statements involve risks and uncertainties including, but not limited to, the risk that that the efficacy results of the B-cell lymphoma preclinical animal model will not correlate to the related efficacy studies in human clinical trials. It is important to note that the company's actual results could differ materially from those in any such forward-looking statements. Factors that could cause actual results to differ materially include, but are not limited to, uncertainties associated with completing preclinical and clinical trials for our technologies; the early stage of product development; the significant costs to develop our products as all of our products are currently in development, preclinical studies or clinical trials; obtaining additional financing to support our operations and the development of our products; obtaining regulatory approval for our technologies; anticipated timing of regulatory filings and the potential success in gaining regulatory approval and complying with governmental regulations applicable to our business. Our business could be affected by a number of other factors, including the risk factors listed from time to time in the Company's SEC reports including, but not limited to, the annual report on Form 10-K for the year ended April 30, 2006 and the quarterly report on Form 10-Q for the quarter ended January 31, 2007. The Company cautions investors not to place undue reliance on the forward-looking statements contained in this press release. Peregrine Pharmaceuticals, Inc. disclaims any obligation, and does not undertake to update or revise any forward-looking statements in this press release

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