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Peregrine Pharmaceuticals Highlights Significant Advances in the Company's Clinical and Preclinical Cancer Programs Presented This Week at the AACR Annual Meeting

- New Study Demonstrated the Clinical Potential of Peregrine's Unique Selective Anti-VEGF Antibodies, Which Were as Effective as AvastinÂ® in Animal Cancer Models
- Trials Could Begin as Soon as Next Year
- Robust Anti-Tumor Data Confirmed Broad Versatility of Clinical Stage Anti-PS Agent Bavituximab in Three Separate Applications-in Combination with Chemotherapy for Prostate Cancer, as Part of a Vaccine-Like Approach for Malignant Brain Cancer and as Vascular Targeting Agent (VTA) Components of Peregrine's Immunocytokine Fusion Proteins
- Preclinical Data Showing Fusion Proteins Reduced Growth of B-Cell Lymphoma by 85% Represented Critical Validation for VTA Immunocytokines and a Potential New Indication for Peregrine's Cancer Program
- Additional Presentations Reported Encouraging Progress in Peregrine's VTA Coaguligand Program, Vasopermeation Enhancement Agent (VEA} Program and in Efforts to Develop 2nd-Generation Fully Humanized Anti-PS Antibodies

TUSTIN, Calif., April 20, 2007 /PRNewswire-FirstCall via COMTEX News Network/ -- 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 from multiple studies presented at the recent Centennial Annual Meeting of the American Association for Cancer Research (AACR) reinforced the versatility and broad anti-cancer potential of bavituximab, its clinical stage targeted anti- phospholipid (PS) monoclonal antibody; provided important new preclinical data confirming the potential anti-tumor efficacy of the company's selective VEGF inhibitors; provided validating data for its immunocytokine fusion proteins developed using the company's proprietary Vascular Targeting Agent (VTA) technology; and highlighted the clinical potential of Peregrine's earlier stage VTA and Vasopermeation Enhancement Agent (VEA) cancer platforms.

"We are extremely pleased with the quality, breadth and diversity of the studies we were selected to present at this historic Centennial AACR Annual Meeting," said Steven W. King, president and CEO of Peregrine. "We believe these studies are a testament to the scientific, medical and commercial potential of our core technology platforms. In particular, multiple studies presented data that support the broad anti-cancer utility of our anti-phospholipid platform, including our lead product candidate bavituximab, in a variety of applications and indications. Research confirming the versatility of our anti-PS antibodies in different anti-cancer combinations is especially encouraging. In addition, we also presented data that supports advancement of potentially important anti-cancer development programs based on our selective anti-VEGF, VTA and VEA technologies. These positive developments in our clinical and preclinical programs reinforce our belief that the future for Peregrine has never been brighter, and we look forward to progressing these programs both on our own and with partners and collaborators going forward."

Highlights of seven of Peregrine's AACR presentations this week follow.

Peregrine's Selective Anti-VEGF Antibody Program

Drugs blocking vascular endothelial growth factor (VEGF) are proving very successful as anti-cancer agents, and for the first time researchers presented animal data on Peregrine's anti-VEGF antibodies that selectively block binding to the second of the two VEGF receptors. Current anti-VEGF drugs such as AvastinÂ® block binding to both receptors, yet in preclinical studies comparing Peregrine's selective anti-VEGF antibody to Avastin, the selective antibodies compared favorably on all efficacy parameters assessed, inhibiting tumor growth by 90% in preclinical cancer models. Antibodies with greater selectivity may have advantages in clinical use since they have the potential to only inhibit angiogenesis while not impairing other functions of VEGF. Additional data that was presented showing the efficacy of Peregrine's fully human selective anti-VEGF antibody (R3) is expected to help facilitate the progress of this program towards clinical trials.

Broad Applicability and Versatility of Bavituximab, Peregrine's Targeted Anti-PS Antibody

Researchers affiliated with Peregrine presented a number of preclinical studies demonstrating the versatility and broad anti-cancer utility of bavituximab in major cancer models. They also reported data validating bavituximab's unique mechanism of action and supporting potential new applications of Peregrine's anti-PS technology platform. These included:

- Data supporting the potential use of bavituximab to enhance immune responses to existing tumors and as a potential enhancement to cancer vaccines. In a challenging model of aggressive brain cancer, 57% of animals immunized with a bavituximab equivalent and irradiated, inactivated tumor cells achieved long-term survival compared to 0% in untreated animals and only 16% survival in animals receiving inactive tumor cells with an antibody that does not block PS. To achieve this survival result, the vaccine-like bavituximab regimen is estimated to have enabled these animals to destroy 99.99% or more of the huge tumor cell challenge they were given. These impressive results provide important confirmation of the ability of bavituximab's anti-PS mechanism to reverse the immune system inhibition caused by cancer and offer another potential application for bavituximab and Peregrine's other anti-PS antibodies.

- Data demonstrating the potent anti-cancer efficacy of bavituximab in combination with chemotherapy. A bavituximab equivalent in combination with the common cancer chemotherapy docetaxel reduced the growth of both hormone-dependent and hormone-independent prostate cancer by up to 94%. Bavituximab is currently being assessed in a Phase lb cancer clinical trial that includes patients receiving docetaxel. Prostate cancer is one of the most common cancers affecting men and is a leading cause of cancer deaths.

- Data supporting use of anti-PS antibodies as the targeting agent for immunocytokine fusion proteins based on Peregrine's VTA platform. Their ability to target phospholipids primarily expressed on the surface of tumor blood vessels enables bavituximab-like antibodies to also serve as targeting agents for Peregrine's Vascular Targeting Agent (VTA) technology platform. Studies presented at AACR assessed the anti-cancer properties of VTA-based immunocytokine fusion proteins. These are combinations of vascular targeting agents such as bavituximab and immune system-stimulating cytokines such as interferon and interleukin-2. Peregrine's immunocytokine fusion proteins showed robust anti-tumor efficacy in animal models of melanoma and B-cell lymphoma, without the signs of toxicity that have limited the wide use of cytokines as anti-cancer agents. In particular, the 85% reduction in tumor growth observed in the B-cell lymphoma model serves as an important validation of Peregrine's VTA immunocytokine approach, and hematological cancers such as lymphoma also represent potential new cancer indications for the company.

Data on Peregrine's VTA coaguligand and VEA anti-cancer development programs.

Researchers working with Peregrine presented data on progress in the company's VTA coaguligand development program, its VEA program and its initiatives to develop second-generation anti-PS monoclonal antibodies.

- Peregrine's VTA coaguligands program has developed fusion proteins that combine a vascular targeting antibody with modified tissue factor, a protein that can induce blocking and destruction of targeted blood vessels. Since Peregrine's VTAs specifically target tumor blood vessels, the fusion proteins are intended to affect only the established blood vessels that are essential for the survival and growth of tumors. Researchers reported on their progress in successfully developing and testing a series of VTA coaguligands that currently are in further testing in animal cancer models.

- Peregrine researchers gave an oral presentation on novel methods the company is employing in its drug discovery efforts for its VEA program. VEAs are a new class of therapeutics comprised of tumor-specific antibodies fused to vasoactive compounds such as interleukin-2. They are designed to increase the uptake of cancer therapeutics at the tumor site, thereby increasing anti-tumor efficacy without having to increase the dose and risk greater toxicity. The novel R&D methods described by Peregrine scientists enabled the company to identify potential VEA clinical candidates for further evaluation in animal cancer models.

- Peregrine researchers also reported on their successful efforts to develop second-generation fully humanized anti-PS antibodies for possible use in a variety of Peregrine development programs. Data assessing the fully human version of the antibody indicated that it was equivalent to the current chimeric version. Fully humanized antibodies may have advantages in some applications and also provide Peregrine with greater flexibility in designing and differentiating new drug candidates.

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 CotaraÂ®. 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 efficacy results in the various preclinical animal models noted above will not correlate to the related efficacy studies in human clinical trials, the risk that future studies may not support the initiation of human clinical trials, and the uncertainty as to whether the Company will be able to obtain regulatory approval for any of its current product candidates. 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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