June 1, 2009

Peregrine Pharmaceuticals Presents Promising Data From Its Phase II Bavituximab Breast Cancer Trial at 2009 ASCO Annual Meeting

-- Interim Primary Endpoint Data from Phase II Study Shows 71% Objective Tumor Response Rate in Evaluable Patients Receiving Bavituximab Plus Docetaxel - -- Secondary Endpoint Evaluation Shows Promising 7.4 Month Median Progression Free Survival in Initial Study Cohort -

ORLANDO, Fla. and TUSTIN, Calif., June 1, 2009 /PRNewswire-FirstCall via COMTEX News Network/ -- Peregrine Pharmaceuticals, Inc. (Nasdaq: PPHM) today announced that preliminary results from a Phase II trial of its lead anti-phosphatidylserine antibody bavituximab in combination with docetaxel in patients with advanced breast cancer will be discussed this morning in an oral presentation at the 45th Annual Meeting of the American Society of Clinical Oncology (ASCO). Initial data from the Phase II study indicates that 10 of 14 evaluable patients in the first cohort of the trial achieved an objective tumor response by the end of the treatment period according to RECIST criteria. Recent analysis shows the median progression free survival of the patients enrolled in the first part of the study was 7.4 months.

Bavituximab is a monoclonal antibody with a unique anti-cancer mechanism that works by helping to activate the body's own immune system to fight cancer. Bavituximab binds to the cellular membrane component phosphatidylserine (PS) that is usually located inside cells, but which becomes exposed specifically on the outside of cells that line tumor blood vessels. Once bound to the exposed PS, bavituximab helps mobilize the body's immune system to destroy both the tumors and their associated blood vessels.

"The preliminary data in this first cohort of advanced breast cancer patients treated with bavituximab and docetaxel along with data we have generated from the two other ongoing Phase II bavituximab cancer trials is very encouraging and suggests that bavituximab may represent a valuable new approach to treating cancer," said Dr. Raghunadharao Digumarti, professor of medical oncology at the Nizams Institute of Medical Sciences and a Phase II bavituximab cancer trial investigator who presented the data at ASCO on behalf of the study team. "We are pleased with the response rates and progression free survival data seen in the initial group of breast cancer patients and look forward to reporting additional results from the entire Phase II breast cancer study later this year."

The primary objective of this multi-center, open-label Phase II study is to assess the overall response rate to bavituximab and docetaxel. In the trial's two-stage design, 15 patients with advanced breast cancer were enrolled in the first cohort. The 71% objective tumor response rate seen in the 14 evaluable patients in the first cohort compares favorably with historical response rates for docetaxel as solo therapy in advanced breast cancer patients and it exceeded the pre-specified primary endpoint needed to expand the trial. An additional 31 patients were then enrolled to achieve the planned study total of 46 patients overall. With patient enrollment complete, dosing and follow-up are continuing. The safety profile of bavituximab plus docetaxel in the study has been acceptable, with minor infusion reactions, epistaxis and nasal dryness among the most common reported bavituximab-related side effects. These did not require dose modification or treatment discontinuation.

Separately, Peregrine reported that researchers will present data at ASCO today from a Phase I study assessing the safety and pharmacokinetic (PK) properties of bavituximab as monotherapy in patients with advanced refractory cancers. This multi-center open label safety study is currently enrolling patients in the final cohort according to the initial study design. The study authors report on their experience with the first 25 patients in the study, concluding that bavituximab has demonstrated acceptable safety and a predictable PK profile and that a maximum tolerated dose was not reached even at the highest planned dose level. The majority of adverse events reported were mild or moderate in nature.

"The quality of the results generated to date in each of our three ongoing Phase II bavituximab cancer trials is very promising," said Steven W. King, president and CEO of Peregrine. "Our oral presentation today at ASCO exemplifies the heightened interest the bavituximab cancer program is receiving from both clinical researchers and potential partners, and we look forward to reporting on progress and additional results from all three of our Phase II bavituximab studies over the rest of the year."

About Phosphatidylserine (PS)-Targeting Therapies

The rapid and disorganized growth that is the hallmark of cancer results in the exposure of the lipid phosphatidylserine (PS) on the surface of tumor blood vessels. Since these phospholipids are typically not exposed on the surface of normal tissues, they represent a unique target for anti-cancer treatments. Bavituximab is a monoclonal antibody that binds specifically to these

phospholipids exposed on the surface of the cells lining tumor blood vessels. Once bound, bavituximab alerts the body's immune system to attack the tumor blood vessels, inhibiting tumor growth and proliferation. In addition, a growing body of evidence supports the active role of PS in immune signaling, with recent research showing that exposed PS can have an immunosuppressive effect and dampen the body's normal response to cancer. By binding to and blocking PS, bavituximab is believed to boost the body's ability to combat cancer via this second immunostimulatory mechanism. Further information on the role of exposed PS in the tumor environment can be found in the Anti-PS Technical Backgrounder posted at www.peregrineinc.com.

Bavituximab Presentation Details:

Preliminary data from a Phase II clinical trial evaluating bavituximab in combination with docetaxel in advanced breast cancer patients will be the subject of an oral presentation at 10:30 AM EDT on June 1, 2009. A second presentation detailing preliminary results from a Phase I clinical trial evaluating bavituximab as solo therapy in patients with advanced refractory cancer will be discussed in a poster session from 1:00 PM to 5:00 PM EDT, also on June 1, 2009.

Title: Phase II study of bavituximab plus docetaxel in patients with locally advanced or metastatic breast cancer.

Authors: D. Tabagari, G. Nemsadze, M. Jincharadze, M. Janjalia, J. Shan

Time: Monday June 1, 10:30 AM

Location: Level 4, Valencia Room, W415A

Abstract No: 3005

Title: Phase I study of bavituximab, a novel anti-phosphatidylserine monoclonal antibody in patients with advanced refractory cancer: Preliminary results.

Authors: N. K. Ibrahim, L. Wong, L. Rosen, J. Shan

Time: Monday June 1, 1:00 PM to 5:00 PM

Location: Level 2, West Hall C

Abstract No: 1080

About Peregrine Pharmaceuticals

Peregrine Pharmaceuticals, Inc. is a biopharmaceutical company with a portfolio of innovative monoclonal antibodies in clinical trials for the treatment of cancer and serious viral infections. The company is pursuing three separate clinical programs in cancer and hepatitis C virus infection with its lead product candidates bavituximab and Cotara(R). Peregrine also has in-house manufacturing capabilities through its wholly owned subsidiary Avid Bioservices, Inc. (www.avidbio.com), which provides development and biomanufacturing 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 the rate of objective tumor response for the expansion stages of the company's three Phase II trials will not be consistent with the objective tumor responses experienced in the first stage of the respective Phase II trials and the risk that the standard chemotherapy response rate will not be improved as a result of the combination therapy with the inclusion of bavituximab . 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 or otherwise adversely impact the company's ability to obtain regulatory approval for its product candidates 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, 2008 and the quarterly report on Form 10-Q for the quarter ended January 31, 2009. 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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