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Peregrine Announces Initiation of Lung Cancer Investigator-Sponsored Trial

Targeted Antibody Bavituximab to Be Evaluated in Combination With Pemetrexed and Carboplatin for Front-Line Non-Small Cell Lung Cancer

TUSTIN, CA and CHAPEL HILL, NC -- (MARKET WIRE) -- 03/08/11 -- Peregrine Pharmaceuticals, Inc. (NASDAQ: PPHM), a clinical-stage biopharmaceutical company developing first-in-class monoclonal antibodies for the treatment of cancer and viral infections, today announced the initiation of an investigator-sponsored trial (IST) for patients with chemotherapy naive stage IV non-squamous non-small cell lung cancer (NSCLC). This Phase Ib trial will treat up to 25 front-line NSCLC patients with Peregrine's investigational monoclonal antibody bavituximab in combination with the chemotherapeutic agents pemetrexed and carboplatin.

"We are encouraged by the prior lung cancer data on bavituximab in combination with chemotherapy and look forward to evaluating the safety and potential efficacy of bavituximab in combination with pemetrexed and carboplatin as an additional therapeutic option in the front-line treatment setting," said Juneko E. Grilley-Olson, M.D., lead investigator of this trial and assistant professor of hematology and oncology at the University of North Carolina at Chapel Hill. "Chemotherapy has been shown to increase the exposure of phosphatidylserine (PS) on tumor blood vessel cells, upregulating the exposure of bavituximab's PS target. We are eager to evaluate this new combination therapy regimen for the treatment of this deadly form of cancer."

In a prior Phase II trial treating 49 front-line NSCLC patients with bavituximab in combination with a different chemotherapeutic regimen, carboplatin and paclitaxel, overall tumor response rate (ORR) was 43% as measured by RECIST criteria and median progression-free survival (PFS) was 6.1 months. Currently, bavituximab is being evaluated in four randomized Phase II trials, including front-line NSCLC, second-line NSCLC, pancreatic cancer, and HCV and in two other investigator-sponsored trials in advanced liver cancer and HER2-negative metastatic breast cancer.

"This new IST is important as it augments our overall clinical experience in treating patients with bavituximab, especially as we conduct our two randomized Phase IIb trials in NSCLC," said Joseph S. Shan, vice president, clinical and regulatory affairs at Peregrine Pharmaceuticals. "We are excited to have Dr. Grilley-Olson and her team evaluate this therapeutic combination as an additional potential treatment combination for patients with metastatic lung cancer."

About the Phase Ib NSCLC Trial
In this Phase Ib single-arm, open-label trial, up to 25 patients with previously untreated locally advanced or metastatic non-squamous NSCLC will receive up to six 21-day cycles of the drugs pemetrexed and carboplatin with weekly bavituximab until progression or toxicity. The primary endpoint of the study is to determine the safety, dose-limiting toxicity (DLT) and recommended Phase II dose of bavituximab in combination with carboplatin and pemetrexed in advanced non-squamous NSCLC. Secondary endpoints include assessment of overall response rate (ORR) measured by RECIST criteria, progression-free survival (PFS) and overall survival (OS) and exploratory biomarkers.

For further information about this trial, please visit http://www.peregrinetrials.com or http://www.clinicaltrials.gov/ct2/results?term=bavituximab.

About Peregrine's Investigator-Sponsored Trials (IST) Program
Peregrine's IST program offers oncologists the opportunity to conduct clinical trials with bavituximab. To apply for Peregrine's IST program, please visit http://www.peregrineinc.com/pipeline/investigator-sponsored-trials.html.

About Lung Cancer
Lung cancer is the leading cause of cancer death. According to the American Cancer Society, lung cancer is the second most commonly diagnosed cancer, with approximately 219,440 new cases and 159,000 deaths each year in the U.S. NSCLC is the most common type of lung cancer, accounting for approximately 85-90% of lung cancer cases.

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 multiple clinical programs in cancer and hepatitis C virus infection with its lead product candidate bavituximab and novel brain cancer agent Cotara®. Peregrine also

has in-house cGMP 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 results from investigator-sponsored trials will not be consistent with results experienced in earlier clinical trials and preclinical studies, the risk that investigators may experience delays in patient enrollment, risk that results may not support registration filings with the U.S. Food and Drug Administration, and the risk that Peregrine may not have or raise adequate financial resources to complete the planned clinical programs. 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, 2010 and the quarterly report on Form 10-Q for the quarter ended October 31, 2010. 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.

Peregrine Contact:

Amy Figueroa

Peregrine Pharmaceuticals

(800) 987-8256

info@peregrineinc.com

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