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# Data Presented at ASCO Shows Promising 11.7 Month Median Overall Survival in Second-Line NSCLC Patients Treated With Peregrine Pharmaceuticals' Novel Immunotherapy Bavituximab

Overall Survival Favors 3 mg/kg Bavituximab Plus Docetaxel Treatment Group Over Control Arm and Across Key Subgroups Analyzed; Data Support Global Phase III Registration Trial in Second-Line Non-Small Cell Lung Cancer That Is Expected to Start by Year-End

TUSTIN, CA -- (Marketwired) -- 06/03/13 -- Peregrine Pharmaceuticals (NASDAQ: PPHM), today reported final data from its randomized, double-blind, placebo-controlled Phase II trial of bavituximab in patients with second-line non-small cell lung cancer (NSCLC). Final results from the Phase II trial showed an improvement in median overall survival (OS) of 11.7 months in the 3 mg/kg bavituximab plus docetaxel arm compared to 7.3 months in the combined control arm, with a persistent separation in the Kaplan Meier survival curves (HR=0.662). In addition, subgroup analyses of overall survival by key patient characteristics favored the bavituximab 3 mg/kg arm, including age, gender, ECOG status, ethnicity and prior treatment. The results also indicated that the 3 mg/kg bavituximab plus docetaxel combination was well-tolerated with no significant differences in adverse events between the trial arms. These results were presented Saturday at the 2013 American Society of Clinical Oncology (ASCO) Annual Meeting in Chicago, Illinois.

"Immunotherapies have shown significant promise in treating solid tumors and it is encouraging to see these latest results from bavituximab in second-line NSCLC. Bavituximab is a unique targeted immunotherapy with a novel mechanism of action that potentially synergizes well with other compounds currently being developed for oncology," said Martin J. Edelman, M.D., Professor of Medicine at the University of Maryland Greenebaum Cancer Center. "I look forward to being involved in the upcoming Phase III trial and to seeing the potential of bavituximab in other indications and combinations."

Results from the trial also showed that overall response rate (ORR) and progression free survival (PFS) both favored the 3 mg/kg bavituximab plus docetaxel arm. Specifically, data showed an ORR of 17.1% months in the 3 mg/kg bavituximab plus docetaxel arm versus 11.3% in the combined control arm and PFS of 4.2 months in the 3 mg/kg bavituximab plus docetaxel arm, versus 3.9 months in the combined control arm.

"These results further support our enthusiasm for advancing bavituximab into Phase III development. With our recent agreement with the FDA on a Phase III trial design in second-line NSCLC, we are able to expedite our plans to advance this promising drug candidate," said Joseph Shan, vice president of clinical and regulatory affairs of Peregrine. "Our goal is to initiate this Phase III trial by year-end while we continue to gather important data from five additional ongoing bavituximab oncology trials that will guide future potential indications for this novel drug candidate."

"The final data from this Phase II trial, along with the novel mechanism of action data presented earlier this year, confirm bavituximab is an immunotherapy that appears to have clinical activity," said Steven King, president and chief executive officer of Peregrine. "We look forward to advancing our ongoing partnering discussions while continuing our plans to initiate this important Phase III clinical trial by year-end."

A copy of the poster can be found in the Technology section of Peregrine's website at http://www.peregrineinc.com/pipeline/bavituximab-oncology.html

## About the Phase II Trial

Peregrine's randomized, double-blind, placebo-controlled Phase II trial was designed to evaluate docetaxel with bavituximab or placebo and enrolled 121 patients with previously treated locally advanced or metastatic NSCLC. Patients enrolled in the trial were not selected based on genetic or other biomarkers. All patients had confirmed Stage IIIb or IV non-squamous NSCLC and had progressed following one prior chemotherapy regimen. The trial was designed to evaluate overall response rate (ORR) measured in accordance with RECIST criteria, progression-free survival (PFS), duration of response, overall survival (OS), and safety. Post study unblinding, vial coding discrepancies were discovered in the placebo and 1 mg/kg vials. As a result, data from these two arms were combined for data analysis.

According to the American Cancer Society, lung cancer is the second most commonly diagnosed cancer in the U.S., with approximately 226,160 new cases and 160,340 deaths each year, representing approximately 28% of all cancer deaths, with a five-year survival rate of 1%. NSCLC is the most common type of lung cancer, accounting for approximately 85-90% of lung cancer cases.

### About Bavituximab: A Targeted Immunotherapy

Bavituximab is a first-in-class phosphatidylserine (PS)-targeting monoclonal antibody that represents a new approach to treating cancer. PS is a highly immunosuppressive molecule usually located inside the membrane of healthy cells, but "flips" and becomes exposed on the outside of cells that line tumor blood vessels, causing the tumor to evade immune detection. Bavituximab targets PS and activates the maturation of dendritic cells and cancer-fighting (M1) macrophages leading to the development of cytotoxic T-cells that fight solid tumors through blocking this immunosuppressive PS signal. Bavituximab is the company's lead PS-targeting investigational product and is currently being evaluated in several solid tumor indications, including non-small cell lung cancer, breast cancer, liver cancer and rectal cancer.

#### About Peregrine Pharmaceuticals, Inc.

Peregrine Pharmaceuticals, Inc. is a biopharmaceutical company with a portfolio of innovative monoclonal antibodies in clinical trials focused on the treatment and diagnosis of cancer. The company is pursuing multiple clinical programs in cancer 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. (<a href="www.avidbio.com">www.avidbio.com</a>), which provides development and biomanufacturing services for both Peregrine and third-party customers. Additional information about Peregrine can be found at <a href="www.peregrineinc.com">www.peregrineinc.com</a>.

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 forwardlooking statements involve risks and uncertainties including, but not limited to, the risk that the company may not be able to initiate the Phase III trial within its anticipated timeline, the risk that the results from the Phase III trial may not support a future BLA submission, the risk that the company may not have or raise adequate financial resources to complete the Phase III trial and the risk that the company may not find a suitable partner for the Phase III trial or the PS program. 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 our reports filed with the Securities and Exchange Commission including, but not limited to, our annual report on Form 10-K for the fiscal year ended April 30, 2012 and our quarterly report on Form 10-Q for the quarter ended January 31, 2013. 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 forwardlooking statements in this press release.

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