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Peregrine Pharmaceuticals Highlights Clinical Data Presentation at AACR 2017 Annual Meeting Supporting Potential of Bavituximab to Enhance Anti-tumor Activity of Immunotherapy

-- SUNRISE Data Analysis Demonstrates Statistically Significant Overall Survival (OS) Improvement in Patients Receiving Bavituximab plus Docetaxel and Subsequent Immunotherapy Compared to Placebo plus Docetaxel and Subsequent Immunotherapy --

TUSTIN, Calif., April 04, 2017 (GLOBE NEWSWIRE) -- Peregrine Pharmaceuticals, Inc. (NASDAQ:PPHM) (NASDAQ:PPHMP), a biopharmaceutical company committed to improving patient lives by manufacturing high quality products for biotechnology and pharmaceutical companies, and advancing its proprietary R&D pipeline, today announced the presentation of results of a new analysis of the Phase III SUNRISE trial of bavituximab in patients with previously treated locally advanced or metastatic non-squamous non-small cell lung cancer (NSCLC). Data demonstrated that for patients in the study's bavituximab plus docetaxel treatment arm who received subsequent immunotherapy, the median overall survival (mOS) was not reached, while mOS was 13.0 months for patients in the study's placebo plus docetaxel arm who received subsequent immunotherapy [HR = 0.43; p=0.005]. These are the first clinical results reported supporting the hypothesis that bavituximab may modulate the tumor microenvironment to enhance the anti-tumor activity of immunotherapy agents. Data were presented by Peregrine scientists at the 2017 Annual Meeting of the American Association for Cancer Research (AACR), which is being held April 1-5, 2017 in Washington, D.C.

The presentation highlighted an analysis in which the company evaluated the impact of subsequent immunotherapy treatment, as well as patients' pre-treatment interferon gamma (IFN-γ) levels on overall survival. Overall, low peripheral IFN-γ correlated with more favorable OS in the patients receiving bavituximab + docetaxel and is a biomarker of interest. Data were also analyzed by low versus high IFN-γ levels. For patients with low pre-treatment IFN-γ levels who received subsequent immunotherapy, those in the bavituximab plus docetaxel arm did not reach mOS compared to mOS of 12.1 months for the placebo plus docetaxel arm [HR = 0.24; p < 0.001].

"We are extremely encouraged by the results of these exploratory analyses which provide further clinical rationale for combining bavituximab and checkpoint inhibitors," said Joseph Shan, vice president of clinical and regulatory affairs at Peregrine. "This will be the key focus for upcoming early phase clinical trials, which includes a study of bavituximab and pembrolizumab in head and neck cancer through our ongoing collaboration with the National Comprehensive Cancer Network."

Bavituximab is an investigational chimeric monoclonal antibody that targets phosphatidylserine (PS). Signals from PS inhibit the ability of immune cells to recognize and fight tumors. PS-targeting antibodies have demonstrated an ability to shift the functions of immune cells in tumors, resulting in multiple signs of immune activation and anti-tumor immune responses. Bavituximab is believed to override PS immunosuppressive signaling by blocking the engagement of PS with its receptors and sending an alternate immune activating signal.

Peregrine's clinical development strategy for bavituximab currently focuses on small, early-stage, proof-of-concept trials evaluating the drug in combination with other cancer treatments. This approach includes the recently announced grants awarded by the National Comprehensive Cancer Network (NCCN) to support three different clinical trials of bavituximab treatment combinations. These trials will evaluate novel bavituximab combinations in glioblastoma, head and neck cancer, and hepatocellular carcinoma including an immunotherapy combination. Additionally, Peregrine continues to advance its pre-clinical collaboration with MSK with the goal of evaluating combinations of bavituximab with checkpoint inhibitors and other immune stimulatory agents. The intent behind this strategy is to focus our research and development spending to further validate bavituximab's combination potential as we seek to advance the program though a pharmaceutical or biotechnology partner.

About Peregrine Pharmaceuticals, Inc.
Peregrine Pharmaceuticals, Inc. is a biopharmaceutical company committed to improving the lives of patients by delivering high quality pharmaceutical products through its contract development and manufacturing organization (CDMO) services and through advancing and licensing its investigational immunotherapy and related products. Peregrine's in-house CDMO services, including cGMP manufacturing and development capabilities, are provided through its wholly-owned subsidiary Avid Bioservices, Inc. (www.avidbio.com), which provides development and biomanufacturing services for both Peregrine

and third-party customers. The company is also working to evaluate its lead immunotherapy candidate, bavituximab, in combination with immune stimulating therapies for the treatment of various cancers, and developing its proprietary exosome technology for the detection and monitoring of cancer. For more information, please visit 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 median OS data from a clinical trial combining bavituximab with a checkpoint inhibitor will not be consistent with the data from the SUNRISE trial for those patients received subsequent immunotherapy following cessation of treatment with bavituximab and docetaxel and the risk that data from subsequent studies do not confirm that IFN-y is a predictive biomarker for patients who are more likely to benefit from a bavituximab containing therapeutic regimen. . 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, 2016 as well as any updates to these risk factors filed from time to time in the company's other filings with the Securities and Exchange Commission. 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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