

## **Peregrine to Present Lung, Advanced Breast, and Brain Cancer Clinical Data at 2010 ASCO Annual Meeting**

### **Clinical Data Highlight Bavituximab's Broad-Spectrum Potential With Unique Mechanism That Blocks Tumors' Ability to Evade Immune Attack**

TUSTIN, CA, May 20, 2010 (MARKETWIRE via COMTEX News Network) -- Peregrine Pharmaceuticals, Inc. (NASDAQ: PPHM) today announced that it will present cancer data from four clinical trials, including its first-in-class phosphatidylserine (PS)-targeting monoclonal antibody bavituximab and novel brain cancer therapy Cotara, at the 2010 ASCO Annual Meeting. Based on encouraging interim Phase II data, Peregrine plans to initiate a new randomized, placebo-controlled, double-blinded Phase II trial of bavituximab in combination with chemotherapy in refractory non-small cell lung cancer (NSCLC) patients, with an additional randomized Phase II trial in front-line NSCLC planned to begin by mid-year.

"PS is a highly immunosuppressive molecule that inactivates the immune system and allows tumors to evade detection," commented Dr. Philip Thorpe, professor of pharmacology at the University of Texas Southwestern Medical Center, a scientific advisor to Peregrine and a pioneer in the development of PS-targeting therapies. "Supported by a growing body of research, PS-targeting antibodies appear to play a critical role in blocking this immunosuppressive molecule and reactivating the immune system's ability to target and mount a robust anti-tumor response. Since chemotherapy increases the exposure of PS on tumor blood vessels, bavituximab has even more of this immunosuppressive molecule to target, potentially offering a new synergistic approach for the treatment of cancer."

#### Reactivating the Immune System by Blocking "Flipped" Phospholipids

Usually located within healthy cell membranes, PS "flips" and becomes exposed on the outside of cells that line tumor blood vessels, creating a specific target for anti-cancer treatments. PS-targeting antibodies mask exposed PS, enabling recognition by immune system cells and reactivating the immune system to fight the tumor.

Peregrine has reported promising interim data from three Phase II trials using bavituximab in combination with chemotherapy in NSCLC and advanced breast cancer patients, showing objective tumor response rates that compare favorably to historic data of chemotherapy alone.

Peregrine's bavituximab has demonstrated broad-spectrum potential supported by a growing body of clinical and preclinical research. Bavituximab has been studied in combination with a range of anti-cancer treatments, including radiation, chemotherapy, hormone depletion therapy and apoptotic agents, demonstrating synergistic anti-tumor effects.

Peregrine's Posters at 2010 ASCO Annual Meeting Posters to include most recent bavituximab Phase II and Cotara Phase I data available at time of presentation.

Saturday, June 5, 2010, 2:00 - 6:00 pm CT Phase II study of bavituximab plus docetaxel in locally advanced or metastatic breast cancer (Abstract #1042), Author: David Tabagari, Poster Board 22C, S Hall A2

Phase II study of bavituximab plus paclitaxel and carboplatin in locally advanced or metastatic breast cancer: Interim results (Abstract #1062), Author: Minish Jain, Poster Board 22G, S Hall A2

Sunday, June 6, 2010, 8:00 - 12:00 pm CT Phase II study of bavituximab plus paclitaxel and carboplatin in untreated locally advanced or metastatic non-small cell lung cancer: Interim results (Abstract #7589), Author: Raghunadharao Digumarti, Poster Board 40H, S Hall A2

Open-label, dose confirmation, and dosimetry study of Cotara for the treatment of recurrent GBM: Final results (Abstract #48393), Author: William R. Shapiro, Poster Board 1G, S Hall A2

Peregrine will also have a booth (#19114) for the duration of the 2010 ASCO Annual Meeting.

For more information on the ASCO conference, visit <http://chicago2010.asco.org/Home.aspx>.

About Peregrine Pharmaceuticals Peregrine Pharmaceuticals, Inc. is a clinical-stage biopharmaceutical company with a portfolio of innovative monoclonal antibodies in development for the treatment of cancer and serious viral infections. The company is pursuing three separate clinical programs in cancer and HCV infection with its lead product candidates baviximab and Cotara(R). Peregrine also has in-house manufacturing capabilities through its wholly owned subsidiary Avid Bioservices, Inc. ([www.avidbio.com](http://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](http://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 larger clinical trials will not be consistent with results experienced in earlier clinical trials and preclinical studies, the risk that the company may experience delays in patient enrollment for the planned phase II clinical trials, and risk that results may not support registration filings with the U.S. Food and Drug Administration. 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, 2009 and the quarterly report on Form 10-Q for the quarter ended January 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.

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