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Peregrine's Non-Radiolabeled Lym-1 Antibody Shows Significant Anti-Tumor Effect on B-Cell Lymphoma in Preclinical Studies

TUSTIN, Calif., Dec. 10 /PRNewswire-FirstCall/ -- Peregrine Pharmaceuticals (Nasdaq: PPHM) announced today that researchers at Fox Chase Cancer Center, Philadelphia, PA presented preclinical data showing that non-radiolabeled Lym-1 antibodies had a significant anti-tumor effect on several B-cell lymphoma cancer models. The data was presented at The American Society of Hematology's (ASH) 2002 Annual Meeting being held December 6-10 in Philadelphia, Pennsylvania.

The presentation, titled "Lym-1 Unlabeled Monoclonal Antibody: Effects on Human B Cell Lymphoma Cells In Vitro and in Human Lymphoma Cell/Scid Mouse Model," was presented by Mitchell Reed Smith, M.D., Ph.D. and four other members of the Fox Chase Cancer Center. This study explored the use of unlabeled Lym-1 as an anti-tumor agent in several B-cell lymphoma mouse models. The study revealed that Lym-1 had significant anti-tumor activity when human natural killer cells were present in the mouse models, indicating that Lym-1 may interact with the immune system to provide an anti-tumor effect. In a survival experiment study, all mice in the control group died by week 10, while all Lym-1 (one dose) treated mice were alive and appeared healthy at week 16.

"We are pleased with the interest that researchers continue to show in working with our Lym-1 antibody in B-cell lymphoma," said Edward J. Legere, Peregrine's president and CEO. "We are actively pursuing potential licensing and development partners for the Oncolym (Lym-1) technology to advance clinical and commercial development. We believe Oncolym can be competitive in the B-cell lymphoma market place."

About Lym-1

The Lym-1 antibody is a murine IgG2a monoclonal antibody (MAb) raised against Raji cells, a malignant line cultured from Burkitt's lymphoma. The Lym-1 antibody recognizes the HLA-Dr10 protein, a cell surface marker present on over 80% of lymphoma cells. Only about 2% of healthy B-cells express the HLA-Dr10 marker. The HLA-DR receptor expression is highly specific with a nearly four fold greater binding constant for malignant lymphocytes than normal B cells. In addition, non-specific binding to other non-target tissues has not been observed. This means that the Lym-1 monoclonal antibody may selectively target lymphoma cancer cells and may spare healthy B-cells that are responsible for making antibodies that fight infection. The antibody profile for Lym-1 demonstrates high specificity only for lymphoma cells and binds to a very high degree to lymphoma cells rather than healthy cells. Lym-1 has demonstrated unusual tumor selectivity.

About Oncolym®

Oncolym is the trade name for the radioimmunoconjugate formed when the Lym-1 monoclonal antibody is attached to iodine-131, a radioactive form of iodine. To date, 126 patients were exposed to Oncolym in seven IND protocols. 114 patients have been treated with a therapeutic dose of Oncolym. In these trials, patients have achieved meaningful complete remissions ("CR") where there is no detectable tumor and partial remissions ("PR") where at least there is a 50% shrinkage of the tumor mass. An overall response rate (complete and partial responses) of 33.7% has been demonstrated in patients with aggressive Non-Hodgkin's Lymphoma. Radiation dosimetry demonstrates a tolerable safety index. Minor side effects such as thrombocytopenia (low platelet count) and leukopenia (low white blood cell count) have been observed. Clinical studies have revealed that the side effects appear to be reversible, manageable and to resolve without complications. To date, the 25 patients with an indolent form of NHL have been treated, of which 14 responders (56% response rate) with five CRs and nine PRs. In addition, 89 patients with an aggressive form NHL were treated, of which, there were 30 responders (33% response rate) with nine CRs and 21 PRs. Some patients treated with Oncolym have experienced durable complete remissions, the longest being about ten years.

About Peregrine Pharmaceuticals, Inc.

Peregrine Pharmaceuticals is a biopharmaceutical company focused on the development, commercialization and licensing of unique technologies for the treatment of cancer, primarily based on three collateral targeting technologies. Peregrine's Tumor Necrosis Therapy (TNT), Vasopermeation Enhancement Agents (VEA), and Vascular Targeting Agents (VTA) technologies target cell structures and cell types that are common among solid tumor cancers, giving them broad applicability across various tumor types. The company is working closely with the FDA on the lead TNT anti-cancer drug, Cotara™, to obtain approval of Phase III clinical trial protocol for brain cancer. Cotara is also being studied in a Phase I trial for colorectal, pancreas, soft tissue

sarcoma and biliary cancers at Stanford University. The company is focused on licensing collaborations for all of its technologies under development. The company also operates a growing cGMP contract manufacturing facility for monoclonal antibodies and recombinant proteins through its wholly-owned subsidiary Avid Bioservices, Inc. (www.avidbio.com). Copies of Peregrine press releases, SEC filings, current price quotes and other valuable information for investors may be found on the website www.peregrineinc.com.

Safe Harbor Statement: This release may contain certain forward-looking statements that are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Actual events or results may differ from the company's expectations as a result of risk factors discussed in Peregrine's reports on file with the U.S. Securities and Exchange Commission, including, but not limited to, the company's report on Form 10-K for the year ended April 30, 2002 and on Form 10-Q for the quarter ended July 31, 2002.

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