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Peregrine's Cotara(R) Phase I Hepatic Cancer Study Published In 'Cancer Therapy'

TUSTIN, Calif., Feb. 4 /PRNewswire-FirstCall/ -- Peregrine Pharmaceuticals (Nasdaq: PPHM) announced today that Phase I data from its Cotara hepatic cancer study was published in "Cancer Therapy." The data from the study highlights the utility of Cotara when used in combination with radiofrequency ablation (RFA) in the treatment of hepatic cancer metastases. Cotara is Peregrine's radiolabeled Tumor Necrosis Therapy (TNT) targeting monoclonal antibody. Cotara has received approval from the FDA to start a registration clinical trial for brain cancer in the U.S. Radiolabeled TNT has received marketing approval for the treatment of advanced lung cancer in the People's Republic of China.

The article, "A Phase I Safety and Imaging Study Using Radiofrequency Ablation (RFA) Followed by 131I-chTNT-1/B Radioimmunotherapy Adjuvant Treatment of Hepatic Metastases," highlighted the use of TNT in combination with RFA, an accepted form of treatment for metastatic hepatic cancer. TNT binds to areas of necrosis in tumors, which are commonly found in a wide variety of cancers. "Since radiofrequency ablation (RFA) of tumor nodules reliably produces 1-5 cm zones of >99% necrotic tissue, RFA may create abundant binding sites for TNT." In this study, "between 12 to 29% (Mean 28.1 +/- 4.0%) of an injected dose concentrated in the liver. Gamma camera imaging confirmed selective and avid targeting of radioisotope to areas of RFA within the liver. No significant adverse events were observed." The study's authors concluded, "The chTNT-1/B construct has excellent potential to become useful after RFA. Zones of necrosis that facilitate 131I-chTNT-1/B antibody binding were probably created after RFA. A further improvement in patient convenience and specific targeting with this promising immunoconjugate may also be possible using direct antibody injection at the end of the RFA procedure into the zone of necrosis using temperature monitoring."

About Tumor Necrosis Therapy (TNT)

Tumor Necrosis Therapy (TNT)-based drugs directly target and bind to the dead and dying regions of virtually all solid tumors. Rapidly growing tumors contain a significant proportion of degenerating or dead cells in addition to numerous proliferating viable cancer cells. These dead or dying cells result from incomplete formation of tumor blood vessels and impaired immune cell response. The accumulation of dying cells results in the formation of a dead, or necrotic, core present in virtually all solid tumors beyond a very small size. TNT-based drugs enter and bind to targets only available for binding in the necrotic areas of cancer. Hence, TNT-based therapeutic agents have the potential to deliver therapeutic agents preferentially targeted to virtually all solid tumors.

TNT antibodies bind to universal intracellular antigens, DNA histone complexes, exposed in the necrotic core of malignant solid tumors. While TNT is capable of binding with nuclear histones found in all cells, preclinical studies indicate that TNT antibodies do not penetrate normal cells with an intact cell membrane, making TNT highly specific to necrotic tumor tissue.

Given TNT's high specificity for necrotic tumor cells, TNT antibodies make excellent delivery molecules for a wide variety of anti-cancer killing agents. To date, the TNT technology platform has been used to deliver various killing agents such as radioactive isotopes, cytokines, chemokines and liposomes to solid tumors.

About Peregrine Pharmaceuticals

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 has received approval from the FDA to start a Cotara™ registration clinical trial for brain cancer. Cotara is also being studied in a Phase I trial for colorectal cancer at Stanford University. The company is focused on licensing collaborations for all of its technologies under development. The company's Oncolym® technology to treat non-Hodgkin's B-cell lymphoma in Phase I/II of development is available for licensing. The company operates a 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, Peregrine's report on Form 10-Q for the quarter ended October 31, 2003 and on Form 10-K for the year ended April 30, 2003.

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