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Peregrine Pharmaceuticals Announces the Initiation of Human Antibody Generation Against Two Additional Antigen Targets With Xenerex Biosciences

TUSTIN, Calif., Dec 20, 2001 (BW HealthWire) -- Peregrine Pharmaceuticals Inc. (Nasdaq:PPHM) today announced that it has initiated human antibody generation against two additional targets with Xenerex Biosciences, a wholly owned subsidiary of Avanir Pharmaceuticals (AMEX:AVN).

Both of these antibodies are being developed to potentially be used as fully human monoclonal antibody therapies for the treatment of solid tumors. The initiation of antibody generation against the new targets will complete the transfer of three targets from Peregrine to Xenerex under the terms of an agreement signed in June 2001.

"We are very pleased with the progress that Xenerex has made on the generation of human antibodies against the first target we provided them earlier this year," said Steven King, Peregrine's vice president of technology and product development.

"Because of the nature of the antigen, we anticipated that it might be difficult to generate antibodies against the target. Xenerex's system has proven to be quite robust, so we are confident to move additional targets into their system for the generation of fully human antibodies."

Work on generating antibodies against the two additional targets will commence immediately.

Xenerex Biosciences has a proprietary technology that enables rapid generation of fully human antibodies of high affinity and specificity to essentially any antigenic disease target or human protein. The technology combines the antigenic stimulation of donated human lymphoid cells with the grafting of the cells into severe combined immunodeficient (SCID) mice.

This technology mimics the in vivo human antibody response as it generates multiple antibodies to an antigenic target with various combinations of affinities and specificities characteristics.

The Xenerex system is able to take advantage of the unique in vivo cellular interactions, which occur in the human immune system that result in natural affinity maturation. This is the process by which the immune system generates antibodies of high specificity and affinity. The technology therefore is capable of duplicating many aspects of the human immune system, resulting in the generation of fully human antibodies.

"Xenerex has developed a novel system for the rapid generation of fully human monoclonal antibodies, which gives antibody development companies an exciting new option for the generation of new therapeutic targets," said Edward Legere, Peregrine's president and CEO.

"The generation of fully human antibodies is a critical milestone in our anti-vascular and anti-angiogenesis programs. Once human antibodies are generated, we can test them for suitability for advancement into human clinical trials as new therapies for solid tumor cancers and possibly other maladies.

"We look forward to continuing to expand our therapeutic pipeline through our sponsored research and in collaboration with companies such as Xenerex Biosciences."

About Xenerex Biosciences and Avanir Pharmaceuticals

Xenerex Biosciences, a subsidiary of Avanir Pharmaceuticals, is a biopharmaceutical company with a customer-focused mission to enable partner companies to develop and commercialize completely human antibody products. Xenerex is building a portfolio of antibody product candidates through agreements and licenses with biopharmaceutical companies.

Xenerex has also identified targets of its own and is in the process of generating antibody product candidates for eventual out-licensing or development. The company's Web site is http://www.xenerex.com.

Avanir Pharmaceuticals, based in San Diego, is an emerging diversified biopharmaceutical company engaged in research, development, commercialization, licensing and sales of innovative drug products and antibody generation services. The company's Web site is http://www.avanir.com.

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 its "collateral targeting technologies." These technologies target cell structures and cell types that are common among solid tumor cancers, giving them broad applicability across various tumor types.

In clinical and pre-clinical studies, collateral targeting technologies have been shown to deliver various anti-cancer compounds selectively to the tumor site without causing damage to surrounding healthy tissue.

Peregrine has three collateral targeting technologies: Tumor Necrosis Therapy (TNT), Vasopermeation Enhancement Agents (VEA) and Vascular Targeting Agents (VTA). The company's lead anti-cancer drug, Cotara™, is currently in a multi-center Phase II clinical study for the treatment of brain cancer and in four Phase I clinical studies for the treatment of colorectal, pancreas, liver, soft tissue sarcoma and biliary cancers.

Peregrine recently finalized a Cotara Phase III brain cancer study design with the FDA and expects to enroll patients under this protocol in the first quarter of 2002. Cotara has received fast track and orphan drug status from the FDA. Peregrine also has a direct tumor targeting agent called Oncolym® for the treatment of advanced non-Hodgkin's B-cell Lymphoma, which is currently in a multi-center Phase I/II study.

Copies of Peregrine news releases, SEC filings, current price quotes and other valuable information for investors may be found on the Web site at http://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, 2001 and on Form 10-Q for the quarter ended Oct. 31, 2001.

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