

Peregrine Pharmaceuticals Forms Anti-Viral Research Group to Oversee Its Anti-PS Infectious Disease Collaborations

- New Anti-Viral Research Group to Coordinate and Expand Externally Funded Collaborations Assessing Peregrine's Broad-Spectrum PS-Targeting Antibodies as Potential Anti-Infective Therapies, Vaccines and Topical Preventatives -
- Peregrine's PS-Targeting Anti-Viral Platform Is Being Studied at More than a Dozen Leading Research Institutions with Over \$60 Million in Potential Funding Already in Place from TMTI, NIAID, the Gates Foundation and the UC System -
- Broad-Spectrum PS-Targeting Antibodies Have Shown Promise in Life-Threatening Infectious Diseases Including HCV, HIV, CMV, Viral Hemorrhagic Fevers and Leishmaniasis -

TUSTIN, Calif., Oct 07, 2009 /PRNewswire-FirstCall via COMTEX News Network/ -- Peregrine Pharmaceuticals, Inc. (Nasdaq: PPHM) today announced that it has established a new Anti-Viral Research Group in its R&D organization. The new group has responsibility for coordinating, expanding and leveraging the company's multiple external collaborations already underway or planned to assess the potential utility of Peregrine's phosphatidylserine (PS)-targeting antibody platform for the prevention and treatment of a broad range of serious infectious diseases, including viral hemorrhagic fevers (VHF) and other biodefense threats, HIV, influenza, cytomegalovirus (CMV), leishmaniasis and malaria.

Peregrine's broad-spectrum PS-targeting antibodies are being assessed in anti-infective applications by more than a dozen leading research institutions. These collaborative efforts include studies assessing PS-targeting antibodies as potential therapeutics for HIV, VHF and CMV; studies assessing anti-PS antibodies as vaccines or vaccine adjuvants for the prevention of HIV and other infectious diseases; and studies of PS-targeting antibodies as potential topical microbicides against sexually transmitted diseases such as HIV and herpes viruses. Peregrine and its collaborators have already secured over \$60 million in research funding to evaluate the potential of the company's PS-targeting platform in a wide range of viral infections, and Peregrine researchers believe there is significant potential for additional applications of the technology in other infectious diseases.

"We are establishing our new Anti-Viral Research Group to maximize the clinical and commercial potential represented by the increasing interest from major research institutions and private and public funding agencies in studying our PS-targeting antibody platform as a novel approach to the prevention and treatment of a range of serious infectious diseases," said Steven W. King, president and CEO of Peregrine. "A growing body of published scientific research confirms that PS plays an important role in the development of many serious viral diseases, as well as in protozoan-caused illnesses such as malaria and leishmaniasis, conditions that impact the lives of millions of people worldwide each year. We believe that our PS-targeting antibody platform has the potential to address the large commercial markets represented by these diseases and to significantly impact the well-being of people around the globe. As a result, we see many opportunities to both optimize our current collaborations and to obtain new funding and support from additional external sources. This is the focus and mission of the Anti-Viral Research Group, and we are confident that it will be successful in identifying additional resources to help advance our PS-targeting anti-infective programs in the near and mid-term."

PS, a lipid molecule normally found only on the inside of cell membranes, becomes exposed on the outside of the membranes of certain viruses and virally infected cells. A rapidly growing body of published scientific research confirms that exposed PS is directly involved in the pathogenesis of many serious infectious diseases. Exposed PS enables viruses to evade immune recognition and dampens the body's normal responses to infection. By masking the exposed PS, PS-targeting antibodies are believed to block these effects, allowing the body to develop a robust immune response to the pathogen. Peregrine's PS-targeting antibodies have been shown to help clear infectious virus from the bloodstream and to induce antibody-dependent cellular cytotoxicity. Researchers have found that PS is exposed on the outer membrane of cells infected with HIV, influenza, herpes simplex viruses, hemorrhagic fever viruses, measles and members of the smallpox and rabies virus families. Scientists have also found that PS is exposed in certain infections caused by protozoan organisms, such as malaria and leishmaniasis.

Bavituximab, which is Peregrine's most advanced PS-targeting antibody, is currently being studied in a clinical trial for the treatment of patients co-infected with HCV and HIV. Phase I studies in HCV patients showed that bavituximab was well tolerated and it exhibited encouraging signs of anti-viral activity.

Peregrine's anti-PS antibodies are also generating positive data in preclinical HIV studies conducted by researchers from

leading universities and medical research institutions in the U.S. and U.K. with funding from the Bill and Melinda Gates Foundation and the National Institutes of Allergy and Infectious Diseases (NIAID). These studies have yielded promising results that support the potential of PS-targeting agents for use as therapeutics, in vaccines and as topical microbicides, an especially promising application urgently needed in the effort to help women avoid infection with HIV and other sexually transmitted diseases such as herpes viruses and chlamydia. In addition, collaborators are also investigating the utility of PS-targeting antibodies against CMV infections and leishmaniasis, a protozoan disease that attacks people and cattle in tropical regions, with devastating effects on both health and economic well-being.

Under a major biodefense initiative funded by the Defense Threat Reduction Agency for the Transformational Medical Technologies Initiative (TMTI), bavituximab and a fully human equivalent antibody are in preclinical development for the treatment of viral hemorrhagic fevers under a contract worth up to \$44.4 million. This contract, which is funding work at Peregrine and at several collaborating institutions, was awarded based on positive data from earlier studies in animals infected with VHF that was funded by a previous grant from NIAID. This work is going well, and Peregrine intends to report early results at an upcoming biodefense conference. NIAID also recently awarded a new VHF grant to Peregrine's collaborators at UT Southwestern Medical Center.

Dr. Amy Brideau-Andersen will be directing the new Anti-Viral Research Group. Before joining Peregrine in 2006, she played an important role in the discovery and development of novel anti-viral drugs at Valeant Pharmaceuticals and at Maxygen, Inc. Dr. Brideau-Andersen completed her post-doctoral training in virology at The Scripps Research Institute. She earned B.S/M.S. degrees from Worcester Polytechnic Institute and was awarded a Ph.D. in molecular biology from Princeton University.

"As a virologist, I am excited about the opportunity to lead this initiative," said Dr. Brideau-Andersen. "PS is a novel host-derived target that is present in many different viral infections. It has the potential to help harness the body's own immune defenses to combat infection while avoiding the problems of resistance that have limited the utility of many anti-viral agents. We look forward to working proactively with both our current collaborators and with the many scientific and medical organizations that are coming to us seeking to learn more about this important new approach."

Peregrine's collaborators currently include researchers affiliated with Duke University, Harvard University, UT Southwestern Medical Center, the National Institutes of Health, Utah State University, the Southwest Foundation for Biomedical Research, the University of California at Irvine, Northwestern University, the University of Texas Medical Branch at Galveston and other institutions in the U.S., U.K., and Brazil.

A scientific publication by Drs. Melina Soares and Philip Thorpe and colleagues discussing the broad anti-viral potential of bavituximab and other PS-targeting antibodies received wide attention when it was published in the December 2008 edition of *Nature Medicine*.

Bavituximab is also being tested in Phase II clinical trials for the treatment of advanced breast cancer and non-small cell lung cancer.

Peregrine's work on viral hemorrhagic fevers is funded by the Transformational Medical Technologies Initiative (TMTI) under contract HDTRA1-08-C-0003.

About Peregrine Pharmaceuticals

Peregrine Pharmaceuticals, Inc. is a biopharmaceutical company with a portfolio of innovative product candidates in clinical trials for the treatment of cancer and serious virus infections. The company is pursuing three separate clinical programs in cancer and HCV infection with its lead product candidates bavituximab and Cotara((R)). Peregrine also has in-house manufacturing capabilities through its wholly owned subsidiary Avid Bioservices, Inc. (www.avidbio.com), which provides development and bio-manufacturing services for both Peregrine and outside customers. Additional information about Peregrine can be found at 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 the Company will not receive the full \$44.4 million awarded under the TMTI program. the risk that bavituximab will not achieve broad-spectrum anti-viral effects and the risk that PS-targeting antibodies will not be less susceptible to viral mutations. It is important to note that 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 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 July 31, 2009. 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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