



August 24, 2015

AstraZeneca and Peregrine Pharmaceuticals to Collaborate on Immuno-Oncology Combination Clinical Trial

Collaboration to Focus on Cancer Immunotherapy Combination of Peregrine's PS-Targeting Bavituximab and AstraZeneca's PD-L1 Inhibitor MEDI4736

TUSTIN, Calif., Aug. 24, 2015 (GLOBE NEWSWIRE) -- AstraZeneca (NYSE:AZN) and Peregrine Pharmaceuticals, Inc. (NASDAQ:PPHM) (NASDAQ:PPHMP), a biopharmaceutical company focused on developing therapeutics to stimulate the body's immune system to fight cancer, today announced that they have entered into a cancer immunotherapy clinical trial collaboration. The collaboration will evaluate Peregrine's investigational phosphatidylserine (PS)-signaling pathway inhibitor, bavituximab, in combination with AstraZeneca's investigational anti-PD-L1 immune checkpoint inhibitor, durvalumab (MEDI4736). The planned Phase I/Ib trial will evaluate the safety and efficacy of bavituximab in combination with durvalumab in multiple solid tumors.

Peregrine and AstraZeneca will collaborate on a non-exclusive basis, to evaluate the combination of bavituximab and durvalumab with chemotherapy as a potential treatment in various solid tumors. The Phase I part of the trial is expected to establish a recommended dose regimen for the combination and the Phase Ib part of the trial will assess the safety and efficacy of the investigational combination. Under the terms of the agreement, the initial trial will be conducted by Peregrine.

Robert Iannone, Head of Immuno-Oncology, Global Medicines Development, at AstraZeneca said, "We believe that combination therapy in immuno-oncology has the potential to be a novel and highly effective approach to treating cancer. Our partnership with Peregrine provides the opportunity to explore an exciting, novel combination that could deliver important clinical benefit to patients across a range of cancers."

Bavituximab and durvalumab are investigational immunotherapies with different mechanisms that assist the body's immune system in fighting cancer. Bavituximab targets and modulates the activity of phosphatidylserine, a highly immune-suppressive molecule expressed broadly on the surface of cells in the tumor microenvironment. The treatment increases activated T-cells in tumors and fights cancer by reversing the immunosuppressive environment that many tumors establish in order to proliferate. MEDI4736 is a monoclonal antibody directed against programmed cell death ligand 1 (PD-L1). Signals from PD-L1 help tumors avoid detection by the immune system. Preclinical data have demonstrated that combining the enhanced T-cell mediated anti-tumor activity of bavituximab with checkpoint inhibitors, like PD-L1 antibodies, prolong the ability of tumor-specific T-cells to continue attacking the tumor.

"Data generated to date have shown significant potential for combining bavituximab with agents targeting the PD-1/PDL-1 pathway and we're excited to further explore this approach in studies with AstraZeneca's durvalumab," said Steven W. King, president and chief executive officer of Peregrine. "AstraZeneca is a recognized leader in the immuno-oncology field and this collaboration will play a key role as we continue to fully explore the potential of bavituximab in combination immunotherapies for a variety of clinical applications."

About Bavituximab: A Targeted Investigational Immunotherapy

Bavituximab is an investigational chimeric monoclonal antibody that targets phosphatidylserine (PS). Signals from PS inhibit the ability of immune cells to recognize and fight tumors. Bavituximab, the lead compound in Peregrine's immuno-oncology development program, blocks PS to remove this immunosuppressive signal and sends an alternate immune activating signal. Targeting PS with bavituximab has been shown to shift the functions of immune cells in tumors, resulting in robust anti-tumor immune responses.

About durvalumab (MEDI4736)

MEDI4736 is an investigational human monoclonal antibody directed against programmed cell death ligand 1 (PD-L1). Signals from PD-L1 help tumors avoid detection by the immune system. MEDI4736 blocks these signals, countering the tumor's immune-evading tactics. MEDI4736 is being developed, alongside other immunotherapies, to empower the patient's immune system and attack the cancer.

About Peregrine Pharmaceuticals, Inc.

Peregrine Pharmaceuticals, Inc. is a biopharmaceutical company with a pipeline of novel drug candidates in clinical trials focused on the treatment of cancer. The company's lead immunotherapy candidate, bavituximab, is in Phase III development for

the treatment of second-line non-small lung cancer (the "SUNRISE trial") along with several investigator-sponsored trials evaluating other treatment combinations and additional oncology indications. Peregrine also has in-house cGMP manufacturing capabilities through its wholly-owned subsidiary Avid Bioservices, Inc. (www.avidbio.com), which provides development and biomanufacturing services for both Peregrine and third-party customers. For more information, please visit www.peregrineinc.com.

About AstraZeneca in Oncology

Oncology is a therapeutic area in which AstraZeneca has a deep-rooted heritage. It will be potentially transformational for the company's future, becoming the sixth growth platform. Our vision is to help patients by redefining the cancer treatment paradigm and one day eliminate cancer as a cause of death. By 2020, we are aiming to bring six new cancer medicines to patients.

Our broad pipeline of next-generation medicines is focused on four main disease areas - ovarian, lung, breast and haematological cancers. These are being targeted through four key platforms - immuno-oncology, the genetic drivers of cancer and resistance, DNA damage repair and antibody drug conjugates.

About AstraZeneca

AstraZeneca is a global, innovation-driven biopharmaceutical business that focuses on the discovery, development and commercialisation of prescription medicines, primarily for the treatment of cardiovascular, metabolic, respiratory, inflammation, autoimmune, oncology, infection and neuroscience diseases. AstraZeneca operates in over 100 countries and its innovative medicines are used by millions of patients worldwide. For more information please visit: www.astrazeneca.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 AstraZeneca decides not to provide its drug for a specific study, the risk that the combination of bavituximab with PD-L1 and PD-1 based therapies will not increase the responsiveness of such PD-L1 and /or PD-1 therapies and the risk that data from the initial clinical trial does not support further development of this treatment combination. 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 our reports filed with the Securities and Exchange Commission including, but not limited to, our annual report on Form 10-K for the fiscal year ended April 30, 2015 as well as any updates to these risk factors filed from time to time in the company's other filings with the Securities and Exchange Commission. 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.*

Contacts:

Jay Carlson

Peregrine Pharmaceuticals, Inc.

(800) 987-8256

info@peregrineinc.com

Stephanie Diaz (Investors)

Vida Strategic Partners

415-675-7401

sdiaz@vidasp.com

Tim Brons (Media)

Vida Strategic Partners

415-675-7402

tbrons@vidasp.com

 Primary Logo

Source: Peregrine Pharmaceuticals Inc.

News Provided by Acquire Media