Pluristem's PLX Cells Show Efficacy in Treating Lung Disease

Statistically significant animal model results indicate PLX cells could improve the lives of people worldwide with interstitial lung disease in a four billion dollar market

HAIFA, ISRAEL, July 31, 2012 -- Pluristem Therapeutics, Inc. (NASDAQ:PSTI; TASE: PLTR), a leading developer of placenta-based cell therapies, today announced the results of new preclinical tests that show its PLacental eXpanded (PLX) cells may be effective in reducing pulmonary fibrosis and improving lung function in a group of diseases collectively called interstitial lung disease (ILD). ILD includes the pulmonary insults occurring in the lung following its exposure to drugs, radiation or toxic chemicals and the pulmonary complications of systemic autoimmune diseases. More than 200,000 people have been diagnosed with ILD in the United States, and nearly five million people have been diagnosed worldwide. It is estimated that more than 40,000 patients die each year from ILD.

The study was conducted at the University of Alberta in Canada by Principal Investigator Professor Bernard Thebaud, Department of Pediatrics and Department of Physiology, and assessed the preventive therapeutic potential of Pluristem's PLX cells in pulmonary fibrosis. In this animal model, mice treated with PLX cells showed approximately a 70% statistically significant decrease in collagen protein deposition in the lungs, in comparison to the control treated group. This significant reduction in collagen deposition, attributed to the PLX treatment, emphasizes the potential of PLX to treat the devastating pathogenic endpoint of pulmonary fibrosis. The effect of PLX on the collagen deposition also resulted in an improved lung capacity as represented by increased weight gain and improved oxygen saturation in the treated mice as compared to the control group.

"The positive results of these tests lead us to believe that we've discovered a very significant therapeutic potential in PLX cells for a wide range of pulmonary diseases," said Zami Aberman, Chairman and CEO of Pluristem. "We will be conducting additional studies to help bring a new cell therapy treatment to market for the benefit of ILD patient around the world."

About interstitial lung disease

ILD, also known as interstitial pulmonary fibrosis, is a general term that describes more than 100 chronic lung disorders that damage the tissue located between the airs sacs of the lungs, called the interstitium. The disease affects the lungs in three ways: (1) The lung tissue is damaged; (2) the interstitium becomes inflamed; and (3) fibrosis (scarring) begins in the alveoli (air sacs) and interstitium, and the lung becomes stiff, making it difficult to breathe. Lung scarring is irreversible. Corticosteroid drugs, the most common treatment, can sometimes slow the damage of ILD. However, many patients never regain full use of their lungs. While most cases of ILD develop gradually with few warning signs, it may develop suddenly in some patients. In some cases of ILD the cause can be identified; however, most cases are idiopathic (have no known

cause). More than 200,000 people have been diagnosed with ILD in the United States, and nearly five million people have been diagnosed worldwide. It is estimated that more than 40,000 patients die each year from ILD worldwide.

About Pluristem Therapeutics

Pluristem Therapeutics Inc. (NASDAQ:PSTI) (TASE:PLTR) is a leading developer of placenta-based cell therapies. The Company's patented PLX (PLacental eXpanded) cells are a drug delivery platform that releases a cocktail of therapeutic proteins in response to a host of local and systemic inflammatory and ischemic diseases. PLX cells are grown using the company's proprietary 3D micro-environmental technology and are an "off-the-shelf" product that requires no tissue matching prior to administration. Pluristem is focusing on the development of PLX cells administered locally to potentially treat systemic diseases and potentially obviating the need to use the intravenous route.

Data from two phase I studies indicate that Pluristem's first PLX product candidate, PLX-PAD, is safe and potentially effective for the treatment of end stage peripheral artery disease when given locally. Additionally, Pluristem is developing PLX-PAD for cardiac ischemia, PLX-BMP for Acute Radiation Exposure, Bone Marrow Transplant Failure and Chemotherapy induced Bone Marrow Aplasia, PLX-ORTHO for orthopedic indications and PLX-PAH for Pulmonary Hypertension in collaboration with United Therapeutics. Pluristem's pre-clinical animal models have demonstrated PLX cells are also potentially effective in other inflammatory/ischemic indications, including diastolic heart failure, inflammatory bowel disease, neuropathic pain and pulmonary fibrosis.

Pluristem has a strong patent portfolio, company-owned GMP certified manufacturing and research facilities, strategic relationships with major research institutions and a seasoned management team. For more information visit www.pluristem.com, follow Pluristem on Twitter@Pluristem, the content of which is not part of this press release.

CLICK HERE to watch a video where CLI patients and doctors involved with the clinical trials share their stories, the content of which is not part of this press release.

The Pluristem Therapeutics Inc. logo is available at
http://www.globenewswire.com/newsroom/prs/?pkgid=6882

Safe Harbor Statement

This press release contains forward-looking statements within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995 and federal securities laws. For example, when we say that data from two phase I studies in Critical Limb Ischemia indicates that PLX-PAD is safe and potentially effective, when we discuss the possibility that our PLX cells may be effective in reducing collagen deposition in the lung , or that our PLX cells have the potential to treat the devastating pathogenic endpoint of pulmonary fibrosis or that our PLX cells may be used in the future as a new treatment to benefit patients suffering from pulmonary fibrosis and improving lung function in ILD, , we are using forward-looking statements. These forward-looking statements are based on the current expectations of the management of Pluristem only, and are subject to a number of factors and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. The following factors, among others, could cause actual results to differ materially from those described in the forward-looking statements: changes in technology and market requirements; we may encounter delays or

obstacles in launching our clinical trials; our technology may not be validated as we progress further and our methods may not be accepted by the scientific community; we may be unable to retain or attract key employees whose knowledge is essential to the development of our products; unforeseen scientific difficulties may develop with our process; our products may wind up being more expensive than we anticipate; results in the laboratory may not translate to equally good results in real surgical settings; results of preclinical studies may not correlate with the results of human clinical trials; our patents may not be sufficient; our products may harm recipients; changes in legislation; inability to timely develop and introduce new technologies, products and applications; loss of market share and pressure on pricing resulting from competition, which could cause the actual results or performance of Pluristem to differ materially from those contemplated in such forward-looking statements. Except as otherwise required by law, Pluristem undertakes no obligation to publicly release any revisions to these forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. For a more detailed description of the risks and uncertainties affecting Pluristem, reference is made to Pluristem's reports filed from time to time with the Securities and Exchange Commission.

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