Third Party Research Study Demonstrates Pluristem's PLX-PAD Cells' Safety in Human Lung Models of Pulmonary Hypertension

Findings presented at ISHLT meeting in Montreal

HAIFA, Israel April 29, 2013 -- Pluristem Therapeutics Inc. (NASDAQCM: PSTI) (TASE:PLTR), a leading developer of placenta-based cell therapies, announced today that independent researchers from the Queensland Lung Transplant Service at the University of Queensland, Australia demonstrated that following infusion of Pluristem's PLX (Placental eXpanded) cells in a human lung model of pulmonary arterial hypertension (PAH), blood flows were maintained and no adverse hemodynamic effects were noted.

The findings were presented on April 25, 2013 at the 33rd Annual Meeting and Scientific Sessions of the International Society of Heart and Lung Transplantation (ISHLT) in Montreal, Canada. The presentation and poster entitled "Safety of a Mesenchymal-like Adherent Stromal Cell (PLX-PAD) in a Human Model of Pulmonary Arterial Hypertension (PAH)" are available at Pluristem's website: http://www.pluristem.com/investors/ for the next 30 days.

Zami Aberman, Pluristem's Chairman and CEO, stated, "We are pleased that independent researchers were able to demonstrate the safety of our PLX-PAD cells in this unique human lung model designed to bridge the gap between data obtained from animals and data needed to commence human studies. We look forward to the initiation of Phase I human studies for this important indication."

On June 20, 2011 United Therapeutics and Pluristem entered into a licensing agreement pursuant to which United Therapeutics will develop, market and sell Pluristem's PLX-PAD cells for PAH.

About the Study:

Daniel C. Chambers MD et. al. from Prince Charles Hospital and the University of Queensland, Australia induced pulmonary hypertension in four human lungs that had been declined for transplantation. Supra-therapeutic doses of Pluristem's PLX-PAD cells were then infused over 15 minutes directly into the pulmonary artery. Pulmonary vascular resistance stabilized during and for the hour post PLX-PAD infusion without adverse hemodynamic manifestations. The authors concluded they have demonstrated the

acute hemodynamic safety of supra-therapeutic doses of PLX-PAD cells in an *ex vivo* model of pulmonary arterial hypertension.

About Pluristem Therapeutics

Pluristem Therapeutics Inc. 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 has a strong intellectual property position, 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, the content of which is not part of this press release.

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 we look forward to the initiation of Phase I human studies for this important indication, we are using forward-looking statements. These forward-looking statements and their implications 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 and/or successfully completing our clinical trials; our products may not be approved by regulatory agencies, 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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