Scale up of bioreactors to allow production of about 30 billion cells with each reactor run

HAIFA, ISRAEL, March 12, 2012 -- **Pluristem Therapeutics, Inc** . (NASDAQ:PSTI; TASE: PLTR) today announced that it has initiated the process of scaling up the Company's manufacturing bioreactors from their current size of 5 liter (L) to 15L. The up scaling process is being coordinated to go on-line as part of Pluristem's current plant expansion. With the completion of the scaling up process, Pluristem will be positioned as the leading manufacturer of cells for a variety of product candidates.

The 15L bioreactors will accommodate the commercial production of Pluristem's PLacental eXpanded (PLX) cells that will be used in both the Company's upcoming pivotal Critical Limb Ischemia (CLI) clinical trial and the subsequent commercial sales of the cell product once approved.

Utilizing Pluristem's proprietary 3D manufacturing technology, a 15L bioreactor will yield approximately 30 billion PLX cells per reactor run, enough PLX cells for 100 doses at a dose of 300 million cells, the dose that will be used in the CLI clinical trial.

“The large-scale manufacturing of our PLX cells is vital to the success of our clinical trials and subsequently important for the potential commercialization of our PLX products" said Zami Aberman, Chairman and CEO of Pluristem. "Today, we initiated an additional important step in our industrialization process, where we utilize our proprietary 3D production technology, in order to manufacture trillions of cells in a stable, fully controlled and cost effective manufacturing operation. I believe that these competitive advantages strongly position us to provide viable therapies to millions of patients around the world once our products are fully developed and approved.”

About Pluristem Therapeutics

Pluristem Therapeutics Inc. (NasdaqCM: PSTI; TASE: PLTR) is a leading developer of placenta-based cell therapies. The company's patented PLX (PLacental eXpanded) cells drug delivery platform releases a cocktail of therapeutic proteins in response to a variety of local and systemic inflammatory 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 or immune-suppression treatment prior to administration. The PLX-PAD comprehensive clinical development plan has been recognized by both the EMA and FDA,

targeting a sub-population of 20 million patients in the Peripheral Artery Disease (PAD) market.

Data from two Phase I clinical trials indicate that Pluristem's first PLX product, PLX-PAD, is safe and potentially effective for the treatment of end stage PAD. Pluristem's pre-clinical animal models have demonstrated PLX cells are also potentially effective in nerve pain and muscle damage when administered locally and in inflammatory bowel disease, MS and stroke when administered systemically.

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