Pluristem Advances its Second Major Cell Therapy Product Line from Development to Large-Scale Manufacturing

Marks second major cell therapy product line developed on Company's PLX platform; PLX-RAD cells address multiple indications associated with bone marrow deficiency

HAIFA, ISRAEL, October 21, 2014-- Pluristem Therapeutics Inc. (NasdaqCM: PSTI; TASE: PLTR), a leading developer of placenta-based cell therapy products, announced today that it has completed development of its second major product line, and can now begin manufacturing the cells on a large-scale at its state-of-the art facility in order to meet demand for anticipated studies in a range of hematologic conditions. This second cell product candidate, called PLX-RAD, was created using Pluristem's proprietary three dimensional cell expansion technology platform. The Company's first product, PLX-PAD, is already in clinical trials for the treatment of peripheral artery disease, muscle injury and pulmonary arterial hypertension.

Pluristem's development plan for the PLX-RAD cells considers numerous potential clinical indications such as: 1) enhancement of engraftment of transplanted hematopoietic stem cells for the treatment of bone marrow deficiency, which can result from immune system disorders, genetic diseases, and treatment of leukemia and other blood cancers; 2) treatment of bone marrow deficiency in patients who have undergone chemotherapy; 3) treatment of acute radiation syndrome (ARS) in conjunction with the U.S. National Institutes of Health's National Institute of Allergy and Infectious Diseases.

"We've just completed a two-year development cycle for our PLX-RAD cells, and have also developed new manufacturing equipment, methods and know-how. We believe that our state-of-the-art technology platform can be used to create additional cell products from the placenta, tailored to potentially deliver targeted treatments for a variety of new indications," stated Zami Aberman, Chairman and CEO of Pluristem.

"Our technology platform, robust manufacturing capabilities and broad IP portfolio open the door for potential institutional and commercial partners, and we're pleased with the level of interest we have received in our technology platform. Pluristem is in a unique position to be a leader in the cell therapy industry," Aberman concluded.

Data from a study of PLX-RAD cells conducted at Hadassah Medical Center were published in the peer-reviewed journal, *PLOS ONE*.

About Pluristem Therapeutics

Pluristem Therapeutics Inc. is a leading developer of placenta-based cell therapy products. The Company's patented PLX (PLacental eXpanded) cells release a cocktail of therapeutic proteins in response to inflammation or ischemia. PLX cells are grown using the Company's proprietary three dimensional expansion 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, forward-looking statements are used in this press release when we discuss our development plan for the PLX-RAD and anticipated studies in a range of hematologic conditions; when we discuss our belief that our technology platform can be used to create additional cell products from the placenta, tailored to potentially deliver targeted treatments for a variety of new indications; when we discuss the feasibility of potential institutional and commercial new partnerships, or that we are in a unique position to lead the cell therapy industry. 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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