Pluristem Therapeutics to Expand Testing of PLX Cells for the Treatment of Radiation Exposure

Collaborative Agreement with Hadassah University Medical Center to Build off Data from Previous Studies Conducted by Pluristem

HAIFA, ISRAEL, April XX, 2011 -- Pluristem Therapeutics, Inc. (NASDAQ:PSTI; TASE:PLTR) announced today that it has signed a collaborative agreement with the Hadassah University Medical Center to continue previously conducted animal study that indicates PLX cells are potentially effective in the treatment of radiation sickness.

Pluristem's preliminary study indicated that the administration of PLX cells following radiation exposure resulted in a significant improvement in the repopulation of cells of the haematopoietic system within the animal's bone marrow.

"We are excited to form a collaboration with Hadassah University Medical Center to further test the ability of our PLX cells to effectively treat radiation sickness," said Zami Aberman, Chairman, President and CEO of Pluristem."The data collected from our initial study holds great promise for both our company and the medical industry and we look forward to validating our research and moving ahead with the next stage of testing for this important indication."

The initial study conducted by Pluristem exposed NOD/SCID mice to a sub-lethal dose of radiation (350) and then injected them with PLX cells. Approximately five weeks after the injection of the cells, a significant recovery of the animal's hematopoietic stem cells (HSCs), which give rise to all the blood cell types, including the cells of the immune system, was noted.

Additionally, Pluristem has found its PLX cells to be cytoprotective, which the company believes play a role in protecting bone marrow cells from the adverse effects of radiation exposure. "Exposure to high doses of ionizing radiation may be fatal, with no adequate efficient treatment, except for bone marrow transplantation in severe cases, which is a hazardous treatment by itself and in most cases is not easily available. Therefore, the convincing initial data from Pluristem's trial, using PLX cells to alleviate radiation

damages, convinced us to move ahead with additional testing," said Prof. Raphael Gorodetsky, the Head of Laboratory of Biotechnology and Radiobiology at Hadassah University Medical Center. "We are excited to use our experience in both radiobiology and stem cells research to partner with Pluristem on this important study and we look forward to taking the steps with them towards commercializing this treatment."

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About Hadassah University Medical Center

A state-of-the-art medical center incorporating all medical and surgical sub-specialties, with a tertiary care referral hospital at Ein Kerem and a community hospital on Mt. Scopus; conducts more than half the hospital research in Israel. The flagship of Hadassah, the Women's Zionist Organization of America, which laid the foundation of Israel's medical infrastructure, initiated and maintains educational programs and youth institutions, and is the main supporter of The Hadassah Medical Center. Hadassah is the largest employer in Jerusalem excluding the government: 850 physicians and academic University Affiliated researchers, 1,940 nurses, 1,020 paramedical and support staff; two campuses with 1,000 beds, 31 operating thereaters, 9 intensive care units and over 120 outpatient clinics. Hadassah is committed to excellence in health care, medical research and medical education. Hadassah treats over 1 million people a year from all over Israel, and neighboring countries, and offers special programs for international patients. Hadassah was and still is a pioneer in introducing in Israel, and in some areas in the world, innovative and unique medical treatment. www.hadassah.org.il

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 and strategic relationships with major research institutions. For more information visit www.pluristem.com, the content of which is not part of this press release. Follow Pluristem on Twitter @Pluristem.

CLICK HERE to watch a video where CLI patients and doctors involved with the clinical trials share their stories. CLICK HERE to see Pluristem's cell therapy product animation on YouTube.

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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, we are using forward looking statements when we say that our previously conducted animal studies indicate PLX cells are potentially effective in the treatment of radiation sickness, or when we say that the data collected from our initial study holds great promise for both our company and the medical industry and we look forward to validating our research and moving ahead with the next stage of testing for this important indication, or when we say that we found our PLX cells to be cytoprotective, which we believe play a role in protecting bone marrow cells from the adverse effects of radiation exposure, or when this press release makes statements about

commercializing our treatment, or when we say that 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 or that 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. 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; 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.