U.S. Department of Defense to Study Pluristem's PLX-R18 for the Treatment of Mustard Gas Injuries

Studies to be funded by the U.S. NIH
Marks the second project for DOD with PLX-R18 cell therapy product

HAIFA, Israel, June 19, 2018 - Pluristem Therapeutics Inc. (Nasdaq:PSTI) (TASE:PSTI), a leading developer of placenta-based cell therapy products, announced today it has entered into an additional collaboration agreement with the U.S. Department of Defense (DOD) and its United States Army Medical Research Institute of Chemical Defense (USAMRICD) to study the Company's PLX-R18 cell therapy product in the treatment of long term lung injuries following exposure to mustard gas. These studies will be funded by the U.S. National Institutes of Health (NIH) and mark the second project selected by the DOD for PLX-R18. The DOD is also studying the effectiveness of PLX-R18 as a novel medical countermeasure for Acute Radiation Syndrome (ARS) prior to exposure to high levels of radiation, designed to support the needs of the U.S. Armed Forces. These two DOD projects are in addition to the NIH-funded late stage development of PLX-R18 to treat the injuries from acute exposure to high levels of radiation.

Sulfur mustard, also known as mustard gas, is a chemical warfare agent, causing severe chemical burns in multiple organs and can also lead to long term damage to the lungs. Currently, supportive care is the only treatment available for people exposed to mustard gas and there is no antidote available.

In multiple studies conducted by several agencies, including the NIH, PLX-R18 has been shown to be effective in recovering the bone marrow, leading to regeneration of progenitor cells and the three blood lineages, including white blood cells, red blood cells and platelets. We believe that these data, together with the results from additional studies conducted with PLX-R18 on lung fibrosis, demonstrate the cells' potential to counteract injuries from sulfur mustard gas.

"Mustard gas injuries have both acute and long-term consequences. We believe that PLX-R18 has the potential to alleviate or prevent the devastating effects of both the acute and chronic injuries following mustard gas exposure," stated Pluristem Co-CEO and President, Yaky Yanay. "Mustard gas is also known as a radio-mimetic agent, with injuries similar to those appearing following exposure to ionizing radiation. Following the positive results with PLX-R18 in ARS we believe that the cells have the potential to mitigate the deleterious effects of mustard gas. Positive results from these studies may establish PLX-R18 as a medical countermeasure against a wide range of chemical, biological, radiological and nuclear (CBRN) threat agents."

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About Pluristem Therapeutics

Pluristem Therapeutics Inc. is a leading developer of placenta-based cell therapy products. The Company has reported robust clinical trial data in multiple indications for its patented PLX cells and is entering late-stage trials in several indications. Our PLX cell products release a range of therapeutic proteins in response to inflammation, ischemia, muscle trauma, hematological disorders, and radiation damage. The cells are grown using the Company's proprietary three-dimensional expansion technology and can be administered to patients off-the-shelf, without tissue matching. Pluristem has a strong intellectual property position; Company-owned and operated, GMP-certified manufacturing and research facilities; strategic relationships with major research institutions; and a seasoned management team.

Safe Harbor Statement

This press release contains express or implied forward-looking statements within the Private Securities Litigation Reform Act of 1995 and other U.S. Federal securities laws. For example, Pluristem is using forward-looking statements when its discusses PLX-R18 cells' potential to counter injuries and deleterious effects from sulfur mustard gas and its belief that positive results from these studies may establish PLX-R18 as a medical countermeasure against a wide range of chemical, biological, radiological and nuclear threat agents. 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; Pluristem may encounter delays or obstacles in launching and/or successfully completing its clinical trials; Pluristem's products may not be approved by regulatory agencies, Pluristem's technology may not be validated as it progresses further and its methods may not be accepted by the scientific community; Pluristem may be unable to retain or attract key employees whose knowledge is essential to the development of its products; unforeseen scientific difficulties may develop with Pluristem's process; Pluristem's products may wind up being more expensive than it anticipates; results in the laboratory may not translate to equally good results in real clinical settings; results of preclinical studies may not correlate with the results of human clinical trials; Pluristem's patents may not be sufficient; Pluristem's products may harm recipients; changes in legislation may adversely impact Pluristem; 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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