Pluristem Expands PLX Product Portfolio in Orthopedics and Sports Medicine

Pluristem plans to Initiate a Phase I Trial in Rotator Cuff Injuries

HAIFA, Israel April 18, 2013 -- Pluristem Therapeutics Inc. (NASDAQCM: PSTI) (TASE:PLTR), a leading developer of placenta-based cell therapies, announced today it is expanding its presence in the orthopedic and sports medicine markets with plans to initiate a Phase I clinical trial to evaluate the safety and efficacy of the local administration of PLX cells to patients suffering from injuries to tendons. This study planned will be a randomized, double blind, placebo-controlled study to evaluate the safety and efficacy of local intra-tendon injections of PLX-PAD cells to patients suffering from rotator cuff tear requiring arthroscopic repair. The hypothesis is that PLX-PAD cells will improve the post-operative structural and functional status of the rotator cuff. This placebo controlled study will be conducted in approximately 30 patients with a follow-up period of 6 months.

Tendinosis, sometimes called chronic tendonitis, is an accumulation over time of micro tears of the connective tissue in and around the tendon that does not heal properly. Tendinosis leads to pain and a reduced range of motion. If left untreated, tendinosis may lead to reduced tensile strength that increases the chance of tendon rupture. Current therapies involve prolonged rest and immobilization. Rotator cuff tendinosis is a very common problem with more than 50% of individuals older than 60 years presenting with at least a partial-thickness rotator cuff tear. According to the American Academy of Orthopedic Surgeons, each year approximately 200,000 Americans require surgery related to repair of the rotator cuff. However full recovery after rotator cuff surgery often takes 4 to 6 months and approximately 65% of the patients undergoing rotator cuff repair will have a satisfactory result one year following surgery.

“We have preclinical data illustrating the potential efficacy of PLX cells in the treatment of tendon pathologies, conditions which impact a large segment of the population. Intra-tendon injections of PLX cells will potentially allow us to provide the focused delivery of therapeutic proteins in the treatment of tendon injuries. This trial represents the expansion of our orthopedic and sports injury franchise and is additive to our current ongoing study in muscle injury,” stated Zami Aberman, Pluristem’s Chairman and CEO.

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 discuss the Phase I Trial in rotator cuff injuries which we plan to initiate, when we discuss the hypothesis that PLX-PAD cells will improve the post-operative structural and functional status, or when we say that Intra-tendon injections of PLX cells will potentially allow us to provide the focused delivery of therapeutic proteins in the treatment of tendon injuries, 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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