New Published Data Show Pluristem's PLX Cells Protect Neurons

PLX cells could potentially be used to treat stroke or other injuries to the nervous system attributable to low oxygen levels

HAIFA, ISRAEL, December 22, 2014 -- Pluristem Therapeutics Inc. (NasdaqCM, TASE: PSTI), a leading developer of placenta-based cell therapy products, announced today that a study of PLacental eXpanded (PLX) cells was accepted for publication in the February, 2015 issue of Biochimica et Biophysica Acta Molecular Cell Research. The study results show that PLX cells protect PC12 cells – an established model of various nerve cells including dopaminergic neurons – from death after oxygen and glucose deprivation. The protective effects of PLX cells were strongly correlated with the secretion of interleukin 6 (IL-6) and vascular endothelial growth factor (VEGF), which are known to have neuroprotective effects in humans with injuries to the nervous system that can occur after events such as a stroke.

"Our findings suggest that PLX cells may potentially treat damaged nerves, and may corroborate and explain the mechanism that leads to one of our findings in our Phase I trial in critical limb ischemia. In that study, patients treated with PLX cells had a statistically significant reduction in pain as compared to their baseline. An earlier preclinical study, published in the journal Brain Research, showed that PLX cells may effectively treat ischemic stroke," stated Pluristem CEO Zami Aberman.

Aberman continued, "These latest findings also call to mind two earlier preclinical studies, which indicated that PLX cells may be an effective treatment for both neuropathic and inflammatory nerve pain, suggesting that PLX cells could be a potential treatment for chronic nerve pain resulting from conditions such as diabetic neuropathy."

The study, titled "Human PLacental eXpanded (PLX) mesenchymal-like adherent stromal cells confer neuroprotection to nerve growth factor (NGF)-differentiated PC12 cells exposed to ischemia by secretion of IL-6 and VEGF", was conducted jointly by researchers at Pluristem and Prof. Philip Lazarovici, Jacob Gitlin Chair in Physiology and Pharmacology at the School of Pharmacy Institute for Drug Research at the Hebrew University and co-authored by Prof. Ephraim Yavin of the Department of Neurobiology at the Weizmann Institute of Science. The study was supported by the Magnet program of Israel's Ministry of Economy.

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, hematological disorders, radiation damage, and 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 the potential of PLX cells to treat damaged nerves and to treat ischemic stroke, and the potential of PLX cells to be an effective treatment for both neuropathic and inflammatory nerve pain. In addition, historic results of scientific research and clinical and preclinical trials do not guarantee that the conclusions of future research or trials would not suggest different conclusions or that historic results would not be interpreted differently in light of additional research and clinical and preclinical trials results. 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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