Pluristem Provides Shareholder Update on Corporate and Clinical Developments

HAIFA, Israel, May 22, 2017 -- Pluristem Therapeutics Inc. (Nasdaq:PSTI) (TASE:PSTI), a leading developer of placenta-based cell therapy products, today reported financial results and corporate and clinical developments for the third quarter of fiscal 2017 ended March 31, 2017.

"In this quarter, we achieved significant progress in the development of our PLX-R18 product as a medical counter measure in the treatment of Acute Radiation Syndrome (ARS). Additionally, we continued to build our intellectual property portfolio and are very proud to have reached a milestone of 100 granted patents, including coverage of leading indications in major markets. We look forward to finalizing our joint venture for the commercialization of PLX-PAD in Japan and are confident in our ability to execute on multiple fronts to bring the most innovative and effective cell therapies to market," stated Pluristem President and Co-CEO, Yaky Yanay.

Clinical and Corporate Highlights Include:

Positive Results from PLX-R18 study in the Treatment of ARS

The objective of the pilot study, conducted and funded by the U.S. National Institutes of Health (NIH), was to evaluate survival, hematological and safety parameters, in both irradiated and non-irradiated non-human primates (NHPs).

Study results showed that all three doses of PLX-R18 improved survival rates compared to control group. Doses of 4, 10 and 20 million cells per kilogram resulted in survival rates of 83%, 86% and 67% respectively, compared to 50% in the control group. All surviving animals fully recovered from ARS. This pilot study also demonstrated a trend towards enhanced neutrophil and lymphocyte recovery.

Safety data showed that PLX-R18 cells did not affect non-irradiated animals. This indicates that individuals can be treated without determining their degree of exposure to radiation. Dosing without the need to test for the level of exposure could offer a significant and time-critical treatment advantage in a mass-casualty disaster.

"The positive data show that PLX-R18 was effective at increasing survival rates and accelerating full recovery in NHPs exposed to radiation. Achievement of this milestone brings us one step closer to potential marketing approval of PLX-R18 as a first line medical countermeasure for ARS," stated Pluristem Chairman and Co-CEO, Zami Aberman.

"We believe that PLX-R18 cells have the potential to become an alternative to existing treatments for ARS due to their significant advantages. Existing treatments available today have limited efficacy, focusing mainly on regeneration of subpopulations of blood cells. Studies have shown that PLX-R18 cells could potentially trigger regeneration of all blood lineages and lead to higher survival rates."

"We are now focusing on advancing this important treatment and continuing our discussions with U.S. government agencies regarding their continued support for the final pivotal study, as well as potential initial stockpiling of PLX-R18 cells," Aberman concluded.

Two Senior Executive Appointments

On March 29, 2017, Pluristem announced two senior executive appointments to support the company's growth and ensure continued success as it enters advanced stages of clinical development for its PLX products.

Yaky Yanay, President of Pluristem and formerly Chief Operating Officer, joined current Chairman and Chief Executive Officer, Zami Aberman as Co-Chief Executive Officer and retained his title of President of the company.

Erez Egozi was appointed to the position of Chief Financial Officer of the company. Previously, Mr. Egozi served as the company's Vice President of Finance and Secretary.

Advancing Towards Finalizing a Joint Venture for the Commercialization of PLX-PAD in Japan

Pluristem is advancing discussions with Sosei Corporate Venture Capital Ltd. (Sosei CVC) towards establishing a new corporation to pursue the clinical development and commercialization of Pluristem's PLX-PAD cell therapy product in Japan. Pluristem and Sosei CVC currently anticipate definitive agreements will be finalized in the coming months.

Milestone of 100 Granted Patents

On April 19, 2017, Pluristem announced that it had been granted its 100th patent. Pluristem's 100 approved patents and over 110 pending patent applications cover over 30 different innovations, including: Pluristem's proprietary PLX cells and the pharmaceutical composition containing them; methods of expanding and harvesting the cells; uses of the cells in treating a wide variety of indications; and advanced devices developed for expanding and thawing the cells.

Asian Markets Show Heightened Interest in Regenerative Medicine

During the last few months we have seen an increased interest from Asia. This was particularly evident in China, where the Chinese Food and Drug Administration (CFDA) updated their regulations in order to accelerate the medical regulatory approval process for regenerative medicine companies. The recent notice states that the CFDA would grant fast-track status to innovative products that address unmet medical needs in the country.

Following the Chinese monetary Policy, Pluristem does not expect the necessary clarifications regarding the agreement with Innovative Medical to be provided by the end of H1/2017. Company will update upon developments, if any.

Pluristem believes that PLX cell therapy products have the ability to play an important role in addressing the needs of Asia's rapidly growing healthcare markets and aging population. The company is confident in its ability to collaborate with strategic Asian partners.

Financial Update:

As of March 31, 2017, Pluristem had $33.1 million in cash and cash equivalents, bank deposits, restricted deposits and marketable securities. During this quarter, Pluristem conducted a public offering for aggregate net proceeds of $15.7 million. The company's net cash used for operating activities was $5.5 million for this quarter.

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 (PLacental eXpanded) cells. The cell products release a range of therapeutic proteins in response to inflammation, ischemia, hematological disorders, and radiation damage. PLX cell products are grown using the company's proprietary three-dimensional expansion technology. They are off-the-shelf, requiring no tissue matching prior to administration.

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, we are using forward-looking statements when the company discusses Pluristem's plans to finalize its joint venture for the commercialization of PLX-PAD in

Japan, the establishment of a Japanese new corporation, Pluristem and Sosei CVC's plan to enter into definitive agreements and the proposed timing of execution of such definitive agreements, Pluristem's ability to collaborate with a strategic Asian partner, Pluristem's confidence in its ability to execute on multiple fronts to bring the most innovative and effective cell therapies to market, Pluristem's belief that PLX-R18 cells have the potential to become an alternative to existing treatments for ARS due to their significant advantages, that PLX-R18 cells could potentially trigger regeneration of all blood lineages and lead to higher survival rates and Pluristem's discussions with U.S. government agencies regarding continued support for a pivotal trial and potential initial stockpiling of PLX-R18 cells. 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 clinical 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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