Pluristem Therapeutics Issues Shareholder Update

- **Recent financing provides funding through multiple potentially value-creating milestones**
- **Providing short and mid-term milestones, targeting marketing and significant contracts**

HAIFA, Israel, April 23, 2019 - Pluristem Therapeutics Inc. (Nasdaq:PSTI) (TASE:PSTI), a leading regenerative medicine company developing novel placenta-based cell therapy products, today issued an update to its shareholders from its Co-Chief Executive Officers, Zami Aberman and Yaky Yanay.

Dear Fellow Shareholders,

During the first quarter of the year, Pluristem made considerable progress toward its clinical and business goals. In addition, subsequent to the end of the quarter, the Company concluded a financing which raised gross proceeds of approximately $21 million. We are aware that such funding and its dilutive nature has had some negative near-term impact on the stock price, but these funds provide resources to fund Pluristem through several important and potentially value-creating milestones, and strengthen its position as a leader in the cell therapy and regenerative medicine space. These important milestones include a potential European Medicines Agency (EMA) application for conditional marketing approval in critical limb ischemia (CLI), completion of our Phase III study in muscle regeneration following hip fracture and securing an important contract with the U.S. government in our Acute Radiation Syndrome (ARS) program.

Over the past few years, Pluristem has been awarded tens of millions of dollars in non-dilutive funding from its partners and collaborators. In order to assure the advancement of these R&D agreements into contracts and continue to advance discussions with other potential strategic and pharmaceutical partners, we needed to secure and strengthen our balance sheet to carry on the development of our novel PLX pipeline of products through marketing approval. The recent financing also attracted long-term oriented institutional investors, both in the U.S. and Israel, which diversified our shareholder base and, we believe, will provide important support for the Company going forward.

Pluristem is in a unique position today as we pursue major short and mid-term milestones. In addition to the anticipated completion of three Phase III studies, we would also like to provide you with the short-term roadmap to important milestones. It is our belief that achieving these

goals will provide increased confidence in Pluristem's ability to lead the cell therapy space, bringing hope to millions of patients and creating substantial value to our shareholders.

In the coming year we expect to report initial data from our ongoing expanded access program in CLI. This real-world data is important to support our biologics license application (BLA) and to provide real-world evidence of the therapeutic potential of PLX-PAD in these patients who are left with no alternative medical options. In addition, within the next quarter we expect to report data from our collaboration with the U.S. Department of Defense, testing PLX-R18 as a prophylactic treatment for ARS. We are working to secure two potential contracts that could create significant value for the company: a contract from the U.S. government which includes the final development phase in our ARS project, and a contract from our European consortium, "RESTORE," where Pluristem is one of two finalists competing to be awarded a grant of up to $1 billion to develop therapies for the European market. While there is no assurance we will win either of these contracts, we believe that our proposals are very competitive, innovative and can provide real benefits for both patients and healthcare systems. We also expect to report progress with our additional collaborations, including NASA, Chart and Thermo Fisher. We see great potential in these collaborations and believe it could generate important data and, assuming approval, ultimately drive sales.

Today, one of the biggest challenges for innovative therapies is having access to large-scale controlled and efficient manufacturing. One of Pluristem's key competitive advantages is its in-house proprietary 3D manufacturing technology, allowing for regulatory-approved large scale manufacturing that provides higher quality and reduced manufacturing costs for the Company. Recently, we started to explore the use of our 3D bioreactor technologies in other industries, while keeping our competitive advantage in the cellular therapy field.

In our view, there aren't many companies in the world that can truly make a substantial impact on the medical world the way Pluristem can. We are focused on bringing our advanced cell therapy products to patients in need, while continuing to build our business and be a leader in our industry. In addition to the significant progress we are making on these fundamental activities, we are also acutely focused on the capital markets, including regaining compliance with Nasdaq listing requirements, reducing expenses and restoring shareholder value.

We have a lot of work to do. As CEOs we sometimes need to make difficult decisions in order to make sure we successfully get to the right place. We want to assure our shareholders that we are committed to meeting all of our milestones and are working tirelessly for the long-term success of the company.

Thank you for your continued support of Pluristem.

Sincerely,

Zami Aberman
Chairman and Chief Executive Officer

Yaky Yanay
President and Chief Executive Officer

Safe Harbor Statement

This letter contains express or implied forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and other U.S. Federal securities laws. For example, Pluristem is using forward-looking statements when Pluristem discusses the use of proceeds from the recent public offering, the milestones these proceeds will fund, the strengthening of Pluristem's position as a leader in the cell therapy and regenerative medicine space, when the Pluristem discusses advancement of R&D agreements into contracts and advancing discussions with potential strategic and pharmaceutical partners, or when the Pluristem discusses that the diversified shareholder base created following the public offering will provide important support for the Company going forward, when Pluristem discusses short term road map to Pluristem's milestones and how achieving these goals will provide increased confidence in Pluristem's ability to lead the cell therapy space, bringing hope to millions of patients and creating substantial value to its shareholders, when Pluristem discusses data it expects to report in the coming year, contracts it is working to secure and progress in collaborations Pluristem expects to report and the potential such collaborations have, or when Pluristem discusses its focus of bringing its advanced cell therapy products to patients in need, while continuing to build its business and be a leader in its industry as well as its focus on the capital markets, including regaining compliance with Nasdaq listing requirements, reducing expenses and restoring shareholder value. 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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