Recently released from Hadassah Medical Center hospital, patient becomes second person whose life was saved by PLX cells, joining seven year old girl who suffered from severe aplastic bone marrow

HAIFA, ISRAEL, August 6, 2012 – Pluristem Therapeutics, Inc. (NASDAQCM:PSTI; TASE:PLTR), a leading developer of placenta-based cell therapies, announced today that the life of a patient suffering from bone marrow failure in which there was a dangerous reduction in the number of red blood cells, white blood cells, and platelets (pancytopenia) has been saved using Placental eXpanded (PLX) cells. This is the second time in the past three months that a patient suffering from bone marrow failure was successfully treated in a compassionate use treatment with PLX cells with a return of bone marrow function.

The patient, a 54 year-old woman diagnosed with lymphoma cancer, was initially treated with chemotherapy. Her condition continued to deteriorate, necessitating a bone marrow transplant. The transplant, as well as alternate therapies, were not successful. As a result, the woman suffered from prolonged dangerous pancytopenia. PLX cells were then administered to the patient at the Hadassah Medical Center, Jerusalem, under the Israeli government's compassionate use program. Following the injection of the PLX cells intramuscularly (IM), the woman's clinical condition and blood counts improved to the point where the patient was able to be released from the isolation unit and subsequently discharged from the hospital.

"This is a real breakthrough – the woman was in isolation due to low white blood cells and high susceptibility to infections and in addition her red blood cells and platelets were low, leading to a very dangerous and life-threatening situation," said Professor Reuven Or, Director of Bone Marrow Transplantation and Cancer Immunology at Hadassah Medical Center. "Further, autologous bone marrow transplantation that she received engrafted poorly, and as a last resort, we applied for a compassionate treatment using Pluristem's PLX cells based on our previous experience with those cells. The treatment with PLX has saved her life and can certainly be classified as a medical miracle," added Dr. Reuven Or. "The result of this unique case demonstrates that
PLX cells could potentially be effective for use in cancer patients, who receive bone marrow transplantation following severe radiation and chemotherapy treatments, which severely damage their bone marrow."

The clinical improvements observed in this and a previous patient treated with PLX cells demonstrate that these cells could potentially assist in the recovery of bone marrow following bone marrow transplant failure or other conditions where the bone marrow is significantly compromised.

Pluristem recently announced it is preparing to apply for Orphan Drug Status for its PLX cells with the U.S. Food and Drug Administration for the treatment of aplastic bone marrow. The bone marrow transplant market is an estimated $1.3 billion per year in the U.S. alone, based on 30,000 bone marrow transplants in the U.S per annum.

In May, Pluristem announced that a seven year-old girl, whose condition was rapidly deteriorating due to an aplastic bone marrow, experienced a reversal of her condition with a significant increase in her red blood cells, white blood cells and blood platelets following the intramuscular injection of the company's PLX cells. The patient has subsequently been released from the hospital and returned home.

"We are extremely grateful to be working with Professor Reuven Or and his team, whose work helped save the life of this woman," said Zami Aberman, Chairman and CEO of Pluristem. "Pluristem now has several clinical data points to suggest that our PLX cells are successful in treating patients whose bone marrow is failing."

About the Patient

This 54 year-old patient was diagnosed with lymphoma in 2008 and received chemotherapy, resulting in remission of the disease in 2009. At that point doctors collected stem cells from her bone marrow. The cancer returned to her spinal cord in 2011. She was treated with both radiation and chemotherapy, which damaged her bone marrow. Autologous stem cell therapy was administered with cells collected from her in 2009. The bone marrow engrafted poorly and she was not responding to alternate treatments. Forty-five days after the autologous stem cell transplantation, with the patient's clinical condition deteriorating, PLX cells were administered IM via two courses a week apart. Approximately two weeks after her second course of PLX cells, clinical improvement was noted with an increase in her red blood cells, white blood cells and platelets. Her clinical condition has improved significantly to the point that she was released

from the hospital.

About Pluristem Therapeutics Inc.

Pluristem Therapeutics Inc. (NasdaqCM: PSTI; TASE: PLTR) 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 is focusing on the use of PLX cells administered locally to treat systemic diseases and potentially obviating the need to use the intravenous route.

Data from two phase I studies indicate that Pluristem’s first PLX product candidate, PLX-PAD, is safe and potentially effective for the treatment of end stage peripheral artery disease when given locally. Additionally, Pluristem is developing PLX-PAD for cardiac ischemia, PLX-BMP for Acute Radiation Exposure, Bone Marrow Transplant Failure and Chemotherapy induced Bone Marrow Aplasia, PLX-ORTHO for orthopedic indications and PLX-PAH for Pulmonary Hypertension in collaboration with United Therapeutics. Pluristem’s pre-clinical animal models have demonstrated PLX cells are also potentially effective in other inflammatory and ischemic indications, including diastolic heart failure, inflammatory bowel disease, neuropathic pain and pulmonary fibrosis.

Pluristem has a strong patent portfolio, GMP certified manufacturing and research facilities as well as strategic relationships with major research institutions.

For more information visit www.pluristem.com and follow Pluristem on Twitter @Pluristem, the content of which is not part of this press release
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CLICK HERE to watch a video where CLI patients and doctors involved in the clinical trials share their sto ries.