

QUARTERLY UPDATE

Business Update and Financial Results for First Quarter of Fiscal 2008

Snapshot

February 11, 2008

Pluristem Therapeutics Inc. ("Pluristem" or "the Company") develops cell therapy products to treat severe blood, cardiovascular, autoimmune, and other disorders. Cell therapy is a technology that relies on replacing diseased or dysfunctional cells with healthy, functioning ones. Pluristem's first product candidate, PLX-I, seeks to address the global shortage of matched tissue for bone marrow transplant (BMT) patients, with the intent of eliminating the deficient BMT search-and-match process. BMT is often the only cure for patients suffering from leukemia, lymphoma, myeloma, and many other hematological diseases. Unlike BMTs, where a "perfect match" is required, Pluristem employs umbilical cord blood (UCB) as a source of hematopoietic stem cells. These cells are younger and less likely to be rejected by the immune system, and can be successfully used even when there is only a partial match. Roughly 95% of patients seeking hematopoietic stem cell transplants may find a match with UCB. The key to using UCB is to enlarge the quantity of stem cells that are transplanted, without differentiation, and to improve the engraftment of these cells. In differentiation, unspecialized stem cells give rise to specialized cells; in engraftment, newly transplanted stem cells begin producing normal quantities of mature cells in the body. Pluristem's technology is intended to improve and enhance the growth of the hematopoietic stem cells found in UCB. The allogeneic PLX-I product is based on obtaining mesenchymal stem cells from the placenta (obtained after birth) and expanding these cells within the Company's proprietary PluriX™ Bioreactor System, which mimics the natural environment of human bone marrow and permits stem cells to expand *ex vivo*, devoid of differentiation. PLX-I is then used concomitantly with UCB as a safe and effective alternative to BMT. The Company is also studying the use of the PLX cells for additional clinical applications. Pluristem trades on the NASDAQ Capital Market as "PSTI" and on the Frankfurt Stock Exchange as "PJT."



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Recent Financial Data

Ticker (Exchange)	PSTI (NASDAQ)
Recent Price (02/11/08)	\$2.40
52-week Range	\$2.20 - \$30.00
Shares Outstanding*	~6.5 million
Market Capitalization	\$15.6 million
Avg. 3-month Volume	9,524
Insider Owners + 5%	39%
Institutional Owners	9.2%
EPS (Qtr. ended 09/30/07)	(\$0.002)
Employees	22 (full-time)



*As of November 26, 2007; Adjusted to reflect Pluristem's 200-for-1 reverse stock split in November 2007

Key Points

- Approximately 150,000 people require a BMT annually, while only 45,000 to 60,000 receive them due to either a lack of a suitable donor or transplants that have failed from complications. Odds that two random individuals will be a match with traditional harvesting methods exceed 1 in 20,000.
- The Company's PluriX™ Bioreactor expands stem cells exponentially, potentially enabling the treatment of as many as 1,000 adult patients from a single placenta versus current UCB technology, which treats one person weighing less than 100 lbs from a sole placenta. In July 2007, Pluristem entered into a Collaborative Research Agreement with the Berlin-Brandenburg Center for Regenerative Therapy (BCRT) to address various neurological indications by using cells that have been expanded in the PluriX™ Bioreactor.
- In November 2007, Pluristem completed its new Good Manufacturing Practices (GMP) facilities, which support large-scale production of PLX-I for clinical trials and future commercialization. During 2008, Pluristem seeks to file an Investigational New Drug (IND) application for PLX-I and begin a Phase I clinical trial to demonstrate the safety of using PLX-I cells with UCB. The Company also aims to begin a clinical trial in Europe for its second product candidate, PLX-PAD, to treat limb ischemia caused by peripheral artery disease (PAD).
- In preclinical results, adding PLX-I to UCB stem cells during BMT hematopoietic stem cell engraftment in mice whose bone marrow had been ablated showed up to a 500% increase in engraftment versus not using PLX-I cells. Also, preclinical data indicates that PLX cells may have potential in Parkinson's disease, autoimmune disorders, and ischemic stroke.
- At Sept. 30, 2007, Pluristem's cash and cash equivalents were \$562,000 plus marketable securities of \$3.7 million.

PLEASE REFER TO EXECUTIVE INFORMATIONAL OVERVIEW® (EIO®), APR. 20, 2007, FOR A FULL COMPANY REPORT.

Business Update

Pluristem Therapeutics Inc. (“Pluristem” or “the Company”), formerly Pluristem Life Systems, Inc., is a biotechnology therapeutics company dedicated to the commercialization of cell therapy (technology that replaces diseased or dysfunctional cells with healthy, functioning ones) to treat severe blood, cardiovascular, autoimmune, and other disorders. Pluristem uses adult mesenchymal stem cells for its cell therapy products, as these stem cells have the potential to treat a range of complicated illnesses, such as leukemia, lymphoma, myeloma, and other diseases. Stem cells are unspecialized cells that can renew themselves for long periods through cell division and have the ability to differentiate into specialized cells (e.g., nerve cells, blood cells, lung cells, etc.). Pluristem’s first product, PLX-I, seeks to address the global shortage of matched tissue for bone marrow transplant (BMT) patients, with the intent of eliminating the currently deficient BMT search-and-match process. The Company’s second product using its **PL**acenta **eX**panded (PLX) cells is PLX-PAD, designed as an allogeneic treatment for limb ischemia resulting from peripheral artery disease (PAD).

Pluristem recently opened its new Good Manufacturing Practices (GMP) facilities, and subsequently, improved its production process to comply with GMP standards. As such, Pluristem is now confirming its earlier preclinical animal studies using PLX cells produced under the new manufacturing techniques. The GMP facilities are designed to support the manufacturing of PLX cells for upcoming Phase I clinical trials, as well as future large-scale commercial production.

Pluristem anticipates filing an Investigational New Drug (IND) application for PLX-I during the second quarter 2008, after which the Company intends to initiate clinical trials. By the end of 2008, Pluristem believes that it can achieve the following objectives:

- Finalize animal studies;
- Submit an IND for PLX-I to the FDA for the use of PLX-I as an alternative to BMT;
- Initiate a Phase I clinical trial with PLX-I as an alternative to BMT;
- Optimize the 3D PluriX™ Bioreactor System in order to attain production capabilities;
- Improve the analytical methods of the Company’s technology and processes;
- Complete the necessary regulatory procedures to begin a clinical trial in Europe for PLX-PAD;
- Continue to build a pipeline of products by evaluating the possibility of using PLX cells to treat additional disorders; and
- Generate collaborative agreements with strategic partners.

Pluristem’s Use of Umbilical Cord Blood (UCB)

Unlike BMTs, where a perfect tissue match between donor and patient is required to perform a transplant, Pluristem employs UCB as a source of hematopoietic stem cells that are needed for the transplant. Because these cells are younger and less likely to be rejected by the immune system, they can be used successfully even when there is only a partial match. This means that approximately 95% of patients seeking stem cell transplants may find a compatible donor versus traditional methods, where only approximately 30% of patients find a match. For instance, data published in *Blood* (2007) indicated that older cancer patients who are typically excluded from stem cell transplants due to a lack of a donor or an inability to tolerate the required high-intensity conditioning regimens could still be successfully transplanted with stem cells derived from UCB. At three years, patients who received mismatched UCB had comparable progression-free survival to patients who had a matched donor.

The key to using UCB lies in finding ways to enlarge the quantity of hematopoietic stem cells to improve engraftment. Pluristem's technology is intended to improve this engraftment process. Engraftment is the method by which newly transplanted stem cells begin to produce normal quantities of mature cells in the body. This is accomplished by using the Company's most advanced cell therapy product, PLX-I. PLX-I is based on expanding mesenchymal stem cells from a placenta obtained after birth and cultivating these cells with the Company's proprietary PluriX™ Bioreactor System (known as PLX cells). By co-transplanting both mesenchymal stem cells and hematopoietic stem cells, Pluristem seeks to improve the engraftment rate of the hematopoietic stem cells. An independent research study, recently published in *Leukemia* (2007), validated Pluristem's concept by demonstrating that co-transplantation of expanded mesenchymal stem cells and hematopoietic stem cells led to rapid engraftment in seven trial patients.

Pluristem's PluriX™ Bioreactor mimics the natural environment of human bone marrow and permits stem cells to expand (grow and replicate) outside of the body devoid of differentiation—a difficulty encountered by current stem cell-expansion technologies. A mesenchymal stem cell is a type of adult stem cell found in both the bone marrow and placenta that can differentiate into a variety of non-hematopoietic cells, such as bone, cartilage, muscle, and neural cells. A hematopoietic stem cell can be isolated from peripheral blood, UCB, or bone marrow, can self-renew, differentiate into a variety of specialized blood-producing cells (e.g., red blood cells, white blood cells, or platelets), move out of the bone marrow into circulating blood, and undergo apoptosis (programmed cell death)—a process by which cells that are detrimental or unneeded self-destruct.

The Company's potential therapeutic products are intended to be used as an alternative or improvement to the cells currently harvested and used in BMTs. Scientists have found that taking hematopoietic stem cells from tissues at earlier development stages (such as UCB) have a greater ability to self-replicate and are less likely to be rejected by the immune system—possibly making them more useful for therapeutic transplantation. Furthermore, to Pluristem's knowledge, there is no such technology other than its PluriX™ Bioreactor System that can increase the number of mesenchymal stem cells taken from a placenta without causing differentiation.

Stem Cells

Unspecialized cells that can renew themselves for long periods through cell division and have the ability to differentiate into specialized cells are called stem cells. Stem cells are separated from other cells within the body by three general properties: (1) they are capable of self-division and self-renewal over long time periods; (2) they are unspecialized; and (3) they can give rise to specialized cells. Stem cells offer the possibility of renewable sources of replacement cells and new tissues to treat many kinds of diseases, conditions, and disabilities.

All stem cells originate from three places: (1) certain adult tissues (adult); (2) UCB (umbilical); and (3) the human embryo (embryonic). Stem cells obtained from a person after birth are adult stem cells and are found within various tissues that make up the body. These stem cells act as a repair and maintenance systems, dividing regularly to provide the body with specialized cells to take the place of those that perish. Pluristem's technology employs only adult mesenchymal stem cells from the placenta.

Bone Marrow Transplants (BMTs)

Each year, hundreds of thousands of patients are diagnosed with diseases that can be treated by a hematopoietic or blood stem cell transplant, such as a BMT procedure. This procedure replaces diseased or treatment-damaged bone marrow with healthy marrow. The hematopoietic stem cells used come from one of three types of bone marrow donation: (1) from a human leukocyte antigen (HLA) tissue type-matched relative or unrelated donor (an allogeneic transplant); (2) from patients who have previously donated their own marrow (autologous transplant); or (3) from a patient's genetically identical twin (syngeneic transplant).

Approximately 150,000 people require a BMT annually, while only 45,000 to 60,000 receive them. Of these, an estimated 100,000 patients each year face difficulties obtaining a BMT due to either a lack of a suitable donor or failed transplants due to complications, such as Graft-versus-Host disease (GVHD), a potentially fatal condition in which donor cells can attack the recipient's tissues.

Umbilical Cord Blood (UCB) Transplants

UCB is retrieved from the umbilical cord and placenta after the birth of a baby. While normally the cord and placenta are discarded after birth, the cord blood can be saved, frozen, and stored. UCB contains hematopoietic stem cells, which are capable of maturing into red blood cells, white blood cells, or platelets. Therefore, when transplanted into a cancer patient whose own bone marrow has been depleted after chemotherapy or radiation treatments, these UCB stem cells can provide the basis for a new, healthy, blood-forming immune system.

The use of UCB as a source of cells may make hematopoietic stem cell transplants more readily available in the general population. Unlike the stem cells found in bone marrow, UCB immune cells are younger, more tolerant, and less likely to be rejected by the immune system. This could be due to the muted immune system of certain cells contained in UCB, as these cells are not yet educated to attack the recipient.

Unfortunately, UCB is currently incapable of solving the unmet demand for implantable hematopoietic stem cells, as UCB alone yields a low volume of hematopoietic stem cells. Related to its low volume of hematopoietic stem cells, UCB is also associated with a delayed time to engraftment, possibly leading to complications from the procedure. Pluristem's technology, outlined below, is designed to address these current UCB technology deficiencies.

Pluristem's Technology and Products

Pluristem is developing a platform designed to improve upon current cell therapy technologies as well as to create a more functional stem cell production system that can treat severe blood, cardiovascular, autoimmune, and other disorders.

Pluristem's PluriX™ Bioreactor System

The foundation for the Company's technology is its PluriX™ Bioreactor System, designed as a system of stromal cell cultures and substrates that create an artificial physiological environment where mesenchymal stem cells can grow and reproduce outside of the human body. Unlike conventional two-dimensional (2D) culturing methods, the Company's PluriX™ Bioreactor creates a three-dimensional (3D) microenvironment that closely resembles the structure and function of the body's bone marrow environment. By mimicking the natural environment that exists within human bones, the System "tricks" stem cells into growing and reproducing in the same way they would in living organs. Because the size and scale of the PluriX™ Bioreactor is larger than that of human bone marrow, stem cell growth can be greatly expanded.

Collaborative Research Agreement for PluriX™-expanded Mesenchymal Stem Cells

In July 2007, Pluristem entered into a Collaborative Research Agreement with the Berlin-Brandenburg Center for Regenerative Therapy (BCRT). Funded by the German Federal Ministry of Education and Research, the BCRT is an association of more than 15 institutional partners resulting from a joint initiative between one of Europe's largest university hospitals, the Charité, and one of Germany's largest research organizations, the Helmholtz association. Under the agreement, Pluristem and the BCRT have partnered in the development of placenta-derived mesenchymal stem cells that have been expanded in the Company's PluriX™ Bioreactor. The collaboration seeks to address neurological diseases, such as multiple sclerosis and Parkinson's disease, as well as organ transplantation and cardiovascular indications. Any technology or products that result from this alliance belong exclusively to Pluristem.

Intellectual Property Protection

In May 2007, Pluristem purchased patents from the Technion-Israel Institute of Technology and the Weizmann Institute of Science that protect the Company's PluriX™ Bioreactor. The value of the purchased intellectual property was approximately \$2 million, which the institutions then invested in Pluristem's May 2007 financing. The intellectual property transaction replaced a previous license agreement, whereby the Company had exclusive rights to the stem cell production technology in exchange for royalties. As a result, Pluristem can now sublicense its technology and is no longer required to pay royalty fees, which could be as high as 25%. Furthermore, Pluristem believes that it may be able to patent its PLX cells that are produced by the Company's novel 3D growth process.

PLX-I

PLX-I is being developed as an allogeneic therapeutic product to supplement UCB hematopoietic stem cells with the goal of improving the effectiveness of engraftments and shortening patient recovery times. Pluristem retrieves mesenchymal stem cells from the placenta (obtained after birth) and places these cells in its PluriX™ Bioreactor System. The PluriX™ Bioreactor expands these cells over several weeks. After expansion, the mesenchymal stem cells are separated from the culture used in the PluriX™ Bioreactor. These separated cells are known as PLX-I. Following production, PLX-I is stored "ready to use" and shipped to hospitals or clinics for use as adjuvant therapy in a UCB transplant.

Once matched cord blood is found (which is believed to be available in approximately 95% of patients), PLX-I is ready for use immediately upon arrival at the hospital, where it is injected into the patient a few hours prior to the UCB injection to improve the engraftment process. Additionally, multiple PLX-I injections may be able to "boost" engraftment of the hematopoietic stem cells found in UCB.

Preclinical Testing

Recently published animal study results show that sufficient engraftment is possible with the limited number of hematopoietic stem cells available from a single UCB source. Pluristem has performed preclinical trials on non-obese, diabetic, severe combined immunodeficient mice (NOD SCID mice) whose bone marrow had been previously ablated. Preclinical results to date document that adding PLX-I to UCB stem cells during the engraftment of human hematopoietic stem cells in NOD SCID mice showed up to a 500% increase in engraftment versus not using PLX-I.

Planned Phase I Clinical Trial

Pluristem anticipates initiating a Phase I clinical trial of its PLX-I product candidate during 2008. The trial is primarily designed to determine the safety of using PLX cells in conjunction with UCB. However, the Company anticipates accumulating data on the enhancement of engraftment of hematopoietic stem cells as well. Pluristem plans to include two locations in the study, one at Duke University and a second in Philadelphia, that will likely enroll approximately 10 to 12 patients.

PLX-PAD

In July 2007, the Company obtained positive preclinical results utilizing its PLX cells to treat limb ischemia, a condition characterized by chronic pain, ulcers, or gangrene in one or both legs likely due to an arterial occlusive disease aggravated by diabetes or smoking. In these preclinical studies, researchers injected PLX cells into ischemic mice. After treatment, Doppler technology—a diagnostic tool that uses low intensity ultrasound to detect blood flow velocity—indicated that the ischemic limbs treated with PLX exhibited restored blood flow, but ischemic limbs not treated with PLX did not show the same results. In addition, immunohistochemical analyses of these limbs demonstrated that the treated areas had a significant increase in new capillaries. This data suggests that Pluristem's PLX cells may promote new blood vessel formation, called angiogenesis.

As such, the Company's second product initiative is called PLX-PAD, designed as an allogeneic treatment for critical limb ischemia (CLI), the end stage of peripheral artery disease (PAD) where patients may need vascular surgery. PAD is characterized by the partial or total blockage of an artery leading to

an arm or a leg. It is believed to be a common, yet underdiagnosed, disorder that usually affects men over 50 years of age. High-risk individuals include those with a personal or family history of heart disease or cerebrovascular disease (stroke), diabetes, smoking, and high blood pressure. The *Journal of the American Medical Association* (2001) notes that PAD's prevalence in the primary care patient population could be as high as 29% (Source: the Cleveland Clinic's Department of Cardiovascular Medicine 2003). Pluristem estimates that between 8 million and 12 million U.S. citizens suffer from limb ischemia.

During the second half of 2008, Pluristem expects to initiate clinical trials in Europe using PLX-PAD, likely in collaboration with a clinical research institution. To the Company's knowledge, PLX-PAD could be the first allogeneic, off-the-shelf product to treat this disease.

Additional Potential Uses of Pluristem's PLX Cells

Thus far, Pluristem has obtained significant preclinical data relating to the function and immunological behavior of its PLX cells in a variety of indications. Recent results with PLX in Parkinson's disease, autoimmune disorders, and ischemic stroke are briefly summarized below.

- Parkinson's Disease. In June 2007, Pluristem demonstrated that its PLX cells may be able to treat Parkinson's, a degenerative disease of the central nervous system. Scientists found that PLX cells differentiated into a select type of neuron that is known to be advantageous for treating Parkinson's. The Company intends to further develop this indication through *in vitro* and *in vivo* studies, believing that PLX cells may be a source of important enzymes, neurotransmitters, and neurotrophic factors.
- Autoimmune Disorders. In November 2007, Pluristem obtained results of *in vitro* testing with PLX cells that demonstrated a potential to treat autoimmune disorders ranging from multiple sclerosis (MS), rheumatoid arthritis (RA), Crohn's disease, and juvenile (Type 1) diabetes. In testing, PLX cells reduced tumor necrosis factor-alpha (TNF- α) and interferon-gamma (IFN- γ)—important cytokines for the pathogenesis of autoimmune disorders.
- Ischemic Stroke. Germany's Fraunhofer Institute, a European organization for applied research, is conducting *in vivo* preclinical studies of Pluristem's PLX cells as a method to improve functional recovery after an ischemic stroke (a stroke caused by blood clots). The Institute has demonstrated PLX's capabilities in spontaneously hypertensive rats that had undergone middle cerebral artery occlusion, which is an ischemic stroke model. Animals that received the PLX treatment have shown a significant advantage in functional recovery over a control group that did not receive the cells. In the U.S., approximately 700,000 individuals are affected by a stroke each year, of which between 83% to 90% are believed to be ischemic (Source: WebMD, Inc.).

The Company may also pursue the use of its cells in areas such as orthopedic soft tissue injury repair, which could include growing tendons, ligaments, muscles, and bone. Altogether, Pluristem expects to investigate the use of PLX cells in the treatment of a variety of diseases that could target markets estimated in the billions.

Corporate Information

Headquarters and Exchanges

Pluristem is incorporated in the U.S. with offices in Colorado and R&D and manufacturing facilities in Haifa, Israel. The Company owns GMP-compliant facilities to conduct research, development, and manufacturing of its products. The manufacturing facilities include 13 units of 7,000 square feet in total, with five clean rooms of 3,000 square feet in total.

The Company trades on the NASDAQ Capital Market under the symbol "PSTI" and on the Frankfurt Stock Exchange under the symbol "PJT." Pluristem began trading on the Frankfurt exchange in May 2007 and believes that this market exposure may enhance cooperation with European companies and agencies for the further development of the Company's product portfolio.

The Company began to trade on the NASDAQ in December 2007, and discontinued trading on the Over The Counter Bulletin Board (OTC.BB). Prior to listing on the NASDAQ, Pluristem effected a 200-for-1 reverse stock split of its Common Shares. The Company also changed its name from Pluristem Life Systems, Inc. to Pluristem Therapeutics Inc. in November 2007, a change that reflects the Company's shift toward therapeutic products.

Employees

On September 5, 2007, Pluristem had 17 full-time and 4 part-time employees in R&D, 4 full-time employees and 1 part-time employee in management at Pluristem, Ltd., and 1 full-time employee in the U.S. for business development. In addition, the Company maintains a Scientific Advisory Board and has created a Business Strategy Advisory Board. The recently appointed Business Strategy Advisory Board is composed of Mr. Frank Carlucci and Dr. Philip J. Schein, whose biographies are provided below.

- Mr. Carlucci was the U.S. Secretary of Defense from November 1987 until January 1989. He was selected to lead Pluristem's Business Strategy Advisory Board. He is chairman emeritus of The Carlyle Group, having served as chairman from 1992 to 2003. He also took a 4.1% stake in Pluristem as part of the Company's recent \$13.5 million financing (described below).
- Dr. Schein, founder of U.S. Bioscience, took three novel therapies for cancer and Human Immunodeficiency Virus (HIV) through the development and regulatory approval processes, as well as established global marketing alliances. In 1995, U.S. Bioscience was acquired by MedImmune, Inc. (now part of AstraZeneca plc [AZN-NYSE]) for approximately \$450 million. Dr. Schein has also authored over 350 articles and texts in the fields of clinical cancer research and drug development. He holds 11 patents and numerous scientific and medical awards. President Clinton appointed Dr. Schein to the National Cancer Advisory Board. Dr. Schein was also president of the American Society of Clinical Oncology and chair of the FDA's Oncologic Drugs Advisory Committee, where he received the Harvey W. Wiley Medal.

Recent Financings

Pluristem completed a financing at the end of May 2007 valued at approximately \$13.5 million for the Company. This financing expanded upon the Company's February 2007 offering and included investments from the Technion-Israel Institute of Technology as well as those from inventors who had previously collaborated on the technology and whose patents Pluristem now holds.

Corporate History

Pluristem was originally incorporated on May 11, 2001, with a business plan to develop artificial intelligence software called Randomix. The Company was unsuccessful in implementing its original business plan with regard to its Randomix software and, as a result, in April 2003, pursued initiatives in the biotechnology industry as an extension to its business. In May 2003, the Company entered into a license agreement with the Weizmann Institute of Science and the Technion-Israel Institute of Technology to acquire an exclusive license for a stem cell production technology. In June 2003, the Company acquired its wholly owned subsidiary, Pluristem, Ltd., based in Israel, to conduct further R&D of the exclusive, licensed stem cell production technology.

Recent Events and Financial Results

Recent Events

An overview of the Company's recent press releases is provided below, referring the reader to Pluristem's website for complete press releases (www.pluristem.com).

- *On January 8, 2008*, Pluristem announced that it identified a second clinical indication for its proprietary PLX cells and the expansion of its pipeline of PLX products. Pluristem's PLX-PAD is expected to begin clinical trials in the second half of 2008 in Europe for the treatment of limb ischemia associated with peripheral artery disease (PAD).
- *On December 6, 2007*, Pluristem announced that the NASDAQ approved the Company's application to list its securities on the NASDAQ Capital Market. The Company's Common Stock began trading on December 10, 2007.
- *On December 6, 2007*, Pluristem announced that it was chosen to present at the Annual Meeting of the American Society of Hematology (ASH) on December 8, 2007, in Atlanta, Georgia. Hematology experts from around the world gathered to discuss the latest developments in their fields.
- *On November 27, 2007*, Pluristem announced that *in vitro* testing of its PLX cells demonstrated the potential to treat autoimmune disorders. This testing showed a significant reduction of TNF- α and interferon- γ inflammatory cytokines that are known to be involved in the pathogenesis of autoimmune disorders. Reducing TNF- α and interferon- γ is considered a key factor in mitigating the symptoms of autoimmune disorders, such as multiple sclerosis (MS), rheumatoid arthritis (RA), Crohn's disease, and juvenile (Type 1) diabetes.
- *On November 26, 2007*, Pluristem announced that its previously disclosed 200-for-1 reverse stock split became effective. The Company's name was changed from Pluristem Life Systems, Inc. to Pluristem Therapeutics Inc. Pluristem's shares traded on a reverse split-adjusted basis on the Over-the-Counter Bulletin Board (OTC.BB) under the symbol "PSTI," which replaced the previous symbol "PLRS." The reverse stock split was made in relation to Pluristem's application to list its shares on the NASDAQ Capital Market and to broaden the availability of its Common Stock to both institutional and individual investors.
- *On November 13, 2007*, Pluristem announced that it completed the construction of its new state-of-the-art Good Manufacturing Practices (GMP) facilities, which support the manufacturing process of the Company's PLX-I cells for the upcoming Phase I clinical trials, in which PLX-I is to be used with cord blood as an alternative to bone marrow transplantation. Additionally, these facilities are sufficient to enable large-scale commercial production of PLX cells.
- *On November 8, 2007*, Pluristem announced that it intended to effect a 200-to-1 reverse stock split in conjunction with an application, previously filed, to list its shares on the NASDAQ Capital Market.
- *On October 18, 2007*, Pluristem announced that results from the Fraunhofer Institute's ongoing *in vivo* study, utilizing Pluristem's PLX cells in treating ischemic stroke, showed initial promise as a potential therapy to treat stroke victims.
- *On July 23, 2007*, Pluristem announced that it had obtained favorable results in preclinical testing using the Company's proprietary PLX cells to treat limb ischemia, believed to be a potential market of over \$1 billion. The results suggest that the Company's PLX cells may be the first allogeneic, off-the-shelf product to treat this disease.

Recent Financial Results

On November 14, 2007, Pluristem released its financial results for the first quarter of fiscal 2008, ended September 30, 2007. The Company reported net R&D costs for the three-month period of \$837,000 versus \$390,000 for the year-ago period. The 115% increase was largely due to stock-based compensation for employees and consultants, which was \$666,000 in the three months ended September 30, 2007, up from \$65,000 in the same quarter a year before.

General and administrative expenses were approximately \$1.6 million for the quarter ended September 30, 2007, versus \$406,000 for the quarter ended September 30, 2006. This increase was also primarily due to stock-based compensation for employees and consultants, which was \$938,000 for the first quarter of fiscal 2008 versus \$122,000 for the first quarter of fiscal 2007.

The Company reported net loss of approximately \$2.3 million, or (\$0.002) per share, for its first quarter of fiscal 2008 versus a net loss of \$284,000, or (\$0.004) per share, for the same quarter a year ago. Net loss increased as a result of the higher operating expenses that Pluristem incurred by moving forward with its R&D plan.

Pluristem had cash and cash equivalents of \$562,000 plus marketable securities of roughly \$3.7 million at September 30, 2007, versus roughly \$5.4 million in cash, cash equivalents, and marketable securities at June 30, 2007. The decrease in cash balances in the first quarter of fiscal 2008 reflects the following: (1) cash used in operating activities of approximately \$1.3 million; (2) cash used in investing activities of \$166,000; and (3) cash generated by investing activities of \$358,000. The cash used in operating activities primarily included payment of employees' salaries and payment of fees to consultants, subcontractors, and professional services providers. Investing activities entailed the costs associated with upgrading the Company's facilities to GMP-compliant facilities, offset by financing activities that provided Pluristem with cash related to the May 2007 investment agreement (described below).

A private placement, closed in May 2007, provided the Company with gross proceeds of \$13.5 million. Of the \$13.5 million, \$5 million is scheduled to be paid in monthly installments over 10 months starting six months after the closing of the private placement. Pluristem received the first \$1 million of this final \$5 million in November 2007.

In late November 2007, the Company effected a 200-for-1 reverse split of its Common Stock. The reverse split reduced the number of shares of Pluristem's outstanding Common Stock from 1.3 billion to approximately 6.5 million. The exercise price and the number of shares of Common Stock issuable under Pluristem's outstanding Warrants and Options were proportionately adjusted to reflect the split.

Key Points to Consider

- Pluristem is a biotechnology therapeutics company dedicated to the commercialization of cell therapy to treat severe blood, cardiovascular, autoimmune, and other disorders. Cell therapy is a technology that replaces diseased or dysfunctional cells with healthy, functioning ones.
- The Company's first planned product, PLX-I, is a stem cell-based therapeutic that seeks to address the global shortage of matched tissue for bone marrow transplant (BMT) patients, with the intent of eliminating the currently deficient BMT search-and-match process.
 - Stem cells are unspecialized cells that can renew themselves for long periods through cell division and have the ability to differentiate into specialized cells.
- Approximately 150,000 people require a BMT annually, while only 45,000 to 60,000 receive them. Of these, an estimated 100,000 patients each year face difficulties obtaining a BMT due to either a lack of a suitable donor or failed transplants from complications, such as Graft-versus-Host disease (GVHD). Odds that two random individuals will be a match with traditional harvesting methods exceed 1 in 20,000.
- Unlike BMTs, where a perfect tissue match between donor and patient is required to perform a transplant, Pluristem employs umbilical cord blood (UCB) as a source of hematopoietic stem cells. UCB-derived hematopoietic stem cells are younger and less likely to be rejected by the immune system; therefore, they can be successfully used even when there is only a partial match.
 - The key to using UCB lies in finding ways to improve engraftment and enlarge the quantity of undifferentiated stem cells transplanted since two key disadvantages of current UCB methods include: (1) low volume yields of hematopoietic stem cells, and (2) delayed time to engraftment.
- Pluristem's technology is intended to improve the engraftment process and enhance the growth of hematopoietic stem cells found in UCB. The Company's potential products could become an alternative or improvement to the cells currently harvested and used in BMTs.
 - Scientists have found that taking hematopoietic stem cells from tissues at earlier development stages (e.g., UCB) have a greater ability to self-replicate and are less likely to be rejected by the immune system—potentially making them more useful for therapeutic transplantation.
 - To Pluristem's knowledge, there is no technology to increase the number of hematopoietic stem cells from UCB without causing differentiation.
- The Company's adjuvant cell therapy product, PLX-I, is based on expanding mesenchymal stem cells from the placenta (obtained after birth) and cultivating these cells with the Company's proprietary PluriX™ Bioreactor System (a technology obtained from the Weizmann Institute of Science and the Technion-Israel Institute of Technology). This System mimics the natural environment of human bone marrow and permits stem cells to expand outside of the body devoid of differentiation—a difficulty encountered by current stem cell-expansion techniques.
 - The Company's technology has shown to expand stem cells exponentially, potentially allowing treatment of 1,000 patients from a single placenta (versus current methods, which only permit the treatment of one person [usually a child] weighing less than 100 lbs from a single placenta).
 - Pluristem signed a Collaborative Research Agreement with the Berlin-Brandenburg Center for Regenerative Therapy (BCRT) in July 2007, under which the partners aim to further development of placenta-derived mesenchymal stem cells that have been expanded through the Company's proprietary PluriX™ Bioreactor.

- Several studies have been performed on non-obese, diabetic, severe combined immunodeficient (NOD SCID) mice to simulate the BMT clinical protocol. Preclinical results illustrate that adding Pluristem's PLX-I to UCB during human hematopoietic stem cell engraftment in NOD SCID mice whose bone marrow had previously been ablated demonstrated up to a 500% increase in engraftment of the hematopoietic stem cells versus not using PLX-I.
 - Pluristem intends to file an Investigational New Drug (IND) application for PLX-I and begin a clinical trial to establish the product candidate's safety during 2008.
- Pluristem's second product candidate is PLX-PAD, designed to treat critical limb ischemia (CLI) caused by peripheral artery disease (PAD). The Company intends to start a clinical trial with PLX-PAD in Europe in the second half of 2008. To Pluristem's knowledge, PLX-PAD could be the first allogeneic, off-the-shelf product to treat this disease.
 - In ischemic mice, PLX-PAD was able to restore blood flow to the affected limbs and significantly increase the number of new capillaries supplying the ischemic area. This data suggests that Pluristem's PLX cells may promote new blood vessel formation.
 - Pluristem estimates that between 8 million and 12 million U.S. citizens suffer from limb ischemia.
- Based on Pluristem's belief that its proprietary PLX cells are unique and possess favorable immunologic characteristics, the Company expects to investigate the use of these expanded mesenchymal stem cells in the treatment of a variety of diseases that could target markets estimated to exceed \$30 billion.
 - In June and November 2007, Pluristem released preclinical results demonstrating that its PLX cells have potential for Parkinson's disease and autoimmune disorders ranging from multiple sclerosis (MS), rheumatoid arthritis (RA), Crohn's disease, and juvenile (Type 1) diabetes. The Company has also received data pertaining to the ability of its PLX cells to improve functional recovery following an ischemic stroke.
- Pluristem had cash and cash equivalents of approximately \$4.3 million at September 30, 2007 (which included almost \$3.7 million in marketable securities), versus roughly \$5.4 million in cash and cash equivalents at June 30, 2007.
- During May 2007, the Company successfully closed a financing for approximately \$13.5 million, and its wholly owned subsidiary, Pluristem, Ltd., received an \$830,000 grant from Israel's Chief Scientist Office (CSO) to support research and development (R&D) of the Company's PLX cells. Of the \$13.5 million, \$5 million is being paid in monthly installments over 10 months. Pluristem received the first \$1 million of this final \$5 million in November 2007.
- The Company began trading on the Frankfurt Stock Exchange under the symbol "PJT" in May 2007, and in November 2007, changed its name from Pluristem Life Systems, Inc. to Pluristem Therapeutics Inc. Also in November 2007, Pluristem effected a 200-for-1 reverse stock split of its Common Shares. The Company began trading on the NASDAQ under the symbol "PSTI" in December 2007.

Risks

Some of the information in this Quarterly Update relates to future events or future business and financial performance. Such statements can only be predictions and the actual events or results may differ from those discussed due to, among other things, the risks described in Pluristem Therapeutics Inc.'s reports on Forms 10-KSB, 10-QSB, 8-K, and other forms filed from time to time. The content of this update with respect to Pluristem has been compiled primarily from information available to the public released by the Company through news releases and through the U.S. Securities and Exchange Commission (SEC) filings. Pluristem is solely responsible for the accuracy of that information. Information as to other companies has been prepared from publicly available information and has not been independently verified by Pluristem. Certain summaries of scientific activities and outcomes have been condensed to aid the reader in gaining a general understanding. For more complete information about Pluristem, please refer to the Company's website at www.pluristem.com. Additionally, please refer to Crystal Research Associates' base report, the Executive Informational Overview[®] (EIO[®]) dated April 20, 2007, and located on Crystal Research Associates' website at www.crystalra.com for more comprehensive details of Pluristem's risk factors.

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