PLURISTEM LIFE SYSTEMS INC
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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

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PROSPECTUS

Subject to Completion

May 13, 2005

PLURISTEM LIFE SYSTEMS, INC.

A NEVADA CORPORATION

SHARES OF COMMON STOCK OF PLURISTEM LIFE SYSTEMS, INC.

This prospectus relates to the resale by certain selling security holders of Pluristem Life Systems, Inc. of up to 70,565,000 shares of our common stock. The selling security holders may offer to sell the shares of common stock being offered in this prospectus at fixed prices, at prevailing market prices at the time of sale, at varying prices or at negotiated prices.

We will not receive any proceeds from the resale of shares of our common stock by the selling security holders. We will, however, receive proceeds upon exercise of the share purchase warrants and these proceeds will be used for general working capital purposes. We will pay for expenses of this offering.

Each of the selling security holders may be deemed to be an underwriter, as such term is defined in the Securities Act.

Our common stock is traded on the National Association of Securities Dealers OTC Bulletin Board under the symbol "PLRS". On April 18, 2005, the closing bid price of our common stock was $0.22 on the OTC Bulletin Board.

Our business is subject to many risks and an investment in our common stock will also involve a high degree of risk. You should invest in our common stock only if you can afford to lose your entire investment. You should carefully consider the various Risk Factors described beginning on page 11 before investing in our common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The information in this prospectus is not complete and may be changed. The selling security holders may not sell or offer these securities until this registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

The date of this prospectus is May 13, 2005.

The following table of contents has been designed to help you find important information contained in this prospectus. We encourage you to read the entire prospectus.

TABLE OF CONTENTS

As used in this prospectus, the terms "we", "us", "our", and "Pluristem" mean Pluristem Life Systems, Inc., unless otherwise indicated.

All dollar amounts refer to US dollars unless otherwise indicated.

PROSPECTUS SUMMARY

THIS IS ONLY A SUMMARY AND DOES NOT CONTAIN ALL OF THE INFORMATION THAT MAY BE IMPORTANT TO YOU. YOU SHOULD READ THE ENTIRE PROSPECTUS, ESPECIALLY RISK FACTORS AND OUR FINANCIAL STATEMENTS AND THE RELATED NOTES INCLUDED IN THIS PROSPECTUS, BEFORE DECIDING TO INVEST IN SHARES OF OUR COMMON STOCK.

Our Business

We are a company engaging in the research and commercialization of an exclusive technology to expand stem cells outside of the human body. Stem cells are unspecialized cells that renew themselves for long periods through cell division. Scientists have developed sufficient fundamental understanding to use stem cells for bone marrow transplants and other methods of cell therapy. However, generally there are not sufficient stem cells available to carry out transplants and other operations on adults. Our technology grows stem cells for potential use in combating fatal disease. We acquired our exclusive technology under a License Agreement with the Weizmann Institute of Science and the Technion-Israel Institute of Technology. We intend to improve this technology platform and develop it into a functional stem cell expansion system that we can sell or license to other research laboratories, umbilical cord blood banks, or clinics in the future. We have decided to name this system the PluriX bioreactor system.

Currently, we are in the research and developmental stage of our PluriX bioreactor system and have not begun the process of seeking regulatory approval for marketing our PluriX bioreactor system in any jurisdiction.

Our principal executive office is at MATAM Advanced Technology Park, Building No. 20, Haifa, Israel. Our telephone number is 011-972-4-850-1080.

We were incorporated in the State of Nevada under the name A.I. Software, Inc. on May 11, 2001. We were not successful in implementing our initial business plan of developing an artificial intelligence software called Randomix . In March and April of 2003, our board of directors decided to pursue initiatives in the biotechnology industry as an extension of our business. In May of 2003, we acquired our exclusive technology under a License Agreement with the Weizmann Institute of Science and the Technion-Israel Institute of Technology. On June 10, 2003, we acquired all of the issued and outstanding shares of a research and development company called Pluristem, Ltd. so we would have the capacity to conduct further research and development of our exclusive technology. On June 25, 2003, we changed our name to Pluristem Life Systems, Inc.

Number of Shares Being Offered

This prospectus relates to the resale by certain selling security holders of Pluristem Life Systems, Inc. of up to 70,565,000 shares of our common stock in connection with the resale of:

- up to 8,500,000 shares of our common stock, representing those shares of our common stock that were sold to certain selling security holders pursuant to the Common Stock and Warrant Purchase Agreements entered into between the selling security holders and our company dated October 25, 2004 see Description of the Agreements with Certain Selling Security Holders in the October 25, 2004 Private Placement
- up to 8,500,000 shares of our common stock, representing those shares of our common stock that are issuable to certain security holders upon exercise of warrants issued in connection with the Common Stock

and Warrant Purchase Agreements entered into between the selling security holders and our company dated October 25, 2004 - see Description of the Agreements with Certain Selling Security Holders in the October 25, 2004 Private Placement

- up to 245,000 shares of our common stock, representing those shares of our common stock that are issuable to certain security holders upon exercise of warrants issued as consideration for services provided as placement agents - see Description of the Agreements with Certain Selling Security Holders in the October 25, 2004 Private Placement
- up to 12,000,000 shares of our common stock, representing those shares of our common stock that were sold to certain selling security holders pursuant to the Common Stock and Warrant Purchase Agreements entered into between the selling security holders and our company dated January 24, 2005 see Description of the Agreements with Certain Selling Security Holders in the January 24, 2005 Private Placement
- up to 12,000,000 shares of our common stock, representing those shares of our common stock that are issuable to certain security holders upon exercise of warrants issued in connection with the Common Stock and Warrant Purchase Agreements entered into between the selling security holders and our company dated January 24, 2005 - see Description of the Agreements with Certain Selling Security Holders in the January 24, 2005 Private Placement
- up to 1,845,000 shares of our common stock, representing those shares of our common stock that were issued to a security holder as consideration for services provided as a placement agent - see Description of the Agreements with Certain Selling Security Holders in the January 24, 2005 Private Placement
- up to 475,000 shares of our common stock, representing those shares of our common stock that are issuable to certain security holders upon exercise of warrants issued as consideration for services provided as placement agents - see Description of the Agreements with Certain Selling Security Holders in the January 24, 2005 Private Placement
- up to 12,000,000 shares of our common stock, representing those shares of our common stock that were sold to certain selling security holders pursuant to the Private Placement Subscription Agreements entered into between the selling security holders and our company dated January 31, 2005 see Description of the Agreements with Certain Selling Security Holders in the January 31, 2005 Private Placement
- up to 12,000,000 shares of our common stock, representing those shares of our common stock that are issuable to certain security holders upon exercise of warrants issued in connection with the Private Placement Subscription Agreements entered into between the selling security holders and our company dated January 31, 2005 - see Description of the Agreements with Certain Selling Security Holders in the January 31, 2005 Private Placement and
- up to 600,000 shares of our common stock, representing those shares of our common stock that are issuable to a security holder upon exercise of warrants issued as consideration for services provided as a placement agent - see Description of the Agreements with Certain Selling Security Holders in the January 31, 2005 Private Placement
- up to 2,400,000 shares of our common stock, representing those shares of our common stock that are issuable to our Chief Executive Officer, Dr. Shai Meretzki, upon exercise of warrants issued to him in connection with the issuance of a Notice of Allowance by the United States Patent Office for our patent application number 09/890,401.

The selling security holders may sell the shares of common stock in the public market or through privately negotiated transactions or otherwise. The selling shareholders may sell these shares of common stock through

ordinary brokerage transactions, directly to market makers or through any other means described in the section entitled Plan of Distribution .

Number of Shares Outstanding

There were 63,603,483 shares of our common stock issued and outstanding as at April 25, 2005.

Use of Proceeds

We will not receive any of the proceeds from the sale of the shares of our common stock being offered for sale by the selling security holders. We will, however, receive proceeds upon exercise of the share purchase warrants and these proceeds will be used for general working capital purposes. We will incur all costs associated with this registration statement and prospectus.

Summary of Financial Data

The summarized financial data presented below is derived from and should be read in conjunction with our audited consolidated financial statements for the years ended June 30, 2004 and June 30, 2003, and our unaudited consolidated financial statements for the six-month period ended December 31, 2004, (in each case including the notes to those financial statements) which are included elsewhere in this prospectus along with the section entitled "Plan of Operation" beginning on page 43 of this prospectus.

	For the 6-month period ended December 31, 2004 (unaudited)	**For the 6-month period ended December 31, 2003 (unaudited)**
Revenue	Nil	Nil
Net Loss for the Period	$708,955	$693,084
Net loss Per Share- basic and diluted	$0.03	$0.03
	As at December 31, 2004 (unaudited)	**As at December 31, 2003 (unaudited)**
Working Capital (Deficiency)	$(117,737)	$(190,701)
Total Assets	$860,190	$610,339
Total Share Capital	$3,355,920	$1,333,610
Accumulated deficit	$(3,260,203)	$(1,233,982)
Total Stockholders' Equity (Deficiency)	$95,717	$99,628

	For the year ended June 30, 2004	**For the year ended June 30, 2003**
Revenue	Nil	Nil
Net Loss for the Period	$2,010,350	$462,995
Net loss Per Share - basic and diluted	$0.083	$0.01
	As at June 30, 2004	**As at June 30, 2003**

Working Capital (Deficiency)	$349,496	$261,619
Total Assets	$1,377,198	$994,594
Total Share Capital	$2,908,258	$1,031,315
Accumulated deficit	$(2,551,248)	$(540,898)
Total Stockholders' Equity	$357,010	$490,417

RISK FACTORS

An investment in our common stock involves a number of very significant risks. You should carefully consider the following risks and uncertainties in addition to other information in this prospectus in evaluating our company and our business before purchasing shares of common stock. Our business, operating results and financial condition could be seriously harmed due to any of the following risks. The risks described below are not the only ones facing our company. Additional risks not presently known to us may also impair our business operations. You could lose all or part of your investment due to any of these risks.

RISKS RELATED TO OUR BUSINESS AND COMPANY

We have not earned any revenues since our incorporation and only have a limited operating history in our current business of developing and commercializing stem cell expansion technology, which raise doubt about our ability to continue as a going concern.

Our company has a limited operating history in our current business of developing and commercializing stem cell expansion technology and must be considered in the development stage. We were incorporated on May 11, 2001 with a business plan to develop an artificial intelligence software called Randomix. We were not successful in implementing our original business plan in regard to our Randomix software and as a result we decided in April of 2003 to pursue initiatives in the biotechnology industry as an extension to our business. In May of 2003 we 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 expansion technology. In June of 2003, we acquired our wholly-owned subsidiary, Pluristem, Ltd., based in Israel to conduct further research and development of the exclusive stem cell expansion technology licensed to us.

We have not generated any revenues since our inception and we will, in all likelihood, continue to incur operating expenses without significant revenues until we successfully develop and commercialise our stem cell expansion technology. Our primary source of funds has been the sale of our common stock. We cannot assure that we will be able to generate any significant revenues or income. These circumstances make us dependent on additional financial support until profitability is achieved. There is no assurance that we will ever be profitable, and we had a going concern note as described in an explanatory paragraph to our consolidated financial statements for the year ended June 30, 2004.

Our likelihood of profit depends on our ability to develop and commercialize our stem cell expansion technology, which is currently in the development stage. If we are unable to complete the development and commercialization of our stem cell expansion technology successfully, our likelihood of profit will be limited severely.

We are engaged in the business of developing and commercializing a technology and proposed device called the PluriX Bioreactor system. The proposed function of our PluriX Bioreactor system is to allow researchers and physicians to expand hematopoietic stem cells outside of the human body without differentiation so they may use in bone marrow transplants and other methods of cell therapy. Our PluriX Bioreactor system is in the development stage and we have not begun the regulatory approval process for our PluriX Bioreactor system. We have not realized a profit from our operations to date and there is little likelihood that we will realize any profits in the short or medium term. Any profitability in the future from our business will be dependent upon successful commercialization of our PluriX Bioreactor system, which will require significant additional research and development as well as substantial clinical trials.

If we encounter problems or delays in the research and development of our PluriX Bioreactor system, we may not be able to raise sufficient capital to finance our operation during the period required to resolve the problems or delays.

Our PluriX Bioreactor system is currently in the development stage and we anticipate that we will continue to incur operating expenses without significant revenues until we have successfully completed all necessary research and clinical trials. We, and any of our potential collaborators, may encounter problems and delays relating to research and development, regulatory approval and intellectual property rights of our technology. Our research and development programs may not be successful, and our cell culture technology may not facilitate the production of cells outside the human body with the expected result. Our PluriX Bioreactor system may not prove to be safe and efficacious in clinical trials. If any of these events occur, we may not have adequate resources to continue operations for the period required to resolve the issue delaying commercialization and we may not be able to raise capital to finance our continued operation during the period required for resolution of that issue. Accordingly, we may be forced to discontinue or suspend our operations.

We need to raise additional financing to support the research and development of our PluriX Bioreactor system in the future but we cannot be sure we will be able to obtain additional financing on terms favourable to us when needed. If we are unable to obtain additional financing to meet our needs, our operations may be adversely affected or terminated.

We raised proceeds of approximately $3,250,000 in three private placement offerings of our securities in October of 2004 and January of 2005 to support the development and commercialization of our PluriX Bioreactor system. These funds are expected to fund operations until early summer of 2006. Our ability to continue to develop and commercialize the PluriX Bioreactor system is dependent upon our ability to raise significant additional financing when needed. If we are unable to obtain such financing, we will not be able to fully develop and commercialize our technology. Our future capital requirements will depend upon many factors, including:

- continued scientific progress in our research and development programs;
- costs and timing of conducting clinical trials and seeking regulatory approvals and patent prosecutions;
- competing technological and market developments;
- our ability to establish additional collaborative relationships; and
- the effect of commercialization activities and facility expansions if and as required.

We have limited financial resources and to date, no cash flow from operations and we are dependent for funds on our ability to sell our common stock, primarily on a private placement basis. There can be no assurance that we will be able to obtain financing on that basis in light of factors such as the market demand for our securities, the state of financial markets generally and other relevant factors. Any sale of our common stock in the future will result in dilution to existing shareholders. Furthermore, there is no assurance that we will not incur debt in the future, that we will have sufficient funds to repay our future indebtedness or that we will not default on our future debts, jeopardizing our business viability. Finally, we may not be able to borrow or raise additional capital in the future to meet our needs or to otherwise provide the capital necessary to conduct the development and commercialization of our PluriX Bioreactor system, which might result in the loss of some or all of your investment in our common stock.

If we fail to obtain and maintain required regulatory approvals for our PluriX Bioreactor system, our ability to commercialize our PluriX Bioreactor system will be limited severely.

Once fully developed, we intend to market our PluriX Bioreactor system primarily in the United States, Europe and Japan. We must obtain the approval of the Food and Drug Administration before commercialization of our technology may commence in the United States and similar agencies in Europe. We may also be required to obtain

additional approvals from foreign regulatory authorities to commence our marketing activities in those jurisdictions. If we cannot demonstrate the safety, reliability and efficacy of our PluriX Bioreactor system, or of the cells produced in the PluriX Bioreactor system, including long-term sustained cell engraftment, or if one or more patients die or suffer severe complications in future clinical trials, the Food and Drug Administration or other regulatory authorities could delay or withhold regulatory approval of our technology.

Furthermore, even if we obtain regulatory approval for our PluriX Bioreactor system, that approval may be subject to limitations on the indicated uses for which it may be marketed. Even after granting regulatory approval, the Food and Drug Administration, other regulatory agencies, and governments in other countries will continue to review and inspect marketed products, manufacturers and manufacturing facilities. Later discovery of previously unknown problems with a product, manufacturer or facility may result in restrictions on the product or manufacturer, including a withdrawal of the product from the market. Further, governmental regulatory agencies may establish additional regulations which could prevent or delay regulatory approval of our technology.

Even if we obtain regulatory approvals to commercialize our technology, we may encounter a lack of commercial acceptance of our PluriX Bioreactor system, which would impair the profitability of our business.

Our research and development efforts are primarily directed toward obtaining regulatory approval to market the PluriX Bioreactor system as an alternative to, or as an improvement for, the traditional bone marrow harvest and peripheral blood progenitor cell stem cell collection methods. These stem cell collection methods have been widely practiced for a number of years, and our technology may not be accepted by the marketplace as readily as these or other competing processes and methodologies. Additionally, our PluriX Bioreactor system may not be employed in all potential applications being investigated, and any reduction in applications would limit the market acceptance of our technology and our potential revenues. As a result, even if we obtain all required regulatory approvals, we cannot be certain that our PluriX Bioreactor system will be adopted at a level that would allow us to operate profitably.

If we do not keep pace with our competitors and with technological and market changes, our technology may become obsolete and our business may suffer.

The market for our technology is very competitive, is subject to rapid technological changes and varies for different individual products. We believe that there are potentially many competitive approaches being pursued in competition to our technology, including some by private companies for which information is difficult to obtain.

Many of our competitors have significantly greater resources, more product candidates and have developed product candidates and processes that directly compete with our technology. Our competitors may have developed, or could in the future develop, new technologies that compete with our technology or even render our technology obsolete. Our technology is designed to expand hematopoietic stem cells outside of the human body without differentiation so they may be used in bone marrow transplants and other methods of cell therapy. Even if we are able to demonstrate improved or equivalent results, researchers and practitioners may not use our technology and we will suffer a competitive disadvantage. Finally, to the extent that others develop new technologies that address the targeted application for our PluriX Bioreactor system, our business will suffer.

We depend to a significant extent on certain key personnel, the loss of any of whom may materially and adversely affect our company.

Our success depends on a significant extent to the continued services of certain highly qualified scientific and management personnel, including our Chief Executive Officer, Dr. Shai Meretzki, our President, John L. Bakos, and our Chief Financial Officer, Yossi Keret. We face competition for qualified personnel from numerous industry sources, and there can be no assurance that we will be able to attract and retain qualified personnel on acceptable terms. The loss of service of any of our key personnel could have a material adverse effect on our operations or financial condition. In the event of the loss of services of such personnel, no assurance can be given that we will be able to obtain the services of adequate replacement personnel. We do not maintain key person insurance on the lives of any of our officers or employees.

Our success depends in large part on our ability to develop and protect our PluriX Bioreactor system technology. If our patents and proprietary right agreements do not provide sufficient protection for our PluriX Bioreactor system technology, our business and competitive position will suffer.

We rely on an exclusive, world-wide license relating to the production of human cells granted to us by the Weizmann Institute of Science and Technion-Israel Institute of Technology for certain of our patent rights. If we materially breach such agreement or otherwise fail to materially comply with such agreement, or if such agreement expires or is otherwise terminated by us, we may lose our rights under the patents held by the Weizmann Institute of Science and Technion-Israel Institute of Technology. At the latest, the license will terminate when the patents underlying the license expire. The underlying patents will expire in approximately 2020. Also, the scope of the patents licensed to us may not be sufficiently broad to offer meaningful protection. In addition, the patents licensed to us could be successfully challenged, invalidated or circumvented so that our patent rights would not create an effective competitive barrier. Significantly, we do not as yet have patents in the United States or Europe or any other major market, although patents have been applied for.

We also rely on trade secrets and unpatentable know-how that we seek to protect, in part, by confidentiality agreements with our employees, consultants, suppliers and licensees. These agreements may be breached, and we might not have adequate remedies for any breach. If this were to occur, our business and competitive position would suffer.

We may be subject to intellectual property litigation such as patent infringement claims, which could adversely affect our business.

Our success will also depend in part on our ability to develop commercially viable technology without infringing the proprietary rights of others. Although we have not been subject to any filed infringement claims, other patents could exist or could be filed which would prohibit or limit our ability to develop and market our PluriX Bioreactor system in the future. In the event of an intellectual property dispute, we may be forced to litigate. Intellectual property litigation would divert management's attention from developing our technology and would force us to incur substantial costs regardless of whether we are successful. An adverse outcome could subject us to significant liabilities to third parties, and force us to curtail or cease the development and commercialization of our PluriX Bioreactor system.

Potential product liability claims could adversely affect our future earnings and financial condition.

We face an inherent business risk of exposure to product liability claims in the event that the use of the PluriX Bioreactor system during research and development efforts, including future clinical trials, or after commercialization results in adverse affects. As a result, we may incur significant product liability exposure. We may not be able to maintain adequate levels of insurance at reasonable cost and/or reasonable terms. Excessive insurance costs or uninsured claims would add to our future operating expenses and adversely affect our financial condition.

Our principal research and development facilities are located in Israel and the unstable military and political conditions of Israel may cause interruption or suspension of our business operations without warning.

Our principal research and development facilities are located in Israel. As a result, we are directly influenced by the political, economic and military conditions affecting Israel. Since the establishment of the State of Israel in 1948, a number of armed conflicts have taken place between Israel and its Arab neighbors and, since September 2000, involving the Palestinian population, and a state of hostility, varying in degree and intensity, has led to security and economic problems for Israel and companies based in Israel. Acts of random terrorism periodically occur which could affect our operations or personnel.

In addition, Israeli-based companies and companies doing business with Israel, have been the subject of an economic boycott by members of the Arab League and certain other predominantly Muslim countries since Israel's establishment. Although Israel has entered into various agreements with certain Arab countries and the Palestinian Authority, and various declarations have been signed in connection with efforts to resolve some of the economic

and political problems in the Middle East, we cannot predict whether or in what manner these problems will be resolved. Also, since the end of September 2000, there has been a marked increase in the level of terrorism in Israel, which has significantly damaged both the Israeli economy and levels of foreign and local investment.

Furthermore, certain of our officers and employees may be obligated to perform annual reserve duty in the Israel Defense Forces and are subject to being called up for active military duty at any time. All Israeli male citizens who have served in the army are subject to an obligation to perform reserve duty until they are between 45 and 54 years old, depending upon the nature of their military service.

Because some of our officers and directors are located in non-U.S. jurisdictions, you may have no effective recourse against the management for misconduct and may not be able to enforce judgement and civil liabilities against our officers, directors, experts and agents.

Most of our directors and officers are nationals and/or residents of countries other than the United States, and all or a substantial portion of their assets are located outside the United States. As a result, it may be difficult for investors to enforce within the United States any judgments obtained against our officers or directors, including judgments predicated upon the civil liability provisions of the securities laws of the United States or any U.S. state.

Because we do not intend to pay any dividends on our common stock, investors seeking dividend income or liquidity should not purchase shares of our common stock.

We have not declared or paid any dividends on our common stock since our inception, and we do not anticipate paying any such dividends for the foreseeable future. Investors seeking dividend income or liquidity should not invest in our common stock.

Our stock is considered a penny stock and certain securities rules may hamper the tradability of our shares in the market.

See Market for Common Equity and Related Security Holder Matters .

FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements which relate to future events or our future financial performance. In some cases, you can identify forward-looking statements by terminology such as "may", "should", "expects", "plans", "anticipates", "believes", "estimates", "predicts", "potential" or "continue" or the negative of these terms or other comparable terminology. These statements are only predictions and involve known and unknown risks, uncertainties and other factors, including the risks in the section entitled "Risk Factors" on pages 11 to 15, that may cause our or our industry's actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements.

While these forward-looking statements, and any assumptions upon which they are based, are made in good faith and reflect our current judgment regarding the direction of our business, actual results will almost always vary, sometimes materially, from any estimates, predictions, projections, assumptions or other future performance suggested herein. Except as required by applicable law, including the securities laws of the United States, we do not intend to update any of the forward-looking statements to conform these statements to actual results. The safe harbor for forward-looking statements provided in the Private Securities Litigation Reform Act of 1995 does not apply to the offering made in this prospectus.

SECURITIES AND EXCHANGE COMMISSION'S PUBLIC REFERENCE

Any member of the public may read and copy any materials filed by us with the Securities and Exchange Commission at the SEC's Public Reference Room at 450 Fifth Street, NW, Washington, D.C. 20549. Information on the operation of the Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330. The SEC

maintains an Internet website (http://www.sec.gov) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

THE OFFERING

This prospectus relates to the resale by certain selling security holders of Pluristem Life Systems, Inc. of up to 70,565,000 shares of our common stock in connection with the resale of:

- up to 8,500,000 shares of our common stock, representing those shares of our common stock that were sold to certain selling security holders pursuant to the Common Stock and Warrant Purchase Agreements entered into between the selling security holders and our company dated October 25, 2004 see Description of the Agreements with Certain Selling Security Holders in the October 25, 2004 Private Placement
- up to 8,500,000 shares of our common stock, representing those shares of our common stock that are issuable to certain security holders upon exercise of warrants issued in connection with the Common Stock and Warrant Purchase Agreements entered into between the selling security holders and our company dated October 25, 2004 - see Description of the Agreements with Certain Selling Security Holders in the October 25, 2004 Private Placement
- up to 245,000 shares of our common stock, representing those shares of our common stock that are issuable to certain security holders upon exercise of warrants issued as consideration for services provided as placement agents - see Description of the Agreements with Certain Selling Security Holders in the October 25, 2004 Private Placement
- up to 12,000,000 shares of our common stock, representing those shares of our common stock that were sold to certain selling security holders pursuant to the Common Stock and Warrant Purchase Agreements entered into between the selling security holders and our company dated January 24, 2005 see Description of the Agreements with Certain Selling Security Holders in the January 24, 2005 Private Placement
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- up to 1,845,000 shares of our common stock, representing those shares of our common stock that were issued to a security holder as consideration for services provided as a placement agent - see Description of the Agreements with Certain Selling Security Holders in the January 24, 2005 Private Placement
- up to 475,000 shares of our common stock, representing those shares of our common stock that are issuable to certain security holders upon exercise of warrants issued as consideration for services provided as placement agents - see Description of the Agreements with Certain Selling Security Holders in the January 24, 2005 Private Placement
- up to 12,000,000 shares of our common stock, representing those shares of our common stock that were sold to certain selling security holders pursuant to the Private Placement Subscription Agreements entered into between the selling security holders and our company dated January 31, 2005 see Description of the Agreements with Certain Selling Security Holders in the January 31, 2005 Private Placement
- up to 12,000,000 shares of our common stock, representing those shares of our common stock that are issuable to certain security holders upon exercise of warrants issued in connection with the Private Placement Subscription Agreements entered into between the selling security holders and our company

dated January 31, 2005 - see Description of the Agreements with Certain Selling Security Holders in the January 31, 2005 Private Placement and

- up to 600,000 shares of our common stock, representing those shares of our common stock that are issuable to a security holder upon exercise of warrants issued as consideration for services provided as a placement agent - see Description of the Agreements with Certain Selling Security Holders in the January 31, 2005 Private Placement
- up to 2,400,000 shares of our common stock, representing those shares of our common stock that are issuable to our Chief Executive Officer, Dr. Shai Meretzki, upon exercise of warrants issued to him in connection with the issuance of a Notice of Allowance by the United States Patent Office for our patent application number 09/890,401.

The selling security holders may sell the shares of common stock being offered in this prospectus at fixed prices, at prevailing market prices at the time of sale, at varying prices or at negotiated prices. We will not receive any proceeds from the resale of shares of our common stock by the selling security holder.

USE OF PROCEEDS

The shares of common stock offered by this prospectus are being registered for the account of the selling security holders named in this prospectus. As a result, all proceeds from the sales of the common stock will go to the selling security holders and we will not receive any proceeds from the resale of the common stock by the selling security holders. We will, however, incur all costs associated with this registration statement and prospectus.

Assuming all of the warrants for which the underlying shares of our common stock that are covered by this prospectus are exercised for cash, we will receive cash proceeds from the exercise of the warrants and we will use these proceeds for our general working capital.

DETERMINATION OF OFFERING PRICE

This prospectus covers the resale by the selling security holders named in this prospectus of up to 70,565,000 shares of our common stock. The selling security holder may offer to sell the shares of our common stock being offered in this prospectus at fixed prices, at prevailing market prices at the time of sale, at varying prices or at negotiated prices. We will not receive any proceeds from the resale of shares of our common stock by the selling security holder.

SELLING SECURITY HOLDERS

The selling security holders may offer and sell, from time to time, any or all of the common stock issued and those issuable to them upon exercise of the share purchase warrants. Because any one of the selling security holders may offer all or only some portion of the shares of common stock registered for such holder, no estimate can be given as to the amount or percentage of these shares of common stock that will be held by the selling security holders upon termination of the offering.

The following table sets forth certain information regarding the beneficial ownership of shares of common stock by the selling security holders as of April 18, 2005, and the number of shares of common stock covered by this prospectus. The number of shares in the table represents an estimate of the number of shares of common stock to be offered by the selling security holder.

The selling security holders identified by footnote 1 in the table below acquired their beneficial interests in the shares being offered hereby in the private placement described in this Prospectus under the caption Description of the Agreements with Certain Selling Security Holders in the October 25, 2004 Private Placement. The selling security holders identified by footnote 2 in the table below acquired their beneficial interests in the shares being offered hereby in the private placement described in this Prospectus under the caption Description of the

Agreements with Certain Selling Security Holders in the January 24, 2005 Private Placement. The selling security holders identified by footnote 3 in the table below acquired their beneficial interests in the shares being offered hereby in the private placement described in this Prospectus under the caption Description of the Agreements with Certain Selling Security Holders in the January 31, 2005 Private Placement.

Beneficial ownership is determined in accordance with SEC rules and includes voting or investment power with respect to the securities. This includes shares which a person or entity has the right to acquire in the next 60 days. However, each selling security holder identified by footnotes 1, 2, 3 or 4 in the table below is subject to certain limitations on the exercise of their warrants, if any. Therefore, although they are included in the table below, the number of shares of Common Stock for some listed selling security holders may include shares that are not subject to purchase during the 60-day period. Other than the relationships described below, none of the selling security holders had or have any material relationship with us. None of the selling security holders is a broker-dealer or an affiliate of a broker-dealer to our knowledge.

Name of Selling Security Holder and Position, Office or Material Relationship with Pluristem	Common Shares owned by the Selling Security Holder	Number of Shares Issuable Upon Exercise of all of the Share Purchase Warrants	Shares Offered Pursuant to this Offering	Number of Shares Owned by Selling Security Holder After Offering and Percent of Total Issued and Outstanding if All Shares Offered are Sold	
				# of Shares	% of Class
Park Ridge Investments A.V.V.	1,000,000 (1)	1,000,000 (1)	2,000,000	Nil	0%
Shay Britz	500,000 (1)	500,000 (1)	1,000,000	Nil	0%
Glenrock Israel Ltd.	600,000 (1)	600,000 (1)	1,200,000	Nil	0%
Bezalel Ziv Ron	100,000 (1)	100,000 (1)	200,000	Nil	0%
Alshuler-Shaham Ltd.	300,000 (1)	300,000 (1)	600,000	Nil	0%
Rolfe Investments Ltd.	250,000 (1)	250,000 (1)	500,000	Nil	0%
Eshed Dash Ltd.	500,000 (1)	500,000 (1)	1,000,000	Nil	0%
Dahav Financial Systems Ltd	300,000 (1)	300,000 (1)	600,000	Nil	0%
Platinum Partners Value Arbitrage Fund L.P.	1,000,000 (1)	1,000,000 (1)	2,000,000	Nil	0%
Yosef Solt	250,000 (1)	262,500 (1) (5)	512,500	Nil	0%
Ori Ackerman	250,000 (1)	715,000 (1) (5) (6)	965,000	Nil	0%
Iris Nehoray	600,000 (1)	600,000 (1)	1,200,000	Nil	0%
Elazar Nehoray	600,000 (1)	600,000 (1)	1,200,000	Nil	0%
Ilana Nehoray	600,000 (1)	600,000 (1)	1,200,000	Nil	0%
Osnot Nehoray	600,000 (1)	600,000 (1)	1,200,000	Nil	0%
Avinoam Rapaport	100,000 (1)	110,000 (1) (5)	210,000	Nil	0%
Kopelman Ltd.	250,000 (1)	250,000 (1)	500,000	Nil	0%
Tibo Marcovich	200,000 (1)	200,000 (1)	400,000	Nil	0%
Shlomo Shmulelov	263,889 (1)	250,000 (1)	500,000	13,889	0.02%

Ilana Rachmilovitz	50,000 (1)	50,000 (1)	100,000	Nil	0%
Rockwell Invest Ltd.	200,000 (1)	200,000 (1)	400,000	Nil	0%
Shmuel Even	Nil	30,000(5)	30,000	Nil	0%
Izhak Brown	Nil	75,000(5)	75,000	Nil	0%
Amnon Dardik	Nil	12,500(5)	12,500	Nil	0%
Joseph Corso	7,000,000 (2)	7,000,000(2)	14,000,000	Nil	0%
Kevin Klier	1,500,000 (2)	1,500,000 (2)	3,000,000	Nil	0%
Frank Santo Jr.	800,000 (2)	800,000 (2)	1,600,000	Nil	0%
Danielle Inserra	500,000 (2)	500,000 (2)	1,000,000	Nil	0%
Michele Inserra	500,000 (2)	500,000 (2)	1,000,000	Nil	0%
Christopher Short	250,000 (2)	250,000 (2)	500,000	Nil	0%
Robert V. Clark	250,000 (2)	250,000 (2)	500,000	Nil	0%
Gina M. Brody	200,000 (2)	200,000 (2)	400,000	Nil	0%
Joseph De Francesco	200,000 (2)	200,000 (2)	400,000	Nil	0%
Joseph Greco Sr.	200,000 (2)	200,000 (2)	400,000	Nil	0%
Sean Walter	200,000 (2)	200,000 (2)	400,000	Nil	0%
Joseph Greco Jr.	100,000 (2)	100,000 (2)	200,000	Nil	0%
Candace Lee	100,000 (2)	100,000 (2)	200,000	Nil	0%
Mauricio Perez	100,000 (2)	100,000 (2)	200,000	Nil	0%
David P. Johnson	100,000 (2)	100,000 (2)	200,000	Nil	0%
Carlthon Corp.	1,200,000(6)	Nil	1,200,000	Nil	0%
Mark Zegal	1,050,000	Nil	600,000(6)	450,000	0.71%
Kinianie Barehet Ltd.	20,000(6)	Nil	20,000	Nil	0%
Erets Hacamel Ltd.	20,000	Nil	10,000(6)	10,000	0.02%
David Buch	15,000(6)	40,000(5) (7)	55,000	Nil	0%
Amir Uziel	Nil	25,000 (7)	25,000	Nil	0%
Stonestreet Limited Partnership	4,000,000 (3)	4,000,000 (3)	8,000,000	Nil	0%
Whalehaven Capital Fund Limited	3,000,000 (3)	3,000,000 (3)	6,000,000	Nil	0%
Alpha Capital AG	1,000,000 (3)	1,000,000 (3)	2,000,000	Nil	0%
Bristol Investment Fund, Ltd.	1,500,000 (3)	1,500,000 (3)	3,000,000	Nil	0%
Shimon Vogel	500,000 (3)	500,000 (3)	1,000,000	Nil	0%
Tower Paper Co. Inc. Retirement Plan	250,000 (3)	250,000 (3)	500,000	Nil	0%

Mordechai Vogel	250,000 (3)	250,000 (3)	500,000	Nil	0%
Yokim Asset Management Corp.	1,000,000 (3)	1,650,000 (3) (5) (8)	2,650,000	Nil	0%
David Klugmann Associates Inc.	500,000 (3)	500,000 (3)	1,000,000	Nil	0%
Dr. Shai Meretzki, Chief Executive Officer	10,053,170	2,400,000(4)	2,400,000	7,653,170	12.16%
TOTAL	**44,872,059**	**36,220,000**	**70,565,000**	8,127,059	12.78%

(1) Represents shares of common stock that were sold to the selling security holder or shares of our common stock that are issuable to the selling security holder upon exercise of the warrant issued to such holder in connection with the Common Stock and Warrant Purchase Agreement dated October 25, 2004 between the holder and our company see Description of the Agreements with Certain Selling Security Holders in the October 25, 2004 Private Placement.

(2) Represents shares of common stock that were sold to the selling security holder or shares of our common stock that are issuable to the selling security holder upon exercise of the warrant issued to such holder in connection with the Common Stock and Warrant Purchase Agreement dated January 24, 2005 between the holder and our company see Description of the Agreements with Certain Selling Security Holders in the January 24, 2005 Private Placement.

(3) Represents shares of common stock that were sold to the selling security holder or shares of our common stock that are issuable to the selling security holder upon exercise of the warrant issued to such holder in connection with the Common Stock and Warrant Purchase Agreement dated January 31, 2005 between the holder and our company see Description of the Agreements with Certain Selling Security Holders in the January 31, 2005 Private Placement.

(4) Represents the shares of our common stock that are issuable upon the exercise of the warrants issued to Dr. Shai Meretzki in connection with the issuance of a Notice of Allowance by the United States Patent Office for our patent application number 09/890,401.

(5) Represents shares of common stock that are issuable to the selling security holders upon exercise of the warrant issued to such holders as consideration for services rendered as placement agents see Description of the Agreements with Certain Selling Security Holders in the October 25, 2004 Private Placement.

(6) Represents shares of common stock that were issued to the selling security holder as consideration for services rendered for financial advice and as a placement agent see Description of the Agreements with Certain Selling Security Holders in the January 24, 2005 Private Placement.

(7) Represents shares of common stock that are issuable to the selling security holder upon exercise of the warrant issued to such holder as consideration for services rendered for financial advice and as a placement agent see Description of the Agreements with Certain Selling Security Holders in the January 24, 2005 Private Placement.

(8) Represents shares of common stock that are issuable to the selling security holder upon exercise of the warrant issued to such holder as consideration for services rendered as a placement agent see Description of the Agreements with Certain Selling Security Holders in the January 31, 2005 Private Placement.

We may require the selling security holder to suspend the sales of the securities offered by this prospectus upon the occurrence of any event that makes any statement in this prospectus or the related registration statement untrue in any material respect or that requires the changing of statements in these documents in order to make statements in those documents not misleading.

PLAN OF DISTRIBUTION

The selling security holders may, from time to time, sell all or a portion of the shares of common stock on any market upon which the common stock may be quoted (currently the National Association of Securities Dealers OTC Bulletin Board), in privately negotiated transactions or otherwise. Such sales may be at fixed prices prevailing at the time of sale, at prices related to the market prices or at negotiated prices. The shares of common stock being offered for resale by this prospectus may be sold by the selling security holders by one or more of the following

methods, without limitation:

(a) block trades in which the broker or dealer so engaged will attempt to sell the shares of common stock as agent but may position and resell a portion of the block as principal to facilitate the transaction;

(b) purchases by broker or dealer as principal and resale by the broker or dealer for its account pursuant to this prospectus;

(c) an exchange distribution in accordance with the rules of the exchange;
(d) ordinary brokerage transactions and transactions in which the broker solicits purchasers;
(e) privately negotiated transactions;
(f) market sales (both long and short to the extent permitted under the federal securities laws);
(g) at the market to or through market makers or into an existing market for the shares;
(h) through transactions in options, swaps or other derivatives (whether exchange listed or otherwise);
(i) a combination of any aforementioned methods of sale; and
(j) any other method permitted pursuant to applicable law.

In the event of the transfer by any selling security holder of his or her shares to any pledgee, donee or other transferee, we will amend this prospectus and the registration statement of which this prospectus forms a part by the filing of a post-effective amendment in order to have the pledgee, donee or other transferee in place of the selling security holder who has transferred his or her shares.

In effecting sales, brokers and dealers engaged by the selling security holders may arrange for other brokers or dealers to participate. Brokers or dealers may receive commissions or discounts from the selling security holders or, if any of the broker-dealers act as an agent for the purchaser of such shares, from the purchaser in amounts to be negotiated which are not expected to exceed those customary in the types of transactions involved. Broker-dealers may agree with the selling security holders to sell a specified number of the shares of common stock at a stipulated price per share. Such an agreement may also require the broker-dealer to purchase as principal any unsold shares of common stock at the price required to fulfil the broker-dealer commitment to the selling security holders if such broker-dealer is unable to sell the shares on behalf of the selling security holders. Broker-dealers who acquire shares of common stock as principal may thereafter resell the shares of common stock from time to time in transactions which may involve block transactions and sales to and through other broker-dealers, including transactions of the nature described above. Such sales by a broker-dealer could be at prices and on terms then prevailing at the time of sale, at prices related to the then-current market price or in negotiated transactions. In connection with such resales, the broker-dealer may pay to or receive from the purchasers of the shares, commissions as described above.

The selling security holders and any broker-dealers or agents that participate with the selling security holders in the sale of the shares of common stock may be deemed to be "underwriters" within the meaning of the Securities Act in connection with these sales. In that event, any commissions received by the broker-dealers or agents and any profit on the resale of the shares of common stock purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act.

Any sales of shares may be effected through the OTC Bulletin Board, in private transactions or otherwise, and the shares may be sold at market price prevailing at the time of sale, at prices related to such prevailing market prices or at negotiated prices.

The selling shareholders may also engage in short sales against the box, puts and calls and other transactions in our

securities or derivatives of our securities and may sell or deliver shares in connection with these trades.From time to time, the selling security holders may pledge their shares of common stock pursuant to the margin provisions of their customer agreements with their brokers. Upon a default by a selling security holder, the broker may offer and sell the pledged shares of common stock from time to time. Upon a sale of the shares of common stock, the selling security holders intend to comply with the prospectus delivery requirements, under the Securities Act, by delivering a prospectus to each purchaser in the transaction. We intend to file any amendments or other necessary documents in compliance with the Securities Act which may be required in the event any selling security holder defaults under any customer agreement with brokers.

To the extent required under the Securities Act, a post effective amendment to this registration statement will be filed, disclosing the name of any broker-dealers, the number of shares of common stock involved, the price at which the common stock is to be sold, the commissions paid or discounts or concessions allowed to such broker-dealers, where applicable, that such broker-dealers did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus and other facts material to the transaction.

We and the selling security holders will be subject to applicable provisions of the Securities Exchange Act of 1934, as amended, and the rules and regulations under it, including, without limitation, Rule 10b-5 and, insofar as the selling security holders are distribution participants and we, under certain circumstances, may be a distribution participant, under Regulation M. All of the foregoing may affect the marketability of the common stock.

All expenses of the registration statement including, but not limited to, legal, accounting, printing and mailing fees are and will be borne by us. Any commissions, discounts or other fees payable to brokers or dealers in connection with any sale of the shares of common stock will be borne by the selling security holders, the purchasers participating in such transaction, or both. We have agreed to indemnify certain selling security holders and certain other persons against certain liabilities, including liabilities under the Securities Act of 1933, as amended, or to contribute to payments to which such selling security holders or their respective pledgees, donees, transferees or other successors in interest may be required to make in respect thereof.

Any shares of common stock covered by this prospectus which qualify for sale pursuant to Rule 144 under the Securities Act, as amended, may be sold under Rule 144 rather than pursuant to this prospectus.

DESCRIPTION OF THE AGREEMENTS WITH CERTAIN SELLING SECURITY HOLDERS

IN THE OCTOBER 25, 2004 PRIVATE PLACEMENT

On October 25, 2004, we commenced a private placement offering with a group of investors who subscribed for units of our securities pursuant to Common Stock and Warrant Purchase Agreement dated for reference on October 25, 2004. For the sake of clarity, we will refer to this private placement offering in this prospectus as the October 25, 2004 Private Placement. We are registering a portion of the shares offered in this prospectus to satisfy our obligations to certain selling security holders of our common stock who participated in our October 25, 2004 Private Placement.

Under a Common Stock and Warrant Purchase Agreement, dated as of October 25, 2004, between our company and those selling security holders who participated in our October 25, 2004 Private Placement, the selling security holders collectively purchased 8,500,000 shares of our common stock at the price of $0.10 per share. In connection with the purchase of our common stock by these holders, we issued to these holders warrants to purchase our common stock in an amount equal to one (1) share of common stock for each share of common stock purchased under the Common Stock and Warrant Purchase Agreement.

The warrants are exercisable at a per share exercise price equal to $0.30. This exercise price is also subject to adjustment if there are certain capital adjustments or similar transactions, such as a stock split or merger. The warrants expire on the second annual anniversary date of the date when the warrants are issued. The warrants will expire earlier if our company is acquired by another company which results in more than fifty percent (50%) of the outstanding voting securities of the surviving entity being held by person who were not shareholders of our company before such a transaction, or if our company sells, leases, assigns, transfers or disposes all or substantially all of our assets. The terms of the warrants specify that the holder can exercise its warrant by giving notice to our

company together with a check payable in lawful money of the United States for the aggregate exercise price.

Pursuant to the Investors Rights Agreement executed and delivered at the same time, we are obligated to use our best efforts to register under the Securities Act the shares of our common stock held by the selling security holders who purchased our common stock under the Common Stock and Warrant Purchase Agreement dated for reference on October 25, 2004, including those shares of our common stock issuable upon exercise of the warrants. We are also obligated to use our best efforts to keep the registration statement of which this prospectus forms a part effective until the earliest of the date on which the holders may sell without restriction all shares registered on their behalf under this prospectus under Rule 144 promulgated under the Securities Act, or the date on which such holders no longer own any of those shares of our common stock or any of those warrants.

Pursuant to the Escrow Agreement executed and delivered as a part of the transaction together with the Common Stock and Warrant Purchase Agreement dated for reference on October 25, 2004, the selling security holders agreed not to sell or offer for sale their shares of our common stock for a period of nine (9) months after closing and to place their shares and warrants in escrow with an escrow agent to be released as to twenty five percent (25%) at a time on each of the 9th, 12th, 15th and 18th month anniversaries of the closing.

We also committed to pay cash in the amount of $24,500 and issued warrants to purchase 245,000 shares of our common stock to certain selling security holders as consideration for their services to our company as placement agents for the October 25, 2004 Private Placement. The warrants are exercisable at a per share exercise price equal to $0.10. The finders warrants were modified in March, 2005, from an exercise price of $0.30 to an exercise price of $0.10 based on negotiations with the finders. This exercise price is also subject to adjustment if there are certain capital adjustments or similar transactions, such as a stock split or merger. The warrants expire on November 30, 2006.

Reference is made to the Common Stock and Warrant Purchase Agreement, the form of warrants and the Investors Rights Agreement and Escrow Agreement that are filed as exhibits to the registration statement for more complete description of the complex provisions that are summarized under this caption.

DESCRIPTION OF THE AGREEMENTS WITH CERTAIN SELLING SECURITY HOLDERS

IN THE JANUARY 24, 2005 PRIVATE PLACEMENT

On January 24, 2005, we commenced another private placement offering with a group of investors who subscribed for units of our securities pursuant to Common Stock and Warrant Purchase Agreement dated for reference on January 24, 2005. For the sake of clarity, we will refer to this private placement offering in this prospectus as the January 24, 2005 Private Placement. We are registering a portion of the shares offered in this prospectus to satisfy our obligations to certain selling security holders of our common stock who participated in our January 24, 2005 Private Placement.

Under a Common Stock and Warrant Purchase Agreement, dated as of January 24, 2005, between our company and those selling security holders who participated in our January 24, 2005 Private Placement, the selling security holders collectively purchased 12,000,000 shares of our common stock at the price of $0.10 per share. In connection with the purchase of our common stock by these holders, we issued to these holders warrants to purchase our common stock in an amount equal to one (1) share of common stock for each share of common stock purchased under the Common Stock and Warrant Purchase Agreement.

The warrants are exercisable at a per share exercise price equal to $0.30. This exercise price is also subject to adjustment if there are certain capital adjustments or similar transactions, such as a stock split or merger. The warrants expire on November 30, 2006. The warrants will expire earlier if our company is acquired by another company which results in more than fifty percent (50%) of the outstanding voting securities of the surviving entity being held by person who were not shareholders of our company before such a transaction, or if our company sells, leases, assigns, transfers or disposes all or substantially all of our assets. The terms of the warrants specify that the holder can exercise its warrant by giving notice to our company together with a check payable in lawful money of the United States for the aggregate exercise price.

Pursuant to the Investors Rights Agreement executed and delivered at the same time, we are obligated to use our best efforts to register under the Securities Act the shares of our common stock held by the selling security holders who purchased our common stock under the Common Stock and Warrant Purchase Agreement dated for reference on January 24, 2005, including those shares of our common stock issuable upon exercise of the warrants. We are also obligated to use our best efforts to keep the registration statement of which this prospectus forms a part effective until the earliest of the date on which the holders may sell without restriction all shares registered on their behalf under this prospectus under Rule 144 promulgated under the Securities Act, or the date on which such holders no longer own any of those shares of our common stock or any of those warrants.

Pursuant to the Escrow Agreement executed and delivered as a part of the transaction together with the Common Stock and Warrant Purchase Agreement dated for reference on January 24, 2005, the selling security holders agreed not to sell or offer for sale their shares of our common stock until August 30, 2005 and to place their shares and warrants in escrow with an escrow agent to be released as to twenty five percent (25%) at a time on each of the 9th, 12th, 15th and 18th month anniversaries of November 30, 2004.

We issued 1,845,000 shares of our common stock to certain selling security holders as consideration for their services to our company for financial advice and as placement agents for the January 24, 2005 Private Placement. We are obligated to use our best efforts to register these shares of our common stock under the Securities Act. We also issued warrants to purchase 475,000 shares of our common stock to seven selling security holders as consideration for their services to our company for financial advice and as placement agents for the January 24, 2005 Private Placement. These warrants are exercisable at a per share exercise price equal to $2.50. This exercise price is also subject to adjustment if there are certain capital adjustments or similar transactions, such as a stock split or merger. The warrants expire on November 30, 2007.

Reference is made to the Common Stock and Warrant Purchase Agreement, the form of warrants and the Investors Rights Agreement and Escrow Agreement that are filed as exhibits to the registration statement for more complete description of the complex provisions that are summarized under this caption.

DESCRIPTION OF THE AGREEMENTS WITH CERTAIN SELLING SECURITY HOLDERS

IN THE JANUARY 31, 2005 PRIVATE PLACEMENT

On January 31, 2005, we commenced a private placement offering with a group of investors who subscribed for units of our securities pursuant to Private Placement Subscription Agreement dated for reference on January 31, 2005. For the sake of clarity, we will refer to this private placement offering in this prospectus as the January 31, 2005 Private Placement. We are registering a portion of the shares offered in this prospectus to satisfy our obligations to certain selling security holders of our common stock who participated in our January 31, 2005 Private Placement.

Under a Private Placement Subscription Agreement, dated as of January 31, 2005, between our company and those selling security holders who participated in our January 31, 2005 Private Placement, the selling security holders collectively purchased 12,000,000 shares of our common stock at the price of $0.10 per share. In connection with the purchase of our common stock by these holders, we issued to these holders warrants to purchase our common stock in an amount equal to one (1) share of common stock for each share of common stock purchased under the Private Placement Subscription Agreement.

The warrants are exercisable at a per share exercise price equal to $0.30. This exercise price is also subject to adjustment if there are certain capital adjustments or similar transactions, such as a stock split or merger. The warrants expire on November 30, 2006. The warrants will expire earlier if our company is acquired by another company which results in more than fifty percent (50%) of the outstanding voting securities of the surviving entity being held by person who were not shareholders of our company before such a transaction, or if our company sells, leases, assigns, transfers or disposes all or substantially all of our assets. The terms of the warrants specify that the holder can exercise its warrant by giving notice to our company together with a check payable in lawful money of the United States for the aggregate exercise price.

Pursuant to the Investors Rights Agreement executed and delivered at the same time, we are obligated to register under the Securities Act the shares of our common stock held by the selling security holders who purchased our common stock under the Private Placement Subscription Agreement dated for reference on January 31, 2005, including those shares of our common stock issuable upon exercise of the warrants. We are also obligated to keep the registration statement of which this prospectus forms a part effective until the earliest of the date on which the holders may sell without restriction all shares registered on their behalf under this prospectus under Rule 144 promulgated under the Securities Act, or the date on which such holders no longer own any of those shares of our common stock or any of those warrants.

In the Private Placement Subscription Agreement, we have agreed that we will not sell or transfer any of our common stock or securities exercisable or convertible into our common stock to any person at a price less than $0.10 per share without written consent of the selling security holders who participated in our January 31, 2005 private placement. If we breach this agreement, the relevant selling security holders will be entitled to an additional number of shares of our common stock and warrants to purchase our common stock (in this paragraph we will refer to one share of our common stock and a warrant to purchase one share of our common stock as a unit). The number of additional units entitled by each of the relevant selling security holders will be the difference between:

(i) Original number of units issued to a relevant selling security holder (X) divided by the per share price (A) at which we sell our common stock at lower than $0.10 per share; minus
(ii) Original number of units issued to a relevant selling security holder (X) divided by $0.10.

For the sake of clarity and by way of example, if there are 50,000 original units issued to a selling security holder and our company sold new shares of common stock to others at a price of $0.07 per share, the selling security holder would be entitled to (50,000 divided by 0.07 equals to 714,286 less 50,000 divided by 0.10 equals 500,000 totals 214,286) 214,286 additional units.

Under the Investors Rights Agreement, we will be obligated to pay liquidated damages to the holders of our common stock who are parties to that agreement, if the Registration Statement is not filed within 70 days after the closing date of the private placement, and if it is not declared effective by August 30, 2005 or if, the effectiveness of the Registration Statement is subsequently suspended for more than certain permitted periods. The permitted suspension periods are up to two periods during any consecutive 12-month period, but each period shall not be for more than 15 days or begin less than 10 days after the preceding suspension period ended. (The first date any such suspension commences, beyond such permitted restrictions, is referred to as a restricted sale date.)

The amount that we must pay to these holders in respect of the liquidated damages associated with the delays in the effective date or after a restricted sale date will be 2% of the purchase price paid by each holder in the January 31, 2005 private placement for each 30-day periods (or part).

We also paid cash in the amount of $60,000 issued warrants to purchase 600,000 shares of our common stock to a selling security holder as consideration for its services to our company as a placement agent for the January 31, 2005 Private Placement. The warrants are exercisable at a per share exercise price equal to $0.10. This exercise price is also subject to adjustment if there are certain capital adjustments or similar transactions, such as a stock split or merger. The warrants expire on June 30, 2006.

Reference is made to the Private Placement Subscription Agreement, the form of warrants and the Investors Rights Agreement that are filed as exhibits to the registration statement for more complete description of the complex provisions that are summarized under this caption.

LEGAL PROCEEDINGS

We know of no material, existing or pending legal proceedings against our company, nor are we involved as a plaintiff in any material proceeding or pending litigation. There are no proceedings in which any of our directors, officers or affiliates, or any registered or beneficial shareholder, is an adverse party or has a material interest adverse to our interest.

DIRECTORS, EXECUTIVE OFFICERS, PROMOTERS AND CONTROL PERSONS

All directors of our company hold office until the next annual meeting of the security holders or until their successors have been elected and qualified. The officers of our company are appointed by our board of directors and hold office until their death, resignation or removal from office. Our directors and executive officers, their ages, positions held, and duration as such, are as follows:

Name	**Position Held with our Company**	**Age**	**Date First Elected or Appointed**
Dr. Shai Meretizki	Chief Executive Officer	37	October 17, 2004
Yossi Keret	Chief Financial Officer	38	May 30, 2004
John L. Bakos	President	50	February 3, 2005
Doron Shorrer	Chairman of the Board, Director	51	October 2, 2003
Hava Meretzki	Director	37	October 2, 2003
Yoram Drucker	Director	40	January 26, 2005
Israel Ben-Yoram	Director	43	January 26, 2005

Business Experience

The following is a brief account of the education and business experience of each director and executive officer during at least the past five years, indicating each person's principal occupation during the period, and the name and principal business of the organization by which he was employed.

Dr. Shai Meretzki

Dr. Shai Meretzki was the founder and the chief technology officer of our wholly owned subsidiary, Pluristem, Ltd. He received his Ph.D. in biotechnology at the Technion-Israel Institute of Technology in 2002. Dr. Meretski has conducted extensive research on the subject of stem cell expansion. His research project for his Ph.D. thesis was Stationary packed bed bioreactor for propagation of transplantable human haemopoietic stem cells. From 1995 to 1996, Dr. Meretzki was employed at the Department of Chemical Engineering at the Technion-Israel Institute of Technology. From 1997 to 2001, he was an instructor teaching medical students cell biology and hematology at the Rappaport Faculty of Medicine in Haifa, Israel. From 2001 to 2002, Dr. Meretzki was in charge of biological and chemical research and development for Polyheal, Ltd. in Nesher, Israel.

Yossi Keret

Mr. Keret was appointed as our Chief Financial Officer on May 30, 2004. Before his appointment as our Chief Financial Officer, Mr. Keret acted as the Chief Financial Officer of M.L.L. Software and Computers Industries Ltd. (TASE:MLL) where he oversaw the company's three subsidiaries. Prior to his employment at M.L.L., he was the Chief Financial Officer of Internet-Zahav Group, Ltd. (NASDAQ:IGLD) the leading Israeli ISP with revenues in excess of $45 million, 900 employees and three subsidiaries. As the Chief Financial Officer of Top Image Systems Ltd. (NASDAQ:TISA), Mr. Keret directed all activities that led to a NASDAQ listing, formulated systems which

increased sales growth 60% during his 5 year term and opened branches and subsidiaries in Europe and USA . He began his career at Kost Forer and Gabai Accountants - a member of E&Y International.

Mr. Keret holds a B.A. from Haifa University in Economics and Accounting, is a Certified Accountant in Israel and is working toward an MBA from Heriot-Watt University.

John L. Bakos

Mr. Bakos was most recently a co-founder and Vice President of Finance at Fluidnet LLC, a medical device company focused on the IV therapy device and disposable market. He raised seed funding for Fluidnet LLC and was responsible for investors communications, business planning, and financial modeling. From 1989 to 2001, Mr. Bakos served as an independent consultant to emerging private and public growth companies in healthcare, telecommunications, financial services, online education, manufacturing and government on issues involving finance, business planning and execution. Mr. Bakos holds a B.A. degree and an MBA degree from Cornell University.

Doron Shorrer

Mr. Shorrer was appointed a director on October 2, 2003. Mr. Shorrer, ISR (CPA) was Chairman of the Board of Phoenix Insurance Company, one of the largest insurance companies in Israel and Mivtachim Pension Benefit Group, the largest pension fund in Israel. Prior to these positions, Mr. Shorrer held senior appointments that included Arbitrator at the Claims Resolution Tribunal for Dormant Accounts in Switzerland; Economic and Financial Advisor, Commissioner of Insurance and Capital Markets for the State of Israel; Member of the board of directors of "Nechasim" of the State of Israel; Member Committee for the Examination of Structural Changes in the Capital Market (The Brodet Committee); General Director of the Ministry of Transport; Co-Founder and director of an accounting firm with offices in Jerusalem, Tel-Aviv and Haifa; Member of the Lecture Staff of the Amal School Chain; Chairman of a Public Committee for Telecommunications; and Economic Consultant to the Ministry of Energy.

Among many areas of expertise, Mr. Shorrer formulates, implements and administers business planning in the private and institutional sector in addition to consulting on economic, accounting and taxation issues to a large audience ranging from private concerns to government ministries. Mr. Shorrer holds a B.A. in Economics and Accounting and an M.A. in Business Administration (specialization in finance and banking) from the Hebrew University of Jerusalem and is a Certified Public Accountant (ISR).

Hava Meretzki

Ms. Meretzki was appointed a director on October 2, 2003. Ms. Meretzki, Adv. is a partner in the law firm of Ben-Noun Meretzki in Haifa, Israel. Ms. Meretzki specializes in civil, trade and labor law and is presently Vice-Chairman for the National Council of the Israel Bar Association. Ms. Meretzki previously was a director of the Israel Electric Company. Ms. Meretzki received a Bachelors Degree in Law from the Hebrew University in 1991, and in 1992 was admitted to the Israel Bar Association.

Yoram Drucker

Mr. Drucker was appointed a director on January 26, 2005. Mr. Drucker has been the Chief Operating Officer of Brainstorm Cell Therapeutics Inc. since November of 2004. Before joining Brainstorm Cell Therapeutics Inc., Mr. Drucker was an independent business consultant providing consulting advice on business development, finance, strategy and operations. From 1997 to 1998, Mr. Drucker managed a real estate brokerage firm. From 1995 to 1996, Mr. Drucker managed his own promotion company, which created and designed marketing and promotional concepts for various companies in Israel. From 1990 to 1995, Mr. Drucker served as a manager of the production department of one of Israel s largest diamond factories.

Israel Ben-Yoram

Mr. Ben-Yoram was appointed a director on January 26, 2005. Mr. Ben-Yoram has been a director and partner in the accounting firm of Mor, Ben-Yoram and Partners in Israel since 1985 to now. This accounting firm currently employs over 15 employees in the field of auditing, consulting, and accompanying projects. Since 1992 to now, Mr. Ben-Yoram has also served as a shareholder and the head director of Mor, Ben-Yoram Ltd., a private company in Israel in parallel to the operation of the Mor, Ben-Yoram and Partners accounting firm. This company provides management services, economic consulting services and other professional services to businesses. Mr. Ben-Yoram received a B.A. in accounting from the University of Tel Aviv, an M.A. in Economics from the Hebrew University of Jerusalem, an LLB and an MBA from Tel Aviv University and an LLM from Bar Ilan University.

Significant Employees

We currently do not have any significant employees aside from our directors and officers.

Family Relationships

Shai and Hava Meretzki are husband and wife.

Involvement in Certain Legal Proceedings

Our directors, executive officers and control persons have not been involved in any of the following events during the past five years:

1. any bankruptcy petition filed by or against any business of which such person was a general partner or executive officer either at the time of the bankruptcy or within two years prior to that time;

2. any conviction in a criminal proceeding or being subject to a pending criminal proceeding (excluding traffic violations and other minor offenses);

3. being subject to any order, judgment, or decree, not subsequently reversed, suspended or vacated, of any court of competent jurisdiction, permanently or temporarily enjoining, barring, suspending or otherwise limiting his involvement in any type of business, securities or banking activities; and

4. being found by a court of competent jurisdiction (in a civil action), the Commission or the Commodity Futures Trading Commission to have violated a federal or state securities or commodities law, and the judgment has not been reversed, suspended, or vacated.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth, as of April 18, 2005, certain information with respect to the beneficial ownership of our common stock by each security holder known by us to be the beneficial owner of more than 5% of our common stock and by each of our current directors and executive officers. Each person has sole voting and investment power with respect to the shares of common stock, except as otherwise indicated. Beneficial ownership consists of a direct interest in the shares of common stock, except as otherwise indicated.

Title of Class	Name and Address of Beneficial Owner	Amount and Nature of Beneficial Owner	Percentage of Class(1)
Common Shares	CEDE & Co. PO Box 20 Bowling Green Station New York, NY 10004	16,315,470	25.65%
Common Shares	Shai Meretzki 38 Raul Wallenberg Haifa, Israel	10,053,170 (2)	15.81%
Common Shares	Joseph Corso 15 Ottavio Promenade Staten Island, NY 10307	7,000,000	11.01%
Common Shares	Stonestreet Limited Partnership #1300 320 Bay Street Toronto, ON M5H 4A6 Canada	4,000,000	6.29%
Common Shares	Hava Meretzki 38 Raul Wallenberg Haifa, Israel	338,377 (3)	0.53%
Common Shares	Directors and Officers (as a group)	11,005,640 (4)	17.30%

(1) Based on 63,603,483 shares of common stock issued and outstanding as of April 25, 2005. Except as otherwise indicated, we believe that the beneficial owners of the common stock listed above, based on information furnished by such owners, have sole investment and voting power with respect to such shares, subject to community property laws where applicable. Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Shares of common stock subject to options or warrants currently exercisable, or exercisable within 60 days, are deemed outstanding for purposes of computing the percentage ownership of the person holding such option or warrants, but are not deemed outstanding for purposes of computing the percentage ownership of any other person.

(2) 4,802,000 of which are registered under the name of A.R.Y. Holdings Ltd., which are owned and controlled by Dr. Shai Meretzki. 451,170 of which are options to purchase shares of common stock granted on December 30, 2003 that are currently exercisable or exercisable within 60 days. 2,400,000 of which were granted in connection with the issuance of Notice of Allowance by the United States Patent Office for our patent application number 09/890,401. 2,400,000 of which are warrants to purchase shares of common stock granted in connection with the issuance of Notice of Allowance by the United States Patent Office for our patent application number 09/890,401.

(3) Representing options to purchase shares of our common stock granted on December 30, 2003 that are currently exercisable or exercisable within 60 days.

(4) 614,093 of which are options to purchase shares of our common stock granted to directors and officers other than Shai Meretzki and Hava Meretzki on December 30, 2003 and other dates that are currently exercisable or exercisable within 60 days.

Changes in Control

We are unaware of any contract or other arrangement the operation of which may at a subsequent date result in a change of control of our company.

DESCRIPTION OF SECURITIES

We are authorized to issue 1,400,000,000 common shares with $0.00001 par value. As at April 25, 2005 we had

63,603,483 common shares outstanding. Upon liquidation, dissolution or winding up of the corporation, the holders of common stock are entitled to share ratably in all net assets available for distribution to security holders after payment to creditors. The common stock is not convertible or redeemable and has no preemptive, subscription or conversion rights.

Each outstanding share of common stock is entitled to one vote on all matters submitted to a vote of security holders. There are no cumulative voting rights.

The holders of outstanding shares of common stock are entitled to receive dividends out of assets legally available therefore at such times and in such amounts as our Board of Directors may from time to time determine. Holders of common stock will share equally on a per share basis in any dividend declared by the Board of Directors. We have not paid any dividends on our common stock and do not anticipate paying any cash dividends on such stock in the foreseeable future.

In the event of a merger or consolidation, all holders of common stock will be entitled to receive the same per share consideration.

DISCLOSURE OF COMMISSION POSITION OF INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Our bylaws provide that directors and officers shall be indemnified by us to the fullest extent authorized by the Nevada General Corporation Law, against all expenses and liabilities reasonably incurred in connection with services for us or on our behalf if such persons acted in good faith and in a manner such person reasonably believed to be in or not opposed to our best interests, and with respect to any criminal action or proceeding, had not reasonable cause to believe his or her conduct was unlawful.

Insofar as indemnification for liabilities arising under the Securities Act might be permitted to directors, officers or persons controlling our company under the provisions described above, we have been informed that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Except as otherwise indicated below, we have not been a party to any transaction, proposed transaction, or series of transactions in which the amount involved exceeds $60,000, and in which, to its knowledge, any of its directors, officers, five percent beneficial security holder, or any member of the immediate family of the foregoing persons has had or will have a direct or indirect material interest.

Dr. Shai Meretzki is a signatory of the License Agreement with the Weizmann Institute of Science and the Technion-Israel Institute of Technology because he was an inventor of the technology listed in the License Agreement. Dr. Meretzki is our Chief Executive Officer and an affiliate of our Company through his indirect acquisition of shares of our Common Stock.

The promoters of our company are our directors and officers.

DESCRIPTION OF BUSINESS

Corporate History

We were incorporated in the State of Nevada under the name A.I. Software, Inc. on May 11, 2001 and commencing July 2001, we were engaged in software development. Our initial business plan at the time of our incorporation was premised on the use of artificial intelligence in computer programming technology and in many areas of the computer, Internet, robotics, and games industries. On July 1, 2001 we entered into a software development agreement with Empire Group, a software development firm, to develop for us the software algorithm program for an artificial intelligence software called "Randomix." We were not successful in fully implementing our initial business plan in regards to our Randomix software. As a result, during March and April of 2003, our Board of

Directors conducted an in-depth analysis of our business plan and related future prospects for software development companies. To better protect stockholder interests and provide future appreciation, it was decided to concurrently pursue initiatives in the biotech industry as an extension to our business.

On May 5, 2003, we entered into a License Agreement with the Weizmann Institute of Science and the Technion-Israel Institute of Technology to acquire an exclusive license for an innovative stem cell expansion technology. This technology, if fully developed and commercialized, will offer novel solutions to make procedures like bone marrow transplants and other methods of cell therapy more accessible to patients suffering from leukemia, lymphoma, myaloma and a broad range of complicated diseases and disorders. Under this License Agreement, we agreed to pay $400,000 cash over time and we will pay royalties on our future sales and product or rights distribution transactions. Also, the licensors of the License Agreement has an option to assign all of their patent rights in the License Agreement to our company in exchange for an aggregate of 5% of all of the issued and outstanding share capital of our company. This option may only be exercised within a 60-day period commencing from the date when we notify the licensors that the market capital of our company has exceeded $25,000,000. The option will expire if it is not exercised within this period.

To enable us to conduct further research and development of the exclusive license for the stem cell expansion technology we acquired from the Weizmann Institute of Science and the Technion-Israel Institute of Technology, on June 10, 2003 we purchased 100% of the issued and outstanding shares of a research and development company based in Israel called Pluristem, Ltd. Pluristem, Ltd. was incorporated under the law of Israel on January 22, 2003 and has the facilities and personnel to conduct research and development in the field of stem cell research. As consideration for the shares of Pluristem, Ltd., we paid to the shareholder of Pluristem, Ltd. cash in the amount of $1,000 and provided Pluristem, Ltd. with a line of credit in the amount of $500,000. Accordingly, Pluristem, Ltd. became our wholly-owned subsidiary as of June 10, 2003.

On June 25, 2003, we changed our name from "A.I. Software, Inc." to "Pluristem Life Systems, Inc." The name change was effected with the Nevada Secretary of State on June 25, 2003 and took effect with the OTCBB at the opening of trading on June 30, 2003 under our new stock symbol "PLRS".

Our Current Business

With the acquisition of Pluristem, Ltd., we aim to become a leader in expansion of hematopoietic stem cells outside of the human body. Stem cells are unspecialized cells that can renew themselves for long periods through cell division. Scientists have developed sufficient fundamental understanding to use stem cells for cell therapy and bone marrow transplants for the potential treatment of a broad range of complicated diseases. Cell therapy is the use of living cells in the treatment of medical disorders. Cell therapy is still in its beginning stages of research and development and only a few potential products are already in clinical studies.

We plan to specialize initially in the expansion of hematopoietic stem cells found in umbilical cord blood, using the technology platform we acquired under the License Agreement with the Weizmann Institute of Science and the Technion-Israel Institute of Technology. We intend to improve this technology platform and develop it into a functional stem cell expansion system that we can sell or license to other research laboratories, umbilical cord blood banks, or clinics in the future. We have named this system the PluriX Bioreactor system.

Brief Introduction on Stem Cell Research and Cell Therapy

Since 1998, when embryonic human stem cells were first isolated, research on stem cells has received much public attention. Stem cells have two important characteristics that distinguish them from other types of cells. First, they are unspecialized cells that renew themselves for long periods through cell division. Second, under certain physiologic or experimental conditions, stem cells can be induced to become cells with special functions, such as the beating cells of the heart muscle or the insulin-producing cells of the pancreas.

Scientists primarily work with two kinds of stem cells from animals and humans: embryonic stem cells and adult stem cells, which have different functions and characteristics. In some adult tissues, such as bone marrow, muscle, and brain, discrete populations of adult stem cells generate replacements for cells that are lost through normal wear

and tear, injury, or disease.

Cell therapy is the use of living cells in the treatment of medical disorders. Stem cells, progenitors and differentiated functional cells of various tissues are evolving as potential treatment modality for life threatening diseases and major clinical indications lacking effective cures. Cell therapy is still in its beginning stages of research and development and only a few potential products are already in clinical studies.

Even though we have the capability to work with embryonic stem cells, we have chosen to concentrate our efforts on hematopoietic stem cells. Hematopoietic stem cells can be found in every adult's bone marrow, which is the spongy tissue found in the cavities of our bones. Hematopoietic stem cells are the precursors of the various types of blood cells in the human body. These cells include:

White cells that fight infections and inflammations (leukocytes) and form the basis of the immune system (lymphocytes);

Red cells that carry oxygen through our bodies (erythrocytes); and

Platelets that help blood to clot.

Scientists have developed sufficient understanding to actually use hematopoietic stem cells for therapy, such as through the procedure of bone marrow transplant. Thus, this class of human stem cell holds the promise of being able to repair or replace cells or tissues that are damaged or destroyed by many of our most devastating diseases and disabilities. Furthermore, bone marrow transplants are ultimate treatments in many pathological disorders, including:

Malignant blood system diseases, such as leukemia, lymphoma and myaloma,

Diseases characterized by the lack of, or defective, production of bone marrow, such as aplastic anemia,

Severe combined immune deficiency,

Non-hematopoietic malignancies (solid tumors), or bone marrow disorders, following chemotherapy and radiation, and

Metabolic diseases or congenital hemoglobinopathies, such as thalessemia.

For stem cell transplants to succeed, the donated stem cells must repopulate and/or engraft the recipient's bone marrow, where they will provide a new source of essential blood and immune system cells. Within the hematopoietic cell system, only a special type of stem cells called pluripotent hematopoietic stem cells have extensive capacities to expand, differentiate and self-renew. Accordingly, pluripotent hematopoietic stem cells are exclusively required for repopulation and engraftment of donated stem cells following transplantation. In spite of the key role of pluripotent hematopoietic stem cells in maintaining the hematopoietic cell system, they appear in extremely low frequency in the bone marrow tissue. The current technology limitation on maintaining or expanding undifferentiated stem cells outside of human body is a major drawback to essential clinical applications of these cells. This current unavailability of technology to expand the number of stem cells outside of human body reflects the need for novel stem cell regulators. However, in spite of all the challenges involved in hematopoietic stem cell transplants, physicians are now trying, sometimes successfully, to assist in hematopoietic and immune system recovery following high-dose chemotherapy and/or radiation therapy treatment for malignant and non-malignant diseases such as leukemia and certain immune and genetic disorders.

Brief Introduction on Bone Marrow Transplants

Bone marrow transplantation is a relatively new medical procedure being used to treat diseases once thought incurable. Since its first successful use in 1968, bone marrow transplants have been used to treat patients diagnosed

with leukemia, aplastic anemia, lymphomas such as Hodgkin's disease, multiple myeloma, immune deficiency disorders and some solid tumors such as breast and ovarian cancer. The bone marrow transplant procedure generally involves three phases. In the first phase, lasting 5 to 14 days, the bone marrow recipient is prepared for the graft. Immunosuppressive and cytotoxic chemotherapy administered with or without irradiation are used to enable the recipient to accept the graft, to prevent graft rejection, and in cases of acute leukemia, to eliminate residual leukemia.

In the second phase, bone marrow is procured from a compatible donor and intravenously administered to the graft recipient.

The third phase is a period of waiting for the bone marrow to engraft and function normally in the recipient. During the time required for engraftment (approximately 2 to 4 weeks), the graft recipient is vulnerable to infection, bleeding, severe weight loss, rejection of the graft and graft-versus-host disease. Graft-versus-host disease occurs in approximately 50% of bone marrow transplant patients. If the marrow engrafts and the patient survives the immediate post-transplant period (first 3 to 6 weeks), the patient faces another set of complications, including graft-versus-host disease and interstitial pneumonia. Interstitial pneumonia occurs in 60% of bone marrow transplant patients, typically 4 to 6 weeks post transplant. The disease progresses rapidly and is fatal in approximately 50% of the cases. 50%-60% of patients survive where the bone marrow transplant is made during disease remission, and only 10%-25% survive in cases where the bone marrow transplant is done outside of remission. (Source: The Cost Effectiveness of BMT Therapy and Its Policy Implications, School of Public Health, UCLA).

There are several types of bone marrow transplants. They are distinguished according to the source of the stem cells. An autologus bone marrow transplant means the transplant stem cells come from the patient. An allogenic bone marrow transplant means the stem cells come from a donor. A syngeneic bone marrow transplant means the stem cells come from an identical twin.

Research and clinical work in the field of bone marrow transplants is presently limited due to:

The average number of active pluripotent hematopoietic stem cells in any given bone marrow is extremely low, less than 0.5% of total mononuclear cells;

The difficulties of the human body to accept bone marrow transplants from donors, and the ensuing damaging reactions;

The patient is quite prone to infections following radiation and/or chemotherapy treatments, and may have been infected even prior to the transplant;

Sorting of healthy cells from cancerous cells has not proven 100% successful;

The great complications in storing and enriching these cells in the absence of *in vitro* differentiation;

The absence of a large-scale and sustainable model that enables the testing of the ability of hematopoietic stem cells to renew the hematopoietic cell system; and

There are some clinical situations where autologus bone marrow after tumor purging provides insufficient numbers of hematopoietic stem cells for the bone marrow transplant.

Transplantation experts believe that the ideal approach to a successful stem cell transplant is to use a large number of stem cells to maximize the probability of bone marrow repopulation and minimize the time needed for the return of normal numbers of hematopoietic and immune cells in the patient.

One of the major efforts in developing hematopoietic stem cell technologies has been to identify new and better sources for stem cells. The majority of transplantable hematopoietic stem cells in adults currently come primarily from peripheral blood or adult donor bone marrow. Another important and attainable source of transplantable and

lasting hematopoietic stem cells is from umbilical cord blood. Such blood is drawn from the umbilical cord after birth, but before the discharge of the placenta, giving way to the following advantages:

The standard procedure at birth is that umbilical cord blood is discarded with the placenta. No morbidity is involved, making this option free of ethical controversy.

Collection of umbilical cord blood is simple and non-invasive both to the mother and the baby;

Use of umbilical cord blood is already approved by the Federal Drug Administration and does not require further clinical testing;

The hematopoietic stem cells drawn from umbilical cord blood can differentiate into primary hematopoietic precursors and create hematopoietic clones in cultures better than those hematopoietic stem cells taken from adult bone marrow;

Umbilical cord blood has lower levels of contamination with common viral pathogens, such as Cytomegalovirus, and is more tolerant of alloantigens; and

Umbilical cord blood hematopoietic stem cells have high tolerance levels, giving way to lower graft-versus-host diseases.

It is important to note that scientists have found no difference in the functionality of hematopoietic stem cells drawn from bone marrow, peripheral blood or umbilical cord blood. However, owing to the small volume of blood collected from umbilical cords (typically less than 100 ml), use of umbilical cord blood has been limited to date to transplants in babies and children weighing less than 45 kg. Moreover, there are no existing hematopoietic stem cell expansion technologies for umbilical cord blood that can increase to the best of our knowledge the number of hematopoietic stem cells without causing differentiation of the hematopoietic stem cells. Once the hematopoietic stem cells have differentiated, they cannot be transplanted into the patient. Therefore, the development of a system that will facilitate the proliferation of hematopoietic stem cells in an appropriate culture media or substrate could enable the use of such hematopoietic stem cells drawn from umbilical cord blood for transplanting in adults where insufficient hematopoietic stem cells are available.

In summary, transplants of hematopoietic stem cells derived from umbilical cord blood are a novel alternative to conventional bone marrow transplants and have several unique advantages, in spite of their present quantitative limitations. Umbilical cord blood lends itself to sorting and storing in cord blood banks and transplant clinics, leading to the ability to build data bases of expanded umbilical cord blood for national and worldwide access and use, making search of bone marrow transplant donors easily facilitated and making autologus bone marrow transplants in adults potentially feasible. We believe that the advantages in use of umbilical cord blood hematopoietic stem cells, combined with our platform technology have the potential to change the ways bone marrow transplants are conducted in the future.

Our Core Technology the PluriX Bioreactor System

For decades, scientists have attempted to "grow" stem cells outside of human body in culture to increase the number of stem cells for transplantation. The challenge of this undertaking lies in overcoming stem cells' predisposition to differentiate. Adult hematopoietic stem cells tend to produce other cells with limited repopulating properties when grown in culture rather than to replicate and regenerate additional stem cells. Current stem cell expansion techniques are complicated by the diverse mix of differentiated cells generated in stem cell cultures. Existing scientific methods considered in increasing the number of stem cells include culturing the stem cells on two dimensional stromal layers and growing in the presence of cytokines. To the best of our knowledge, none of these existing methods to grow stem cells outside of patients' bodies are able to prevent differentiation of stem cells while promoting their proliferation.

Through the License Agreement we entered with the Weizmann Institute of Science and the Technion-Israel

Institute of Technology, we acquired an exclusive license for an innovative stem cell expansion technology. This technology, if fully developed and commercialized, will offer novel solutions to expand hematopoietic stem cells taken from umbilical cord blood. We intend to improve this technology and develop it into a functional stem cell expansion system that we can sell or license to other research laboratories, umbilical cord blood banks, or clinics in the future. We have named this system the PluriX Bioreactor system.

The PluriX Bioreactor system is a system of stromal cell cultures and substrates that create an artificial physiological environment in which hematopoietic stem cells can grow and reproduce outside of the human body. The system recreates the environment which exists in human bones, in which stem cells reproduce in nature. The stem cells are tricked into growing and reproducing in the PluriX Bioreactor in the same way they would in living bone, and because the size and scale of the PluriX Bioreactor can be much bigger than a human bone, the stem cell growth can be greatly expanded. We expect that the three dimensional PluriX Bioreactor system has the potential to bring about the expansion of umbilical cord blood hematopoietic stem cells to proportions that will be enough for a number of adult transplants, without promoting differentiation.

We are designing and developing the PluriX Bioreactor system to perform controlled expansion of hematopoietic stem cells for bone marrow transplants. The general idea is to cause self-renewal of early stage stem cells and prevent them from differentiating through use of the PluriX Bioreactor system. The PluriX Bioreactor system creates an artificial physiological environment in which hematopoietic stem cells can grow and reproduce. This system is in direct contrast to standard teflon bags or culture flasks, which cannot promote hematopoietic stem cells self-renewal and prevent their differentiation. In the PluriX Bioreactor system, hematopoietic stem cells are influenced by contact with the surrounding environment, made up of stromal cell cultures and substrates. Therefore, by keeping the hematopoietic stem cells in the closed environment of the PluriX Bioreactor system, the hematopoietic stem cells maintain their original form, which means that they can proliferate without differentiating.

We believe that the PluriX Bioreactor system, once fully developed, will enable the production of certain stem cells, such as umbilical cord blood hematopoietic stem cells, for which there might otherwise be insufficient quantities available for many transplants. Having access to a sufficient number of hematopoietic stem cells is essential to successful clinical outcomes. This is particularly the case with umbilical cord blood transplants. The limited quantities of available hematopoietic stem cells in umbilical cord blood and difficulties in expanding the starting volumes to therapeutic quantities have restricted the widespread practice of umbilical cord blood transplants. The PluriX Bioreactor system is designed to solve this dilemma by providing the capability to easily and cost-effectively expand umbilical cord blood hematopoietic stem cells to higher quantities for therapeutic treatments.

The PluriX Bioreactor system is comprised of several components, including(1) a reservoir, (2) gas mixture, (3) a gas filter, (4) an injection point, (5) a Plug Flow Bioreactor, (6) a flow monitor and a flow valve, (7) a separating container, (8) a container for medium exchange, (9) a peristaltic pump, (10) a sampling point, (11) a container for medium exchange and (12) an oxygen monitor. The PluriX Bioreactor system is designed to be operated with minimal operator activity by a medical or laboratory technician. Operation of the PluriX Bioreactor system is intended to be relatively simple, and therefore, a trained lab technician will be able to operate and monitor between 10 to 20 PluriX Bioreactor systems at any one time. In other words, one lab technician will operate 70 to 100 PluriX Bioreactor systems per year.

Primary Advantages of PluriX Bioreactor System

We believe our core technology, the PluriX Bioreactor system, once fully developed, will have the following advantages:

Our PluriX Bioreactor system can be used to expand umbilical cord blood hematopoietic stem cells for use in adult transplants. With the assistance of our PluriX Bioreactor system, one portion of umbilical cord blood hematopoietic stem cells can be expanded to quantities enough for a number of transplants. This means that healthy autologus umbilical cord blood hematopoietic stem cells can be taken at the time of birth, expanded into mature

hematopoietic stem cells and stored by a cell bank in the instance that it may be needed by that specific patient at a later date. This will eliminate the current practice of transplanting cancerous cells back into the patient.

Our PluriX Bioreactor system can be used for allogenic expansion, i.e. to expand the hematopoietic stem cells from donors other than the patient himself. Allogenic stem cells can also be expanded for use as a transplant source for adults in the instances that enough stem cells are not attainable from a particular donor.

Our PluriX Bioreactor system can also be used for autologus proliferation, i.e. to expand the hematopoietic stem cells taken from the transplant patients themselves. Contrary to any existing available technologies known to us, our PluriX Bioreactor system will allow the use of autologus bone marrow transplantation in the case that healthy cells are not clearly attainable from the patient.

Our PluriX Bioreactor system can be used to produce a high number of hematopoietic stem cells, which will result in increased potential for faster, successful engraftment of stem cells in transplant patients.

By making the option of expanding hematopoietic stem cells taken from transplant patients themselves available, we believe that costs related to donor searches for bone marrow transplants will be reduced significantly;

We believe that our PluriX Bioreactor system may produce by-products that will speed up the recovery time of transplant patients, thereby reducing the number of hospitalization days needed.

Alongside our research process on the PluriX Bioreactor system, we have also identified characterization processes of new proteins that are important to the differentiation of stem cells, both within and without patients' bodies. We plan to continue in the cleaning and characterization of these proteins with the intention of making them into commercial products.

Markets for Our Product and Services

There are presently between 40,000 to 50,000 bone marrow transplants performed annually worldwide. Approximately 18,000 of these bone marrow transplants are performed in the United States and approximately 25,000 are performed in Europe. We have not taken steps to determine the number of bone marrow transplants performed elsewhere. Of the 40,000 to 50,000 bone marrow transplants performed, only 5,000 are performed on babies and children. Furthermore, most of these 40,000 to 50,000 bone marrow transplants are allogeneic transplants, requiring patients to locate donors with compatible hematopoietic stem cells. Based on the fact that only one in three patients actually finds a compatible donor, we estimate that the number of potential bone marrow transplants should exceed 150,000 annually. Based on these statistics, we believe that the existing methods of transplanting human bone marrow have not been perfected and are far from reaching an ideal level of success.

Presently, the standard bone marrow transplant procedure costs approximately $100,000 per patient. This translates into approximately $5 billion annually that patients and their medical insurers around the world are spending currently for this procedure alone. In addition, to manage the risk of incompatibility between donor and patient stem cells, a separation procedure of the stem cells is frequently also performed at a cost of $70,000. We believe that 15% to 20%, or 15,000 to 20,000 of the patients require this stem cell separation procedure as well, adding a further $700 million to the current spending on bone marrow transplants in the United States. Combining these figures with similar expenditures in Europe and Asia, we estimate the current worldwide spending on bone marrow transplants to exceed $7 billion per year.

We estimate that there are between 50 to 100 cord blood banks in the world, most of them located in the United States. In 2001, they collective cryo-preserved (frozen) and stored cord blood from some 34,000 to 36,000 donors and they project that the annual rate of growth of cord blood preserved will be over 15%. Due to the increased use of umbilical cord blood hematopoietic stem cells in bone marrow transplants, we expect that the number of cord blood banks will also grow significantly around the world. We also expect that, in developed countries, in the near future, umbilical cord blood may be drawn at the time of every birth and stored for later use. We believe that the stem cell expansion technology that we will make available through our PluriX Bioreactor system, together with

proper marketing efforts, will increase the number of umbilical cord blood donors for personal use, i.e., parents storing the umbilical cord blood for their children's future, by increasing the existing growth rate. This will also provide a full base of hematopoietic stem cells donor opportunities to patients throughout the world. We project that the global market for the provision of stem cell expansion services can reach approximately $8 billion.

Intellectual Property

Our success will depend in part on our ability, and the ability of our licensors, to obtain patent protection for our technology and processes we acquired under the License Agreement with the Weizmann Institute of Science and the Technion-Israel Institute of Technology. Under the License Agreement we have exclusive rights to the technology covered a patent application entitled "Method and Apparatus for Maintenance and Expansion of Hematopoietic Stem Cells and/or Progenitor Cells" filed with the World Intellectual Property Organization under the Patent Cooperation Treaty (PCT) patent number PCT/US00/02688. Corresponding patent application have also been filed in a number of countries including the United States under patent application number 09/890,401. On January 4, 2005, we received notice from the U.S. Patent and Trademark Office that it has allowed the U.S. patent application number 09/890,401, but changing the title of the patent from Method and Apparatus for Maintenance and Expansion of Hemopoietic Stem Cells and/or Progenitor Cells to Method of Producing Undifferentiated Hemopoietic Stem Cells Using a Stationary Phase Plug-Flow Bioreactor. This patent allowance provides coverage to our concept of creating a three-dimensional bone-like environment that supports stem cell expansion without differentiation. Our other issued patent presents claims to: (i) certain apparatus for cell culturing, including a bioreactor suitable for culturing human hematopoietic stem cells or hematopoietic progenitors cells; (ii)three dimensional stromal cells based bioreactor. A patent was issued in South Africa in October, 2002, and is due to expire in approximately 2020. Patents were approved in Australia and New Zealand in July 2003 and are due to expire in approximately 2020. In addition, we and our exclusive licensors plans to file applications for patents in the United States and equivalent applications in certain other countries claiming other aspects of our technology and processes, including a number of U.S. patent applications and corresponding applications in other countries relating to various components of the PluriX Bioreactor system.

The validity and breadth of claims in medical technology patents involve complex legal and factual questions and, therefore, may be highly uncertain. No assurance can be given that any patents based on pending patent applications or any future patent applications by us, or our licensors, will be issued, that the scope of any patent protection will exclude competitors or provide competitive advantages to us, that any of the patents that have been or may be issued to us or our licensors will be held valid if subsequently challenged or that others will not claim rights in or ownership of the patents and other proprietary rights held or licensed by us. Furthermore, there can be no assurance that others have not developed or will not develop similar products, duplicate any of our technology or design around any patents that have been or may be issued to us or our licensors. Since patent applications in the United States are maintained in secrecy until patents issue, we also cannot be certain that others did not first file applications for inventions covered by our, and our licensors' pending patent applications, nor can we be certain that we will not infringe any patents that may be issued to others on such applications.

We rely on the license granted by Weizmann Institute of Science and Technion-Israel Institute of Technology and others for the patent rights related to our core technology, the PluriX Bioreactor system. If we breach the License Agreement or otherwise fail to comply with the License Agreements, or if the License Agreement expires or is otherwise terminated, we may lose our rights in such patents, which would have a material adverse affect on our business, financial condition and results of operations.

We applied for a U.S. Trademark on the word "PluriX" on June 22, 2003. The application has been reviewed by the assigned examining attorney of the U.S. Patent and Trademark office. No objections were lodged, although additional information was requested. We submitted a response on February 17, 2004.

We also rely on trade secrets and unpatentable know-how that we seek to protect, in part, by confidentiality agreements. It has not been, but is now our intended policy to require our employees, consultants, contractors, manufacturers, outside scientific collaborators and sponsored researchers, board of directors, technical review board and other advisors to execute confidentiality agreements upon the commencement of employment or consulting relationships with us. These agreements will provide that all confidential information developed or made known to

the individual during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except in specific limited circumstances. We also will commence to require signed confidentiality or material transfer agreements from any company that is to receive our confidential information. In the case of employees, consultants and contractors, the agreements will generally provide that all inventions conceived by the individual while rendering services to us shall be assigned to us as the exclusive property of Pluristem, Ltd. There can be no assurance, however, that all persons who we desire to sign such agreements will sign, or if they do, that these agreements will not be breached, that we would have adequate remedies for any breach, or that our trade secrets or unpatentable know-how will not otherwise become known or be independently developed by competitors.

Our success will also depend in part on our ability to commercialize our technology without infringing the proprietary rights of others. We have not conducted freedom of use patent searches and no assurance can be given that patents do not exist or could not be filed which would have an adverse affect on our ability to market our technology or maintain our competitive position with respect to our technology. If our technology components, devices, designs, products, processes or other subject matter are claimed under other existing United States or foreign patents or are otherwise protected by third party proprietary rights, we may be subject to infringement actions. In such event, we may challenge the validity of such patents or other proprietary rights or we may be required to obtain licenses from such companies in order to develop, manufacture or market our technology. There can be no assurances that we would be able to obtain such licenses or that such licenses, if available, could be obtained on commercially reasonable terms. Furthermore, the failure to either develop a commercially viable alternative or obtain such licenses could result in delays in marketing our proposed technology or the inability to proceed with the development, manufacture or sale of products requiring such licenses, which could have a material adverse affect on our business, financial condition and results of operations. If we are required to defend ourselves against charges of patent infringement or to protect our proprietary rights against third parties, substantial costs will be incurred regardless of whether we are successful. Such proceedings are typically protracted with no certainty of success. An adverse outcome could subject us to significant liabilities to third parties and force us to curtail or cease our development and commercialization of our technology.

Research and Development

Foundational Research

For the last five years, our Chief Executive Officer, Dr. Shai Meretzki, has made the initial strides in the development of our core technology, the PluriX Bioreactor system. Research was performed by Dr. Meretzki and his team in the laboratory of Dr. Shosh Merchav at the Technion - Israel Institute of Technology's Rappaport Faculty of Medicine. Dr. Meretzki also worked in close collaboration with Professor Dov Zipori and Dr. Avinoam Kadouri, both from the Weizmann Institute of Science. Professor Zipori specializes in cultures and stromal cells and Dr. Kadouri specializes in the planning and creation of bioreactors. Special carriers were used in our research and development process. In addition, this foundational research was conducted in joint cooperation with the laboratory of SCID-NOD mice at the Weizmann Institute of Science and with Plumacher Laboratories in Rotterdam. To this end, Plumacher Laboratories allocated a research physician to the project for over two years. The technology resulting from this research is the subject of our License Agreement (see Intellectual Property).

Ongoing Research and Development Plan

For the next three to four years, we intend to continue developing our stem cell expansion technology based on the PluriX Bioreactor system, which will consist of four broad stages:

3D Stroma Culture Optimization During this stage, we are collecting stroma cells from donor bone marrow and growing them within the PluriX 3-D culture. We intend to focus on optimizing the capacity of the PluriX system to support the growth and long-term maintenance of our high-density three dimensional stromal cells cultures.

Stem-cells/Stromal cells Co-Culture Development & Optimization - At this stage we intend to focus on the establishment of the PluriX Bioreactors containing high-density cell and pluripotent hematopoietic stem cells co-cultures; maintenance of common cells on high-density cell-coated carriers and testing of expanded stem cells

outside a host body using mice without immune systems repopulating cells assay.

Characterization & Protein Analysis - At this stage we intend to focus on the analysis of activity in media conditioned by the high-density cell cultures in the PluriX Bioreactor systems; expansion standardization of pluripotent hematopoietic stem cells and hematopoietic progenitors in the PluriX Bioreactor system and comparison to expansion in standard stromal cell cultures and analysis of protein content expressed in PluriX cell cultures by two-dimensional electrophoresis.

Regulatory Approval - We intend to prepare and file with the Food and Drug Administration and other relevant health authorities an Investigational New Drug or an Investigational Device Exemption application to initiate human clinical trials designed to demonstrate the safety, efficacy and clinical benefits of selectively expanded stem cell populations from umbilical cord blood. All research and development activities will be carried out under the advice of a Food and Drug Administration advisor.

Employees

We presently have nine employees in Research & Development and five employees in management through our wholly owned subsidiary, Pluristem, Ltd.

Competition

The biotechnology and medical device industries are characterized by rapidly evolving technology and intense competition. Our competitors include major pharmaceutical, medical device, medical products, chemical and specialized biotechnology companies, many of which have financial, technical and marketing resources significantly greater than ours. In addition, many biotechnology companies have formed collaborations with large, established companies to support research, development and commercialization of products that may be competitive with ours. Academic institutions, governmental agencies and other public and private research organizations are also conducting research activities and seeking patent protection and may commercialize products on their own or through joint ventures. We are aware of certain other products manufactured or under development by competitors that are used for the prevention or treatment of certain diseases and health conditions that we have targeted for product development. There can be no assurance that developments by others will not render our technology obsolete or noncompetitive, that we will be able to keep pace with new technological developments or that our technology will be able to supplant established products and methodologies in the therapeutic areas that are targeted by us. The foregoing factors could have a material adverse affect on our business, financial condition and results of operations.

Our competition will be determined in part by the potential indications for which our technology is developed and ultimately approved by regulatory authorities. In addition, the first product to reach the market in a therapeutic or preventive area is often at a significant competitive advantage relative to later entrants to the market. Accordingly, the relative speed with which we, or our potential corporate partners, can develop products, complete the clinical trials and approval processes and supply commercial quantities of the products to the market are expected to be important competitive factors. Our competitive position will also depend on our ability to attract and retain qualified scientific and other personnel, develop effective proprietary products, develop and implement production and marketing plans, obtain and maintain patent protection and secure adequate capital resources. We expect our technology, if approved for sale, to compete primarily on the basis of product efficacy, safety, patient convenience, reliability, value and patent position.

We believe we compete with the following larger and more established specialized biotechnology companies that are developing devices and products to be used for the prevention or treatment of certain diseases and health conditions that we have targeted for product development: Aastrom Biosciences, Inc., ViaCell Inc., Gamida-Cell Ltd., Advanced Cell Technology, Inc., BioTransplant Inc., and CellGenix. However, to the best of our knowledge none of these companies have developed a platform that can support expansion of hematopoietic stem cells without promoting their differentiation in cytokines free conditions.

Government Regulations and Supervision

Once fully developed, we intend to market our technology, the PluriX Bioreactor system, to research laboratories, clinics and umbilical blood banks primarily in the United States and in Europe. Accordingly, we believe our research and development activities and the manufacturing and marketing of our technology are subject to the laws and regulations of governmental authorities in the United States and other countries in which our technology will be marketed. Specifically, in the United States, the Food and Drug Administration, among other agencies, regulates new product approvals to establish safety and efficacy of these products. Governments in other countries have similar requirements for testing and marketing.

Regulatory Process in the United States

Regulatory approval of new medical devices and biological products is a lengthy procedure leading from development of a new product through pre-clinical and clinical testing. This process takes a number of years and requires the expenditure of significant resources. There can be no assurance that our technology will ultimately receive regulatory approval.

We may develop our PluriX Bioreactor system into a GMP-compliant cell culture system for production of human cells outside of the human body to be sold for therapeutic applications. GMP is a standard set for laboratories by the World Health Organization and other health regulatory authorities. Therefore, to a certain degree, the manner in which the Food and Drug Administration will regulate our PluriX Bioreactor system is uncertain. While normally there is extreme caution in allowing matter to be transplanted into the human body, the severity of the diseases our applications will treat may result in certain leniency from the Food and Drug Administration for terminally ill patients (see Product Approval).

We understand that the Food and Drug Administration is still in the process of developing its requirements with respect to somatic cell therapy and gene cell therapy products and has issued draft documents concerning the regulation of cellular and tissue-based products. If the Food and Drug Administration adopts the regulatory approach set forth in the draft document, the Food and Drug Administration will require regulatory approval for certain human cellular or tissue based products, including cells produced in the PluriX Bioreactor system, through a biologic license application.

In addition, the output of expanded human stem cells from our PluriX Bioreactor system is potentially subject to regulation as medical products under the Federal Food, Drug and Cosmetic Act, and as biological products under the Public Health Service Act. Different regulatory requirements may apply to our technology depending on how they are categorized by the Food and Drug Administration under these laws.

Furthermore, the Food and Drug Administration has published regulations which require registration of certain facilities, which may include our future clinics, and is in the process of publishing regulations for the manufacture or manipulation of human cellular or tissue based products which may impact our future clinics.

Regardless of how our technology is regulated, the Federal Food, Drug, and Cosmetic Act and other Federal statutes and regulations govern or influence the research, testing, manufacture, safety, labeling, storage, record-keeping, approval, distribution, use, reporting, advertising and promotion of our future products. Noncompliance with applicable requirements can result in civil penalties, recall, injunction or seizure of products, refusal of the government to approve or clear product approval applications or to allow us to enter into government supply contracts, withdrawal of previously approved applications and criminal prosecution.

Product Approval

We are currently only in the developmental stage of our technology, PluriX Bioreactor system and have not begun the process of seeking regulatory approval from the Food and Drug Administration. Once our PluriX Bioreactor system is fully developed, we intend to consult with a Food and Drug Administration advisor to assist us in determining our path in the process toward gaining regulatory approval from the Food and Drug Administration. Obtaining regulatory approval of new medical devices and biological products from the Food and Drug Administration is a lengthy procedure leading from development of a new product through pre-clinical and clinical testing. This process takes a number of years and requires the expenditure of significant resources. There can be no

assurance that our technology will ultimately receive regulatory approval. We summarize below our understanding of the regulatory approval requirements that may be applicable to us if we begin the process of seeking an approval from the Food and Drug Administration.

Generally, in order to obtain an approval from the Food and Drug Administration of a new medical product, an applicant must submit proof of safety and efficacy. In some cases, such proof entails extensive pre-clinical and clinical laboratory tests. The testing, preparation of necessary applications and processing of those applications by the Food and Drug Administration is expensive and may take several years to complete. There can be no assurance that the Food and Drug Administration will act favorably or in a timely manner in reviewing submitted applications, and an applicant may encounter significant difficulties or costs in its efforts to obtain Food and Drug Administration approvals, in turn, which could delay or preclude the applicant from marketing any products it may develop. The Food and Drug Administration may also require post-marketing testing and surveillance of approved products, or place other conditions on the approvals. These requirements could cause it to be more difficult or expensive to sell the products, and could therefore restrict the commercial applications of such products. Product approvals may be withdrawn if compliance with regulatory standards is not maintained or if problems occur following initial marketing. For patented technologies, delays imposed by the governmental approval process may materially reduce the period during which an applicant will have the exclusive right to exploit such technologies.

If human clinical trials of a proposed medical product are required, the manufacturer or distributor of the product will have to file an Investigational Device Exemption or Investigational New Drug submission with the Food and Drug Administration prior to commencing human clinical trials. The submission must be supported by data, typically including the results of pre-clinical and laboratory testing. Following submission of the Investigational Device Exemption or Investigational New Drug, the Food and Drug Administration has 30 days to review the application and raise safety and other clinical trial issues. If an applicant is not notified of objections within that period, clinical trials may be initiated, and human clinical trials may commence at a specified number of investigational sites with the number of patients approved by the Food and Drug Administration.

The Food and Drug Administration categorizes medical devices into three regulatory classifications subject to varying degrees of regulatory control. In general, Class I devices require compliance with labeling and record keeping regulations, Quality System Regulation, 510(k) pre-market notification, and are subject to other general controls. Class II devices may be subject to additional regulatory controls, including performance standards and other special controls, such as post-market surveillance. Class III devices, which are either invasive or life-sustaining products, or new products never before marketed (for example, non-"substantially equivalent" devices), require clinical testing to demonstrate safety and effectiveness and the approval of the Food and Drug Administration prior to marketing and distribution.

Because the technology represented by our PluriX Bioreactor system has never before been marketed, we believe that our PluriX Bioreactor system, if successfully developed, will be classified as Class III medical devices and be subject to the requirements of clinical testing to demonstrate safety and effectiveness and the approval of the Food and Drug Administration prior to marketing and distribution.

In addition, we, and any contract manufacturer, may be required to be registered as a medical device manufacturer with the Food and Drug Administration. These manufacturers will be inspected on a routine basis by the Food and Drug Administration for compliance with the Food and Drug Administration's Quality System Regulations. The regulations of the Food and Drug Administration would require that we, and any contract manufacturer, design, manufacture and service products and maintain documents in a prescribed manner with respect to manufacturing, testing, distribution, storage, design control and service activities. The Medical Device Reporting regulation requires that we provide information to the Food and Drug Administration on deaths or serious injuries alleged to be associated with the use of our devices, as well as product malfunctions that are likely to cause or contribute to death or serious injury if the malfunction were to recur. In addition, the Food and Drug Administration prohibits a company from promoting an approved device for unapproved applications and reviews company labeling for accuracy.

Also, if we are able to successfully develop our PluriX Bioreactor system, we believe that the stem cells produced in the PluriX Bioreactor system may be regulated by the Food and Drug Administration as a licensed biologic,

although there can be no assurance that the Food and Drug Administration will not choose to regulate these stem cells in a different manner. The Food and Drug Administration categorizes human cell or tissue based products as either minimally manipulated or more than minimally manipulated, and has proposed that more than minimally manipulated products be regulated through a "tiered approach intended to regulate human cellular and tissue based products only to the extent necessary to protect public health." For products which may be regulated as biologics, the Food and Drug Administration requires: (i) preclinical laboratory and animal testing; (ii) submission to the Food and Drug Administration of an Investigational Device Exemption or Investigational Device Exemption New Drug application which must be effective prior to the initiation of human clinical studies; (iii) adequate and well-controlled clinical trials to establish the safety and efficacy of the product for its intended use; (iv) submission to the Food and Drug Administration of a biologic license application; and (v) review and approval of the biologic license application as well as inspections of the manufacturing facility by the Food and Drug Administration prior to commercial marketing of the product.

Generally, pre-clinical testing covers laboratory evaluation of product chemistry and formulation as well as animal studies to assess the safety and efficacy of the product. The results of these tests are submitted to the Food and Drug Administration as part of the Investigational Device Exemption. Following the submission of an Investigational Device Exemption, the Food and Drug Administration has 30 days to review the application and raise safety and other clinical trial issues. If an applicant is not notified of objections within that period, clinical trials may be initiated. Clinical trials are typically conducted in three sequential phases. Phase I represents the initial administration of the drug or biologic to a small group of humans, either healthy volunteers or patients, to test for safety and other relevant factors. Phase II involves studies in a small number of patients to assess the efficacy of the product, to ascertain dose tolerance and the optimal dose range and to gather additional data relating to safety and potential adverse affects. Once an investigational drug is found to have some efficacy and an acceptable safety profile in the targeted patient population, multi-center Phase III studies are initiated to establish safety and efficacy in an expanded patient population and multiple clinical study sites. The Food and Drug Administration reviews both the clinical plans and the results of the trials and may request an applicant to discontinue the trials at any time if there are significant safety issues.

The results of the pre-clinical tests and clinical trials are submitted to the Food and Drug Administration in the form of a biologic license application for marketing approval. The testing and approval process is likely to require substantial time and effort and there can be no assurance that any approval will be granted on a timely basis, if at all. Additional animal studies or clinical trials may be requested during the Food and Drug Administration review period that may delay marketing approval. After the Food and Drug Administration approval for the initial indications, further clinical trials may be necessary to gain approval for the use of the product for additional indications. The Food and Drug Administration requires that adverse affects be reported to the Food and Drug Administration and may also require post-marketing testing to monitor for adverse affects, which can involve significant expense.

Under current requirements, facilities manufacturing biological products must also be licensed. To accomplish this, a biologic license application must be filed with the Food and Drug Administration. The biologic license application describes the facilities, equipment and personnel involved in the manufacturing process. An establishment license is granted on the basis of inspections of the applicant's facilities in which the primary focus is on compliance with regulations and procedures and the ability to consistently manufacture the product in the facility in accordance with the Investigational Device Exemption. If the Food and Drug Administration finds the inspection unsatisfactory, it may decline to approve the biologic license application, resulting in a delay in production of products.

As part of the approval process for human biological products, each manufacturing facility must be registered and inspected by the Food and Drug Administration prior to marketing approval. In addition, state agency inspections and approvals may also be required for a biological product to be shipped out of state.

Regulatory Process in Europe

If we successfully develop our PluriX bioreactor system and seek regulatory approval in Europe, we believe our PluriX Bioreactor system may be regulated in Europe as a Class I Sterile, Class IIb or Class III medical device,

under the authority of the Medical Device Directives being implemented by European Union member countries. These classifications apply to medical laboratory equipment and supplies including, among other products, many devices that are used for the collection and processing of blood for patient therapy.

The Medical Device Directives regulations vest the authority to permit affixing of the CE Mark with various notified bodies. These are private and state organizations which operate under license from the member states of the European Union to certify that appropriate quality assurance standards and compliance procedures are followed by developers and manufacturers of medical device products or, alternatively, that a manufactured medical product meets a more limited set of requirements. Notified bodies are also given the responsibility for determination of the appropriate standards to apply to a medical product. Receipt of permission to affix the CE Mark enables a company to sell a medical device in all European Union member countries. Other registration requirements may also need to be satisfied in certain countries. We have not received permission from a notified body to affix the CE Mark to our PluriX Bioreactor system.

PLAN OF OPERATION

Overview

You should read the following discussion of our financial condition and results of operations together with the unaudited financial statements and the notes to unaudited financial statements included elsewhere in this filing prepared in accordance with accounting principles generally accepted in the United States. This discussion contains forward-looking statements that reflect our plans, estimates and beliefs. Our actual results could differ materially from those anticipated in these forward-looking statements.

From our inception on May 11, 2001 to April, 2003, we had been engaged in software development, premised on the use of artificial intelligence in computer programming technology and in many areas of the computer, Internet, robotics, and games industries, and as well, a software application to assist in finding domain names. In May 2003, our board of directors conducted an in-depth analysis of our business plan and related future prospects for software development companies. To better protect stockholder interests and provide future appreciation, it was decided to concurrently pursue initiatives in the biotech industry as an extension to our existing business. On May 5, 2003, we entered into a License Agreement with Weizmann Institute to Science and the Technion-Israel Institution of Technology to acquire an exclusive license for a stem cell expansion technology. To better develop this exclusively licensed technology, we purchased 100% of the issued and outstanding shares of Pluristem, Ltd. on June 10, 2003. Pluristem, Ltd. is a research and development company based in Israel. As of July 1, 2003, we have suspended our efforts to further develop artificial intelligence in computer programming and other software applications.

Liquidity and Capital Resources

During the six months ended December 31, 2004, we incurred a net loss of $708,955, as compared to a net loss of $693,084 in the six month period to December 31, 2003. For the three months ended December 31, 2004 we incurred a loss of $401,881 compared to a loss of $370,625 in the three months ended December 31, 2003. This resulted from moving forward with our R&D plan. We obtained funds to carry on our business from private placements we conducted in October of 2004 and January of 2005, which raised proceeds of approximately $3,250,000 through the issuance of 32,500,000 units comprising one common share and one common share purchase warrants. By the end of the six month period, on December 31, 2004, we had cash of $265,409, which together with the proceeds from the recent private placement offerings, would be sufficient to fund our operations for approximately 18 months.

On October 25, 2004, we commenced a private placement offering with a group of investors who subscribed for units of our securities pursuant to Common Stock and Warrant Purchase Agreement dated for reference on October 25, 2004. For the sake of clarity, we have referred to this private placement offering as the October 25, 2004 Private Placement. The October 25, 2004 Private Placement closed in four different tranches:

On November 30, 2004, we closed the first tranche of the October 25, 2004 Private Placement and issued 3,250,000 units at a price of $0.10 per unit to seven investors for total gross proceeds of $325,000. Each unit consists of one

common share and one share purchase warrant. Each warrant shall entitle the holder to purchase one additional common share at a price of $0.30 per share until November 30, 2006.

On January 26, 2005, we closed the second tranche of the October 25, 2004 Private Placement and issued 4,300,000 units at a price of $0.10 per unit to nine investors for total gross proceeds of $430,000. Each unit consists of one common share and one share purchase warrant. Each warrant shall entitle the holder to purchase one additional common share at a price of $0.30 per share until November 30, 2006.

On March 3, 2005, we closed the third tranche of the October 25, 2004 Private Placement and issued 750,000 units at a price of $0.10 per unit to four investors for total gross proceeds of $75,000. Each unit consists of one common share and one share purchase warrant. Each warrant shall entitle the holder to purchase one additional common share at a price of $0.30 per share until November 30, 2006.

On March 23, 2005, we closed the fourth tranche of the October 25, 2004 Private Placement and issued 200,000 units at a price of $0.10 per unit to one investor for total gross proceeds of $20,000. Each unit consists of one common share and one share purchase warrant. Each warrant shall entitle the holder to purchase one additional common share at a price of $0.30 per share until November 30, 2006.

We have committed to pay certain placement agents cash in the amount of $24,500 and issued to them 245,000 warrants, each exercisable for one common share at a price of $0.10 until November 30, 2006.

On January 24, 2005, we commenced another private placement offering with a group of investors who subscribed for units of our securities pursuant to Common Stock and Warrant Purchase Agreement dated for reference January 24, 2005. For the sake of clarity, we have referred to this private placement offering as the January 24, 2005 Private Placement. We closed the January 24, 2005 Private Placement on March 3, 2005 and issued 12,000,000 units at a price of $0.10 per unit to fifteen investors for total gross proceeds of $1,200,000. Each unit consists of one common share and one share purchase warrant. Each warrant shall entitle the holder to purchase one additional common share at a price of $0.30 per share until November 30, 2006.

We have paid certain placement agents fees consisted of 1,845,000 common shares and 475,000 common share purchase warrant. These warrants are exercisable at a per share exercise price equal to $2.50. The warrants expire on November 30, 2006.

On January 31, 2005, we commenced a private placement offering with a group of investors who subscribed for units of our securities pursuant to Private Placement Subscription Agreement dated for reference on January 31, 2005. For the sake of clarity, we have referred to this private placement offering as the January 31, 2005 Private Placement. The January 31, 2005 Private Placement closed in three different tranches:

On February 16, 2005, we completed the first tranche of the January 31, 2005 Private Placement effective January 31, 2005 and issued 7,000,000 units at a price of $0.10 per unit to two investors for total gross proceeds of $700,000. Each unit consists of one common share and one share purchase warrant. Each warrant shall entitle the holder to purchase one additional common share at a price of $0.30 per share until November 30, 2006.

On February 16, 2005, we closed the second tranche of the January 31, 2005 Private Placement and issued 4,500,000 units at a price of $0.10 per unit to six investors for total gross proceeds of $450,000. Each unit consists of one common share and one share purchase warrant. Each warrant shall entitle the holder to purchase one additional common share at a price of $0.30 per share until November 30, 2006.

On February 17, 2005, we closed the third tranche of the January 31, 2005 Private Placement and issued 500,000 units at a price of $0.10 per unit to one investor for total gross proceeds of $50,000. Each unit consists of one common share and one share purchase warrant. Each warrant shall entitle the holder to purchase one additional common share at a price of $0.30 per share