

PLURISTEM LIFE SYSTEMS INC  
Form SB-2/A  
June 27, 2006

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**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

**FORM SB-2/A**  
Amendment No. 1

**REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933**

**PLURISTEM LIFE SYSTEMS, INC.**

(Name of small business issuer in its charter)

|  |   |   |
|--|---|---|
| <b><u>Nevada</u></b>   | <b><u>2836</u></b>  | <b><u>98-0351734</u></b>                |
| State or jurisdiction of<br>incorporation or organization                  | (Primary Standard Industrial<br>Classification Code Number) | (I.R.S. Employer<br>Identification No.) |
| <b>MATAM Advanced Technology Park Building No. 20, Haifa, Israel 31905</b> |   |   |
| <b><u>Telephone: 011-972-4-850-1080</u></b>                                |   |   |
| (Address and telephone number of principal executive offices)              |   |   |

**Zami Aberman    Chief Executive Officer**  
**c/o The Nevada Agency and Trust Company**  
**Suite 880    Bank of America Plaza**  
**50 West Liberty Street, Reno, Nevada 89501 Telephone: 775.322.0626**  
(Name, address and telephone number of agent for service)

Copy of communications to:  
**Clark Wilson LLP**  
**Bernard Pinsky, Esq.**  
**Suite 800 - 885 West Georgia Street**  
**Vancouver, British Columbia, Canada V6C 3H1**  
**Telephone: 604.687.5700**

Approximate date of proposed sale to the public: From time to time after the effective date of this registration statement.

If any securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933. [X]

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. [ ]

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the

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following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. [ ]

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. [ ]

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If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box. [ ]

### CALCULATION OF REGISTRATION FEE

| Title of each class of securities to be registered  | Amount to be registered <sup>(1)</sup> | Proposed maximum offering price per share <sup>(8)</sup> | Proposed maximum aggregate offering price | Amount of registration fee |
|---|--|--|---|----------------------------|
| Common Stock to be offered for resale by a selling security holder upon exercise of a convertible debenture | 228,000,000 <sup>(2)</sup>             | \$0.041  | \$9,348,000.00                            | \$1,000.24                 |
| Common Stock to be offered for resale by selling security holders upon exercise of share purchase warrants  | 47,393,364 <sup>(3)</sup>              | \$0.041  | \$1,943,127.92                            | \$207.91                   |
| Common Stock to be offered for resale by selling security holders upon exercise of share purchase warrants  | 10,426,539 <sup>(4)</sup>              | \$0.041  | \$427,488.10                              | \$45.74                    |
| Common Stock to be offered for resale by a selling security holder upon exercise of share purchase warrants | 1,000,000 <sup>(5)</sup>               | \$0.041  | \$41,000.00                               | \$4.39                     |
| Common Stock to be offered for resale by certain selling security holders                                   | 10,000,000 <sup>(6)</sup>              | \$0.041  | \$600,000.00                              | \$43.87                    |
| Common Stock to be offered for resale by selling security holders   | 33,239,336 <sup>(7)</sup>              | \$0.041  | \$1,362,812.78                            | \$145.82                   |
| Total Registration Fee  |  |  |   | \$1,450                    |

(1) Pursuant to Rule 416 under the Securities Act, as amended, this registration statement also covers such indeterminate number of additional shares of common stock as may be issuable to our selling security holders to prevent dilution resulting from stock splits, stock dividends or similar transactions.

(2) Represents 200% of the shares of our common stock that are issuable to certain selling security holders upon conversion of a Senior Secured Convertible Debenture issued by our company to those selling security holders on April 3, 2006.

(3) Represents the 47,393,364 shares of our common stock that are issuable to certain selling security holders upon exercise of common share purchase warrants issued to the security holders pursuant to a Securities Purchase Agreement between our company and the security holders dated April 3, 2006.

(4) Represents the 10,426,539 shares of our common stock that are issuable to a certain selling security holder upon exercise of common share purchase warrants, taking into account our good faith estimate of possible adjustments to the number of those warrants, that were issued to that selling security holder as consideration for acting as finder in

connection with the transactions contemplated by the April 3, 2006 Securities Purchase Agreement.

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(5) Represents the 1,000,000 shares of our common stock that are issuable to a certain security holder upon exercise of common share purchase warrants issued to the security holders pursuant to a consulting agreement between the security holder and our company dated February 28, 2006.

(6) Represents the 10,000,000 of our common shares that are issuable to certain service providers pursuant to an investor relations agreement, dated April 28, 2006, upon the service providers reaching certain milestones as agreed to by the Company.

(7) Represents our current good faith estimate of additional shares that we might be required to issue to the selling stockholders (a) upon adjustments to the conversion price of the convertible debenture and/or to the number of shares issuable upon exercise of the unexercised warrants and (b) as liquidated damages pursuant to a registration rights agreement between the selling security holders and our company dated April 3, 2006.

(8) Exercise price calculated in accordance with Rule 457(c) of the Securities Act. Estimated for the sole purpose of calculating the registration fee. We have based the fee calculation on the average of the last reported bid and ask price for our common stock on the National Association of Securities Dealers OTC Bulletin Board on June 16, 2006.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON THE DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON THE DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

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**PROSPECTUS**

**Subject to Completion**  
\_\_\_\_\_, 2006

**PLURISTEM LIFE SYSTEMS, INC.**  
A NEVADA CORPORATION

330,059,239 SHARES OF COMMON STOCK OF PLURISTEM LIFE SYSTEMS, INC.

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This prospectus relates to the resale by certain selling security holders of Pluristem Life Systems, Inc. of up to 330,059,239 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 may, 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.

The selling security holders may be deemed to be underwriters, 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 June 16, 2006, the closing bid price of our common stock was \$0.041 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 8 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 \_\_\_\_\_, 2006.

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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.

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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 engaged in the business of the development of the stem cell production technology and the commercialisation of cell therapy products. 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 production system that use to develop cell therapy products for sale on the medical marketplace. 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 potential cell therapy products and have not begun the process of seeking regulatory approval for marketing our products 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 330,059,239 shares of our common stock.

The selling security holders may sell the shares of common stock in the public market or through privately negotiated transactions or otherwise. The selling security holders 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 63,743,483 shares of our common stock issued and outstanding as at June 16, 2006.

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## 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 may, 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, 2005 and June 30, 2004, and our unaudited consolidated financial statements for the nine-month period ended March 31, 2006, (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.

|                                       | <b>For the 9-month<br/>period ended<br/>March 31, 2006<br/>(unaudited)</b> | <b>For the 9-month<br/>period ended<br/>March 31, 2005<br/>(unaudited)</b> |
|---------------------------------------|--|--|
| Revenue                               | Nil  | Nil  |
| Net Loss for the Period               | \$1,489,748  | \$2,131,003  |
| Net loss Per Share- basic and diluted | \$0.03   | \$0.06   |
|                                       | <b>As at<br/>March 31, 2006<br/>(unaudited)</b>                            |  |

|                              |               |
|------------------------------|---------------|
| Working Capital (Deficiency) | \$(21,360)    |
| Total Assets                 | \$1,023,766   |
| Total Share Capital          | \$6,500,664   |
| Accumulated deficit          | \$(6,139,104) |
| Total Stockholders' Equity   | \$361,560     |

|  | <b>For the year ended<br/>June 30, 2005</b> | <b>For the year ended<br/>June 30, 2004</b> |
|--|---|---|
| Revenue                                | Nil   | Nil   |
| Net Loss for the Period                | \$2,098,108                                 | \$2,010,350                                 |
| Net loss Per Share - basic and diluted | \$0.05                                      | \$0.083                                     |
|  | <b>As at<br/>June 30, 2005</b>              | <b>As at<br/>June 30, 2004</b>              |
| Working Capital                        | \$1,647,529                                 | \$349,496                                   |
| Total Assets                           | \$2,620,040                                 | \$1,377,198                                 |

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|                            |                |                |
|----------------------------|----------------|----------------|
| Total Share Capital        | \$6,452,482    | \$2,908,258    |
| Accumulated deficit        | \$ (4,649,356) | \$ (2,551,248) |
| Total Stockholders' Equity | \$1,803,126    | \$357,010      |

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## **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 production 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 production 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 production 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 production 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 our stem cell production technology and commercialise our cell therapy products. 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 have a going concern note as described in an explanatory paragraph to our consolidated financial statements for the year ended June 30, 2005.

*Our likelihood of profit depends on our ability to develop and commercialise products based on our stem cell production technology, which is currently in the development stage. If we are unable to complete the development and commercialisation of our stem cell products successfully, our likelihood of profit will be limited severely.*

We are engaged in the business of developing and commercializing products based on 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 be used in bone marrow transplants and other methods of cell therapy. Our PluriX Bioreactor system and our products are in the development stage and we have not begun the regulatory approval process. 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 commercialisation of our potential cell therapy products, 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 and our potential cell therapy products, 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 and our cell therapy products are 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

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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 and our potential cell therapy products 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 commercialisation 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 and our products 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 \$3,000,000 through issuing a senior convertible debenture on April 3, 2006 to support the development and commercialisation of our PluriX Bioreactor system and our potential cell therapy products. The funds from the are expected to fund operations until early Spring of 2007. Our ability to continue to develop the PluriX Bioreactor system and commercialise our potential cell therapy products 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 our technology and commercialise our cell therapy products.. 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 commercialisation 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 stockholders. 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 of our PluriX Bioreactor system and commercialisation of our potential cell therapy products, 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 and our potential cell therapy products, our ability to commercialise our potential cell therapy products will be limited severely.*

Once our PluriX Bioreactor system and our potential cell therapy products are fully developed, we intend to market our potential cell therapy products primarily in the United States, Europe and Japan. We must obtain the approval of the Food and Drug Administration of our technology and potential cell therapy products before commercialisation of our potential cell therapy products 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 and our potential products.





Furthermore, even if we obtain regulatory approval for our PluriX Bioreactor system and our potential cell therapy products, that approval may be subject to limitations on the indicated uses for which they 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 and our potential cell therapy products.

*Even if we obtain regulatory approvals to commercialise our cell therapy products, we may encounter a lack of commercial acceptance of our cell therapy products, which would impair the profitability of our business.*

Our research and development efforts are primarily directed toward obtaining regulatory approval for our PluriX Bioreactor system and our potential cell therapy products. We intend that our potential products be used as an alternative or improvement to the cells currently harvested and used in bone marrow transplants. Current methods of stem cell collection and use have been widely practiced for a number of years, and our technology and products may not be accepted by the marketplace as readily as these or other competing processes and methodologies. Additionally, our PluriX Bioreactor system and products 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 and our potential cell therapy products 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 and products may become obsolete and our business may suffer.*

The market for our products 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 products, including some by private companies from 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 products. Our competitors may have developed, or could in the future develop, new products that compete with our products or even render our products 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 products and we will suffer a competitive disadvantage. Finally, to the extent that others develop new products that address the targeted application for our products, 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, Zami Aberman, our Vice President of Development, Ora Burger, 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 and our cell therapy products. If our patents and proprietary right agreements do not provide sufficient protection for our PluriX Bioreactor system technology and our cell therapy products, 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. We also intend to seek patent protection for any of our potential cell therapy products once we have completed their development. 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 our technology and commercially viable products 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 our PluriX Bioreactor system and market our potential cell therapy products 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 marketing our potential cell therapy products 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 commercialisation 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 our products 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

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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 you 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.

*There may be significant dilution of your shares of our common stock. First, the entire amount of money owed under the senior secured convertible debentures may be converted into shares of our common stock. Second, the warrants may be exercised for shares of our common stock. Next, the debenture and warrants may be convertible into even more shares than currently estimated depending on adjustments to the conversion price of the debenture and warrants. Then, if this registration statement is not declared effective by a certain date, we will likely have to pay investors additional shares as liquidated damages under a registration rights agreement. If additional common shares are issued as a result of any or all of these possibilities, there likely will be significant dilution of your shares of our common stock.*

The issuance of shares of our common stock being registered in the registration statement of which this prospectus forms a part, upon conversion, as principal repayments on or as interest payments on the senior secured convertible debentures, upon the exercise of common share purchase warrants or upon the payment of shares as liquidated damages for the failure to have the registration statement declared effective by the SEC by a certain date will result in dilution to your interests as a stockholder of our common stock. This is so because the holders of the senior secured convertible debentures and the holders of the warrants whose underlying shares are being offered in this prospectus may sell all of the resulting shares into the public market.

The principal amount of the senior secured convertible debentures, \$3,000,000, plus 7% interest, may be converted, at the option of the holders, into shares of our common stock at a price that will be equal to the lower of 75% of the volume weighted average price of our stock for the twenty trading days prior to the conversion date or a price at which we sell our stock in any financing transaction before three-quarters (in the aggregate) of the principal of all of the senior convertible debentures are converted or fully paid.

The senior secured convertible debentures mature on April 3, 2008. Interest accrues on the debentures at the rate of 7% per annum, payable semi-annually on June 30 and December 31 of each year and on conversion and at the maturity date. Interest is payable, at the option of our company, either (i) in cash, or (2) in shares of our common stock at the then applicable conversion price. Since the conversion price is tied to the stock price, we cannot calculate exactly how many shares the holders will receive if all of the principle and interest due under the senior secured convertible debentures is converted to shares of our common stock. If, for example, we use the closing

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price of our shares on April 28, 2006, the date of the closing of the senior secured convertible debentures, and the debenture plus interest is converted into shares, then the holders could receive approximately 54,028,436 shares of our common stock upon conversion of the debentures. If all of the shares underlying warrants being offered in this prospectus are issued resulting from the exercise of warrants, then an additional 57,872,036 shares will be issued.

*The senior secured convertible debentures provide for various events of default that would entitle the holders to require us to immediately repay the outstanding principal amount, plus accrued and unpaid interest, in cash. If an event of default occurs, we may be unable to immediately repay the amount owed, and any repayment may leave us with little or no working capital in our business.*

We will be considered in default of the senior secured convertible debentures if any of the following events, among others, occurs:

We default on the payment of principal or interest of the senior secured convertible debentures for a specified period of time;

Any of the representations or warranties made by us in the documents related to the senior secured convertible debenture transaction are false or misleading in any material respect at the time made;

We fail to authorize or to cause our transfer agent to issue shares of Common Stock upon exercise by the security holder of its conversion rights in accordance with the terms of the senior secured convertible debentures;

We fail to perform or observe, in any material respect, any other covenant or term of the senior secured convertible debentures or other transaction agreements and fail to cure such default within a specified period of time after receiving notice of such failure; or,

Our common stock is suspended from trading on, or delisted from, its principal trading market in excess of fifteen (15) consecutive trading days.

If an event of default occurs, the holders of the senior secured convertible debentures can elect to require us to pay any and all of the outstanding principal amount, plus all other accrued and unpaid amounts.

Some of the events of default include matters over which we may have some, little or no control. If a default occurs and we cannot pay the amounts payable under any of the convertible notes in cash (including any interest on such amounts and any applicable late fees under the convertible notes), the holders of the notes may protect and enforce their rights or remedies either by suit in equity or by action at law, or both, whether for the specific performance of any covenant, agreement or other provision contained in the documents related to the senior secured convertible debentures, or to enforce the payment of the outstanding amount or any other legal or equitable right or remedy. This would have an adverse effect on our continuing operations.

*All of our assets are secured and consequently if we default on the senior secured convertible debentures, our continued operation will be adversely affected.*

We are financing our operations primarily through the issuance of the equity and debt securities, including the senior secured convertible debentures. The senior secured convertible debentures issued on April 3, 2006 have been secured primarily by all of our assets. If we default on any of the senior secured convertible debentures, the holders would be entitled to seize all of our assets and take control of our business, which would have a material adverse effect on our business. Please refer to section entitled April 3, 2006 Private Placement of Senior Secured Convertible Debentures and Warrants on page 22 for a description of the security we granted to the holders of these convertible notes.





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

Shares of our common stock are subject to rules adopted by the Securities and Exchange Commission that regulate broker-dealer practices in connection with transactions in penny stocks. Penny stock is defined to be any equity security that has a market price (as defined) less than \$5.00 per share or an exercise price of less than \$5.00 per share, subject to certain exceptions. Our common stock are covered by the penny stock rules, which impose additional sales practice requirements on broker-dealers who sell to persons other than established customers and accredited investors. The term accredited investor refers generally to institutions with assets in excess of \$5,000,000 or individuals with a net worth in excess of \$1,000,000 or annual income exceeding \$200,000 or \$300,000 jointly with their spouse. The penny stock rules require a broker-dealer, prior to a transaction in a penny stock not otherwise exempt from the rules, to deliver a standardized risk disclosure document in a form prepared by the SEC which provides information about penny stocks and the nature and level of risks in the penny stock market. The broker-dealer also must provide the customer with current bid and offer quotations for the penny stock, the compensation of the broker-dealer and its salesperson in the transaction and monthly account statements showing the market value of each penny stock held in the customer's account. The bid and offer quotations, and the broker-dealer and salesperson compensation information, must be given to the customer orally or in writing prior to effecting the transaction and must be given to the customer in writing before or with the customer's confirmation. In addition, the penny stock rules require that prior to a transaction in a penny stock not otherwise exempt from these rules, the broker-dealer must make a special written determination that the penny stock is a suitable investment for the purchaser and receive the purchaser's written agreement to the transaction. These disclosure requirements may have the effect of reducing the level of trading activity in the secondary market for the stock that is subject to these penny stock rules. Consequently, these penny stock rules may affect the ability of broker-dealers to trade our securities.

Please read this prospectus carefully. You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with different information. You should not assume that the information provided by the prospectus is accurate as of any date other than the date on the front of this prospectus.

### **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, plan, 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 beginning on page 8, 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 100 F Street NE, 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.

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## THE OFFERING

This prospectus relates to the resale by certain selling security holders of Pluristem Life Systems, Inc. of up to 330,059,239 shares of our common stock in connection with the resale of:

- The shares of our common stock that are issuable to certain selling security holders upon conversion of Senior Secured Convertible Debentures issued on April 3, 2006 by our company to those selling security holders in the original aggregate principal amount of \$3,000,000.
- The 47,393,364 shares of our common stock that are issuable to certain selling security holders upon exercise of common share purchase warrants issued to those security holders pursuant to a Securities Purchase Agreement between our company and such security holders dated April 3, 2006.
- The 10,426,539 shares of our common stock that are issuable to a certain selling security holder upon exercise of common share purchase warrants that were issued to him for acting as a finder in connection with the transactions contemplated by the April 3, 2006 Securities Purchase Agreement, taking into account our good faith estimates of possible adjustments to the number of those warrants.
- The 1,000,000 shares of our common stock that are issuable to a certain security holder upon exercise of common share purchase warrants issued to the security holders pursuant to a consulting agreement between the security holder and our company dated February 28, 2006.
- The 10,000,000 of our common shares that are issuable to certain service providers pursuant to an investor relations agreement, dated April 28, 2006, upon the service providers reaching certain milestones as agreed to by the Company.
- The 33,239,336 shares of our common stock that represents our current good faith estimate of additional shares that we might be required to issue to the selling stockholders (a) upon adjustments to the conversion price of the convertible debenture and/or to the number of shares issuable upon exercise of the unexercised warrants and (b) as liquidated damages pursuant to a Registration Rights agreement between the selling security holders and our company dated April 3, 2006.

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 that the number of warrants is not adjusted and that 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 in the amount of approximately \$4,349,881 from the exercise of the 57,872,036 warrants and we will use these proceeds for our general working capital.

53,132,700 of the common share purchase warrants are exercisable at \$0.075 per share with an expiration date on the last day of the month in which the third anniversary of the effective date of the registration statement of which this Prospectus is a part occurs. 4,739,336 of the common share purchase warrants are exercisable at \$0.077 per share with an expiration date on the last day of the month in which the third anniversary of the effective date of the registration statement of which this Prospectus is a part occurs.



## **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 exact 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 the number of shares that are, to our knowledge, beneficially owned as of June 16, 2006, by the selling security holders prior to the offering contemplated by this prospectus, the number of shares each selling security holder is offering by this prospectus and the number of shares which each would own beneficially if all such offered shares are sold. 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 holders. The selling security holders acquired their beneficial interests in the shares being offered hereby in private placements in which each such selling security holder advised us that it purchased the relevant securities solely for investment and not with a view to or for resale or distribution of such securities. For full details of these transactions, see the section entitled April 3, 2006 Private Placement of Senior Secured Convertible Debentures And Warrants on page 22 of this prospectus and our agreements with the selling security holders, which are attached as exhibits to the registration statement of which this prospectus forms a part.

Beneficial ownership is determined in accordance with SEC rules and includes voting or investment power with respect to the securities currently owned or for which the selling security holder has the right to acquire within 60 days. However, except for the selling security holders with an asterisk (\*) next to their names, each of the selling security holders is subject to certain limitations on the conversion of its convertible debentures and the exercise of its warrants. The warrants held by the investors in the debentures, issued on April 3, 2006, are not exercisable until (i) 65 days from the date of issue or (ii) effective date of the Registration Statement of which this Prospectus forms a part. The other significant limitation on both the Senior Secured Convertible Debentures and Warrants is that, subject to certain circumstances, the holder may not convert its convertible debentures or exercise its warrants if such conversion or exercise would cause the holder's beneficial ownership of our Common Stock (excluding shares underlying any of their unconverted debentures or unexercised warrants) to exceed 4.99% of the outstanding shares of our Common Stock immediately after the conversion or exercise. (If this situation arises and the holder subsequently disposes of some or all of its holdings, it can again convert its debenture or exercise its warrant, subject to the same limitation).

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The table below also includes an estimate of the number of shares which might be issuable on the occurrence of certain events which have not yet occurred and may not occur, such as the accrual of interest. Therefore, although they are included in the table below, the number of shares of Common Stock for some listed persons may include shares that are not subject to purchase during the 60-day period.

| Name of Selling Security Holder and Position, Office or Material Relationship with Pluristem | Common Shares owned by the Selling Security Holder before this Offering | Number of Shares Issuable Upon Exercise of Share Purchase Warrants, Conversion of Debenture plus Interest and Issuance of Payment Shares | 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** |
| Brio Capital L.P.  | Nil   | 10,287,757 <sup>(1)</sup>  | 10,287,757 <sup>(1)</sup>                | Nil   | 0%           |
| Ellis International  | Nil   | 10,287,757 <sup>(1)</sup>  | 10,287,757 <sup>(1)</sup>                | Nil   | 0%           |
| Double U Master Fund LP  | Nil   | 38,579,088 <sup>(2)</sup>  | 38,579,088 <sup>(2)</sup>                | Nil   | 0%           |
| Monarch Capital Fund Ltd.  | Nil   | 20,575,514 <sup>(3)</sup>  | 20,575,514 <sup>(3)</sup>                | Nil   | 0%           |
| Nite Capital LP  | Nil   | 15,431,635 <sup>(4)</sup>  | 15,431,635 <sup>(4)</sup>                | Nil   | 0%           |
| Puritan LLC  | Nil   | 25,719,392 <sup>(5)</sup>  | 25,719,392 <sup>(5)</sup>                | Nil   | 0%           |
| Harborview Master Fund LP.   | Nil   | 15,431,635 <sup>(4)</sup>  | 15,431,635 <sup>(4)</sup>                | Nil   | 0%           |
| Rutgers Casualty Insurance Company   | Nil   | 5,143,878 <sup>(6)</sup>   | 5,143,878 <sup>(6)</sup>                 | Nil   | 0%           |
| Nachum Stein   | Nil   | 20,575,514 <sup>(3)</sup>  | 20,575,514 <sup>(3)</sup>                | Nil   | 0%           |
| First Mirage, Inc.   | Nil <sup>(10)</sup>   | 15,431,635 <sup>(4)</sup>  | 15,431,635 <sup>(4)</sup>                | Nil <sup>(10)</sup>   | 0%           |
| Generation Capital Associates  | 200,000 <sup>(10)</sup>   | 7,715,817 <sup>(7)</sup>   | 7,715,817 <sup>(7)</sup>                 | 200,000 <sup>(10)</sup>   | 0%           |
| Professional Offshore Opportunity Fund, Ltd.   | Nil   | 15,431,635 <sup>(4)</sup>  | 15,431,635 <sup>(4)</sup>                | Nil   | 0%           |
| Professional Traders Fund, LLC   | Nil   | 5,143,878 <sup>(6)</sup>   | 5,143,878 <sup>(6)</sup>                 | Nil   | 0%           |
| Notzer Chesed  | Nil   | 15,431,635 <sup>(4)</sup>  | 15,431,635 <sup>(4)</sup>                | Nil   | 0%           |
| Bristol Investment Fund, Ltd.  | 2,100,000 <sup>(11)</sup>   | 20,575,514 <sup>(3)</sup>  | 20,575,514 <sup>(3)</sup>                | 2,100,000 <sup>(11)</sup>   | 0%           |

| Name of Selling Security Holder and Position, Office or Material Relationship with Pluristem | Common Shares owned by the Selling Security Holder before this Offering | Number of Shares Issuable Upon Exercise of Share Purchase Warrants, Conversion of Debenture plus Interest and Issuance of Payment Shares | 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** |
| Simon Vogel  | 500,000   | 5,143,878 <sup>(6)</sup>   | 5,143,878 <sup>(6)</sup>                 | 500,000   | 0%           |
| Alpha Capital AG   | 750,000   | 15,431,635 <sup>(4)</sup>  | 15,431,635 <sup>(4)</sup>                | 750,000   | 0%           |
| Ronald Kimelman  | Nil   | 5,143,878 <sup>(6)</sup>   | 5,143,878 <sup>(6)</sup>                 | Nil   | 0%           |
| Bursteine and Lindsay Sec. Corp.   | Nil   | 10,287,757 <sup>(1)</sup>  | 10,287,757 <sup>(1)</sup>                | Nil   | 0%           |
| Quines Financial SA  | Nil   | 10,287,757 <sup>(1)</sup>  | 10,287,757 <sup>(1)</sup>                | Nil   | 0%           |
| Anthony Heller   | Nil   | 10,287,757 <sup>(1)</sup>  | 10,287,757 <sup>(1)</sup>                | Nil   | 0%           |
| Marvin Mermelstein   | Nil   | 10,287,757 <sup>(1)</sup>  | 10,287,757 <sup>(1)</sup>                | Nil   | 0%           |
| Yokim Asset Management Corp.   | 50,000  | 10,426,539 <sup>(8)</sup>  | 10,426,539 <sup>(8)</sup>                | 50,000  | 0%           |
| Ernest Muller  | Nil   | 1,000,000 <sup>(9)</sup>   | 1,000,000                                | Nil   | 0%           |
| Zegal & Ross Capital*  | 1,400,000   | Nil  | 1,400,000                                | Nil   | 0%           |
| Tayside Trading*   | 3,600,000   | Nil  | 3,600,000                                | Nil   | 0%           |
| Levi Israel LLC*   | 3,600,000   | Nil  | 3,600,000                                | Nil   | 0%           |
| EDA Capital*   | 1,400,000   | Nil  | 1,400,000                                | Nil   | 0%           |
| <b>TOTAL</b>   | <b>13,600,000</b>   | <b>320,059,239</b>   | <b>330,059,239</b>                       | <b>3,600,000</b>  | <b>1%</b>    |

\*Stockholder is not subject to the limitations on the conversion of its convertible debentures or the exercise of its warrants, as the case may be.

\*\* 0% is indicated for amounts less than 1%, based on 63,743,483 issued and outstanding shares as of June 16, 2006 plus the amount that will be issued and outstanding if all shares offered are sold.

<sup>(1)</sup> Represents (a) 200% of the number of shares of Common Stock issuable upon conversion of \$100,000 in aggregate principal amount of Senior Secured Convertible Debentures according to our good faith estimate of the conversion price in effect as at June 16, 2006; (b) 200% of the number shares of Common Stock issuable in payment of interest accruing thereon through the second anniversary of the issuance thereof according to our good faith estimate of the conversion price in effect as at June 16,

2006; (c) 1,579,779 shares of shares of Common Stock issuable upon the exercise of common share purchase warrants; and, (d) an additional number of shares of Common Stock representing our current good faith estimate of shares that we might be required to issue to the selling security holder upon adjustments to the conversion price of the convertible debenture and/or to the number of shares issuable upon exercise of the unexercised warrants and as liquidated damages through the projected effective date of the Registration Statement of which this Prospectus forms a part.

(2) Represents (a) 200% of the number of shares of Common Stock issuable upon conversion of \$375,000 in aggregate principal amount of Senior Secured Convertible Debentures according to our good faith estimate of the conversion price in effect as at June 16, 2006; (b) 200% of the number shares of Common Stock issuable in payment of interest accruing thereon through the second anniversary of the issuance thereof according to our good faith estimate of the conversion price in effect as at June 16, 2006; (c) 5,924,171 shares of shares of Common Stock issuable upon the exercise of common share purchase warrants; and, (d) an additional number of shares of Common Stock representing our current good faith estimate of additional shares that we might be required to issue to the selling security holder upon adjustments to the conversion price of the convertible debenture and/or to the number of shares issuable upon exercise of the unexercised warrants and as liquidated damages through the projected effective date of the Registration Statement of which this Prospectus forms a part.

(3) Represents (a) 200% of the number of shares of Common Stock issuable upon conversion of \$200,000 in aggregate principal amount of Senior Secured Convertible Debentures according to our good faith estimate of the conversion price in effect as at June 16, 2006; (b) 200% of the number shares of Common Stock issuable in payment of interest accruing thereon through the second anniversary of the issuance thereof according to our good faith estimate of the conversion price in effect as at June 16, 2006; (c) 3,159,558 shares of shares of Common Stock issuable upon the exercise of common share purchase warrants; and, (d) an additional number of shares of Common Stock representing our current good faith estimate of additional shares that we might be required to issue to the selling security holder upon adjustments to the conversion price of the convertible debenture and/or to the number of shares issuable upon exercise of the unexercised warrants and as liquidated damages through the projected effective date of the Registration Statement of which this Prospectus forms a part.

(4) Represents (a) 200% of the number of shares of Common Stock issuable upon conversion of \$150,000 in aggregate principal amount of Senior Secured Convertible Debentures according to our good faith estimate of the conversion price in effect as at June 16, 2006; (b) 200% of the number shares of Common Stock issuable in payment of interest accruing thereon through the second anniversary of the issuance thereof according to our good faith estimate of the conversion price in effect as at June 16, 2006; (c) 2,369,668 shares of shares of Common Stock issuable upon the exercise of common share purchase warrants; and, (d) an additional number of shares of Common Stock representing our current good faith estimate of additional shares that we might be required to issue to the selling security holder upon adjustments to the conversion price of the convertible debenture and/or to the number of shares issuable upon exercise of the unexercised warrants and as liquidated damages through the projected effective date of the Registration Statement of which this Prospectus forms a part.

(5) Represents (a) 200% of the number of shares of Common Stock issuable upon conversion of \$250,000 in aggregate principal amount of Senior Secured Convertible Debentures according to our good faith estimate of the conversion price in effect as at June 16, 2006; (b) 200% of the number shares of Common Stock issuable in payment of interest accruing thereon through the second anniversary of the issuance thereof according to our good faith estimate of the conversion price in effect as at June 16, 2006; (c) 3,949,447 shares of shares of Common Stock issuable upon the exercise of common share purchase warrants; and, (d) an additional number of shares of Common Stock representing our current good faith estimate of additional shares that we might be required to issue to the selling security holder upon adjustments to the conversion price of the convertible debenture and/or to the number of shares issuable upon exercise of the unexercised warrants and as liquidated damages through the projected effective date of the Registration



Statement of which this Prospectus forms a part.

<sup>(6)</sup> Represents (a) 200% of the number of shares of Common Stock issuable upon conversion of \$50,000 in aggregate principal amount of Senior Secured Convertible Debentures according to our good faith estimate of the conversion price in effect as at June 16, 2006; (b) 200% of the number shares of Common Stock issuable in payment of interest accruing thereon through the second anniversary of the issuance thereof according to our good faith estimate of the conversion price in effect as at June 16, 2006; (c) 789,889 shares of shares of Common Stock issuable upon the exercise of common share purchase warrants; and, (d) an additional number of shares of Common Stock representing our current good faith estimate of additional shares that we might be required to issue to the selling security holder upon adjustments to the conversion price of the convertible debenture and/or to the number of shares issuable upon exercise of the unexercised warrants and as liquidated damages through the projected effective date of the Registration Statement of which this Prospectus forms a part.

<sup>(7)</sup> Represents (a) 200% of the number of shares of Common Stock issuable upon conversion of \$75,000 in aggregate principal amount of Senior Secured Convertible Debentures according to our good faith estimate of the conversion price in effect as at June 16, 2006; (b) 200% of the number shares of Common Stock issuable in payment of interest accruing thereon through the second anniversary of the issuance thereof according to our good faith estimate of the conversion price in effect as at June 16, 2006; (c) 1,184,834 shares of shares of Common Stock issuable upon the exercise of common share purchase warrants; and, (d) an additional number of shares of Common Stock representing our current good faith estimate of additional shares that we might be required to issue to the selling security holder upon adjustments to the conversion price of the convertible debenture and/or to

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the number of shares issuable upon exercise of the unexercised warrants and as liquidated damages through the projected effective date of the Registration Statement of which this Prospectus forms a part.

<sup>(8)</sup> Represents 10,426,539 shares of Common Stock that may be issuable upon the exercise of common share purchase warrants, taking into account our good faith estimate of possible adjustments to the number of those warrants.

<sup>(9)</sup> Represents 1,000,000 shares of Common Stock issuable upon the exercise of common share purchase warrants.

<sup>(10)</sup> 200,000 shares of Common Stock may be issuable upon the exercise of common share purchase warrants held by Generation Capital Associates, a company affiliated with First Mirage, Inc. The warrants have an exercise price of \$0.75 and an expiry date of January 31, 2007.

<sup>(11)</sup> Represents 600,000 shares of Common Stock that may be issuable upon the exercise of common share purchase warrants with an exercise price of \$0.75 and an expiry date of January 31, 2007 and 1,500,000 shares of Common Stock that may be issuable upon the exercise of common share purchase warrants with an exercise price of \$0.30 and an expiry date of November 30, 2006.

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.

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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 fulfill 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 security holders 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.

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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.

**APRIL 3, 2006 PRIVATE PLACEMENT OF SENIOR SECURED  
CONVERTIBLE DEBENTURES AND WARRANTS**

Effective April 3, 2006, we issued senior secured convertible debentures, for gross proceeds of \$3,000,000. In conjunction with this financing, we issued 47,393,364 common share purchase warrants exercisable for three years from the effective date of the Registration Statement of which this Prospectus is a part at an exercise price of \$0.075. We paid a finder's fee of \$300,000 in cash and 9,478,672 three year common share purchase warrants, half of which are exercisable at \$0.075, with an expiration date approximately three years from such effective date and half of which are exercisable at \$0.077, with an expiration date of April 30, 2009.

Also on April 3, 2006, in connection with a separate finder's fee agreement related to the issuance of the senior secured convertible debentures, we also issued 1,000,000 common share purchase warrants exercisable for three years at an exercise price of \$0.075.

The senior secured convertible debentures, which mature on April 3, 2008, are convertible to common shares at the lower of 75% of the volume weighted average trading price for the 20 trading days prior to issuance of a notice of conversion by a holder of a debenture, or, if while the debentures remain outstanding we enter into one or more financing transactions involving the issuance of common stock or securities convertible or exercisable for common stock, the lowest transaction price for those new transactions.

Interest accrues on the debentures at the rate of 7% per annum, payable semi-annually on June 30 and December 31 of each year and on conversion and at the maturity date. Interest is payable, at the option of our company, either (i) in cash, or (2) in shares of Common Stock at the then applicable conversion price. If our company fails to deliver stock certificates upon the conversion of the debentures or the exercise of the warrants at the relevant specified time and in the relevant specified manner, our company may be required to make substantial payments to the holders of those debentures or warrants..

We have agreed to register the common shares issuable upon conversion of the debentures and exercise of the warrants. We have agreed to file the registration statement within 30 days after the closing date of the debenture transaction. That closing date was April 3, 2006.

Provided the Registration Statement is effective, we may prepay the amounts outstanding on the debentures by giving advance notice and paying an amount equal to 120% of the sum of (x) the principal being prepaid plus (y) the accrued interest thereon. The holders will continue to have the right to convert their debentures prior to the actual prepayment.

The holders of the debentures may require us to redeem any or all of the outstanding debentures upon the occurrence of any one or more of events of default specified in the debentures. The redemption is computed pursuant to a formula in the debentures which takes into account the conversion and market sales prices of our stock at that time.

The warrants, issued in connection with the debentures as of April 3, 2006, become first exercisable on the earlier of (i) the 65th day after issuance or (ii) the effective date of the Registration Statement. The holders of the warrants are entitled to exercise their warrants on a cashless basis following the first anniversary of issuance if the Registration Statement is not in effect at the time of exercise.

The holders of debentures are subject to certain limitations on their rights to convert the debentures. The principal limitation is that the holder may not, with certain limited exceptions, convert into a number of shares that would,

together with other shares held by the holder, exceed 4.99% of our then outstanding shares after such conversion. The exercise of the warrants is subject to a similar limitation.

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To secure our obligations under the debentures and other transaction agreements, we have granted a security interest in substantially all of our assets, including without limitation, its intellectual property, in favor of the investors under the terms and conditions of a security interest agreement dated as of the date of the debentures. The security interest terminates upon the earlier of (i) the date on which less than one-fourth of the original principal amount of the debentures are outstanding or (ii) payment or satisfaction of all of our obligations under the securities purchase agreement.

The conversion price of the debentures and the exercise price of the warrants are subject to adjustment. Under the agreements with the holders of the debentures, we agreed that if we make certain offers or sales of our common stock (or securities convertible into our common stock) to any third party during the period from the closing date of the debentures to the date when the aggregate principal amount of all outstanding senior secured debentures issued is first \$750,000 or less, adjustments would be made to the conversion price of the then unconverted debentures and to the exercise price of the then unexercised warrants. The exercise price of the warrants also are subject to adjustment in the event of certain capital adjustments or similar transactions, such as a stock split or merger. In addition, in certain cases, the investors may be entitled to receive additional warrants to purchase additional shares.

The Company also agreed that until less than one-fourth of the aggregate principal amount of the debentures issued remain unconverted, without the prior written consent of more than 51% of the then outstanding debentures, we will not enter into any new transaction for the offer or sale of our securities when such transaction provides for a variable conversion price or a variable exercise price. We also agreed that until the effective date of the Registration Statement we will not enter into any other transaction for the offer or sale of any of its securities and, commencing on the effective date and for six months thereafter, we will not enter into any transaction granting the investors in that new transaction registration rights.

Under certain circumstances, we will be obligated to pay liquidated damages to the holders of the debentures if the Registration Statement is filed late and/or is not declared effective by the Securities and Exchange Commission within 120 days after the closing date. Similar payments will be required if the registration is subsequently suspended beyond certain agreed upon periods. The amount of liquidated damages that may become payable may be substantial. If any such liquidated damages are payable, the security holder may ask, and in certain circumstances, we may elect, to have the amount paid in shares of common at the then applicable conversion price.

Directors and officers of our company have also agreed not to sell any of their shares in our company, unless purchased in the open market or as part of certain private placements, until six (6) months after the investors registration statement has been declared effective, and have also agreed to limit the volume of their share sales thereafter.

These securities were issued pursuant to the exemption from registration under the United States Securities Act of 1933 provided by Section 4(2), Section 4(6) and/or Rule 506 of Regulation D promulgated under the 1933 Act to the investors and brokers who are accredited investors within the respective meanings ascribed to that term in Rule 501(a) under the 1933 Act. No advertising or general solicitation was employed in offering the securities.

Copies of the Securities Purchase Agreement, Form of Debenture, Form of Warrant, Registration Rights Agreement and Security Interest Agreement relating to the above transactions, and a copy of a press release of the Company, dated April 4, 2006, are filed as exhibits to the registration statement for a more complete description of the complex provisions that are summarized under this caption. The foregoing descriptions of the above transactions are qualified in their entirety by reference to such exhibits, which are incorporated by reference herein.

## 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 stockholder, is an adverse party or has a material interest adverse to our interest.

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**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:

| <b>Name</b>      | <b>Position Held with our Company</b>           | <b>Age</b> | <b>Date First Elected or Appointed</b>  |
|------------------|---|------------|---|
| Zami Aberman     | Chief Executive Officer, President and Director | 52         | September 26, 2005<br>November 21, 2005 |
| Yossi Keret      | Chief Financial Officer                         | 40         | May 30, 2004                            |
| Ora Burger       | Vice President, Development                     | 39         | October 26, 2005                        |
| Doron Shorrer    | Director  | 52         | October 2, 2003                         |
| Hava Meretzki    | Director  | 37         | October 2, 2003                         |
| Isaac Braun      | Director  | 52         | July 6, 2005                            |
| Israel Ben-Yoram | Director  | 42         | 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.

**Zami Aberman**

Mr. Aberman became our Chief Executive Officer and President on September 26, 2005 and a director of our company on November 21, 2005. Mr. Aberman became our acting Chairman of the Board on April 3, 2006. Mr. Aberman has 20 years of Experience in Marketing and Management in the Hi-Tech Industry. He held Chief Executive and Chairman positions in Israel, the USA, Europe, Japan and Korea. He operated within high-tech global companies in the fields of Automatic Optical Inspection, network security, Video over IP, software, chip design and robotic markets. Mr. Aberman serve as the chairman of Rose Hitech Ltd., a private investment company; as chairman of VLScom Ltd., a private company specializing in video compression for HDTV and video over IP and as a director of Ori Software Ltd., involved in data management. Before those positions he served as the President and CEO of Elbit Vision Systems), a public company traded on the OTCBB market (EVSNF.OB) which supplies inspection systems for the microelectronic industry. As well, Mr. Aberman served as President and CEO of Netect Ltd specializing in the field of Internet security software, he was the Co-Founder, President and CEO of Associative computing Ltd, developing an associative parallel processor for real-time video processing, he served as chairman of Display Inspection Systems Inc specializing in laser based inspection machines and he served as President and CEO of Robomatix Technologies Ltd, a public company (RBMXF.OB).

In 1992, Mr. Aberman was awarded the Rothschild Prize for excellence in his field from the President of the State of Israel. Aberman holds a B.Sc. in Mechanical Engineering from Ben Gurion University in 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.

### **Ora Burger**

Dr. Burger was appointed as our Vice President, Development on October 26, 2005. Dr. Burger was recruited to Pluristem in 2003 to promote the research of hemopoietic stem cells (HSC) growing and expanding in a physiological like microenvironment 3-D culture in our company's novel PluriX(TM) bioreactor. She was subsequently promoted to manage turnkey projects in research and development - specifically the production of transplantable HSC using a 3-D biodegradable scaffolding platform in the PluriX(TM) bioreactor. This project is co-sponsored by the Chief Scientist of the Israeli Ministry of Industry and Trade under the most prestigious Magnetron grant program directed toward facilitating technology transfer to the forefront of innovation from the University to leading high-technology and biotechnology companies.

Prior to joining our company, Dr. Burger served as a Research and Development Advisor in several emerging-growth biotechnology companies validating technologies for further development. She acted as Director of Research and Development for Diagnostic Technology where she led the development of ELISA kit, intended for the prenatal diagnose of pregnancy complications such as preeclampsia, preterm delivery and fetal growth restriction.

Dr. Burger holds a B.A. and MSc. in plant science from the faculty of agronomy of the Hebrew University and a DSc. in Biotechnology Engineering from Technion. She completed postdoctoral training at Technion and Tel Aviv University, Sackler School of Medicine, working on therapeutic models to cure the damage of Helicobacter pylori, a bacterial infection which causes ulcers, gastritis, and gastric cancer. Her work was recently re-illuminated following the 2005 Nobel Prize in Medicine to the scientists who discovered the clinical central importance of the subject: Ulcer Derived from Bacterial Infections. Dr. Burger was until recently a lecturer in Biotechnology and Food Engineering Faculty at the Technion institute.

### **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

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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.

### **Isaac Braun**

Mr. Braun was appointed a director on July 6, 2005. Mr. Braun is a business veteran with entrepreneurial, industrial and manufacturing experience. He has been a co-founder and board member of several hi-tech start-ups in the areas of e-commerce, security, messaging, search engines and biotechnology. Mr. Braun is involved with advising private companies on raising financing and business development.

### **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 present. This accounting firm currently employs over 15 employees in the field of auditing, consulting, and accompanying projects. Since 1992 to present, 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 Meretzki, our former Chief Executive Officer and the founder and chief technology officer of our wholly owned subsidiary, Pluristem, Ltd. and Hava Meretzki, one of our directors, are husband and wife.

### *Audit Committee and Audit Committee Financial Expert*

On October 2, 2003, our board of directors created an audit committee and adopted an audit committee charter. On July 6, 2005 we appointed Hava Meretzki, Israel Ben-Yoram and Isaac Braun as members of our Audit Committee. However, our board of directors has determined that we do not have a member of our audit committee that qualifies as an audit committee financial expert as defined in Item 401(e) of Regulation S-B. Mr. Israel Ben-Yoram and Mr. Isaac Braun are independent as the term is used in Item 7(d)(3)(iv) of Schedule 14A under the Securities Exchange Act of 1934, as amended. Ms. Hava Meretzki is not considered independent as she is married to our former Chief Executive Officer and the founder and chief technology officer of our wholly owned subsidiary, Pluristem, Ltd., Dr. Shai Meretzki. We believe that the members of our audit committee are collectively capable of analyzing and evaluating our financial statements and understanding internal controls and procedures for financial reporting. During the fiscal

year 2005, the audit committee met a total of 4 times.

*Other Committees of the Board*

On October 2, 2003, our board of directors also created a compensation committee and a corporate governance committee. Our board of directors adopted a compensation committee charter and appointed Doron Shorrer and

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Hava Meretzki as members of our compensation committee. Our board of directors also adopted a corporate governance committee charter and appointed Doron Shorrer and Hava Meretzki as members of our corporate governance committee

*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 June 16, 2006, 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 <sup>(1)</sup> | Percentage of Class* |
|----------------|---|--|----------------------|
| Common Shares  | Zami Aberman<br>Chief Executive Officer, Chairman of the Board, President and Director<br>63 Rabutzky Street<br>Raanana, Israel | 3,000 <sup>(2)</sup>                                 | 0%                   |
| Common Shares  | Shai Meretzki<br>Chief Technology Officer of Pluristem, Ltd.<br>38 Raul Wallenberg<br>Haifa, Israel                             | 10,053,170 <sup>(3)</sup>                            | 15.1%                |
| Common Shares  | Joseph Corso<br>15 Ottavio Promenade<br>Staten Island, NY 10307   | 7,000,000  | 13.63%               |

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|               |  |           |       |
|---------------|--|-----------|-------|
| Common Shares | Stonestreet Limited Partnership<br>#1300 320 Bay Street<br>Toronto, ON M5H 4A6<br>Canada | 4,000,000 | 6.28% |
|---------------|--|-----------|-------|

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| <b>Title of Class</b> | <b>Name and Address of Beneficial Owner</b>   | <b>Amount and Nature of Beneficial Owner<sup>(1)</sup></b> | <b>Percentage of Class*</b> |
|-----------------------|---|--|-----------------------------|
| Common Shares         | Hava Meretzki<br>Director<br>38 Raul Wallenberg<br>Haifa, Israel                        | 338,377 <sup>(4)</sup>                                     | 0%                          |
| Common Shares         | Doron Shorrer<br>Director<br>33 Koreh Hadorot Street<br>Jerusalem, Israel               | 451,170 <sup>(5)</sup>                                     | 0%                          |
| Common Shares         | Israel Ben-Yoram<br>Director<br>24 Barkan Street<br>Rishon Lezion, Israel               | 155,089 <sup>(6)</sup>                                     | 0%                          |
| Common Shares         | Isaac Braun<br>Director<br>9 Zeharia Street, POB 402<br>Bene Barak, Israel              | 159,594 <sup>(7)</sup>                                     | 0%                          |
| Common Shares         | Yossi Keret<br>Chief Financial Officer<br>Hanesi im Street 6/19<br>Hod Hasharon, Israel | 451,170 <sup>(8)</sup>                                     | 0%                          |
| Common Shares         | Ora Burger<br>Vice President, Development<br>5 Bulchin St.<br>Haifa 32882<br>Israel     | 33,838 <sup>(9)</sup>                                      | 0%                          |
| Common Shares         | Directors and Officers (as a group)   | 11,645,408 <sup>(10)</sup>                                 | 18.27%                      |

0% is indicated for amounts less than 1%

<sup>(1)</sup> Based on 63,743,483 shares of common stock issued and outstanding as of June 16, 2006. 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, warrants or right or through the conversion of a security currently exercisable or convertible, or exercisable or convertible 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.

<sup>(2)</sup> Mr. Aberman was granted 4,500,000 options to purchase shares of common stock pursuant to our 2005 Stock Option Plan, exercisable at \$0.10 per share until January 16, 2016. These options vest as follows: 25% on July 16, 2006, 4% on the 7 month and each successive month anniversary to and including the 23 month anniversary and the balance on the 24 month anniversary.

<sup>(3)</sup> 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. Dr. Meretzki was granted 1,500,000 options to purchase shares of common stock pursuant to our 2005 Stock Option Plan, exercisable at \$0.10 per share until January 16, 2016. These options vest as follows: 25% on July 16, 2006, 4% on the 7 month and each successive month anniversary to and including the 23 month anniversary and the balance on the 24 month anniversary.

<sup>(4)</sup> Representing options to purchase shares of our common stock granted on December 30, 2003 that are currently exercisable or exercisable within 60 days. Ms. Meretzki was granted 600,000 options to purchase shares of common stock pursuant to our 2005

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Stock Option Plan, exercisable at \$0.10 per share until January 16, 2016. These options vest as follows: 25% on July 16, 2006, 4% on the 7 month and each successive month anniversary to and including the 23 month anniversary and the balance on the 24 month anniversary.

(5) Representing options to purchase shares of our common stock granted on December 30, 2003 that are currently exercisable or exercisable within 60 days. Mr. Shorrer was granted 800,000 options to purchase shares of common stock pursuant to our 2005 Stock Option Plan, exercisable at \$0.10 per share until January 16, 2016. These options vest as follows: 25% on July 16, 2006, 4% on the 7 month and each successive month anniversary to and including the 23 month anniversary and the balance on the 24 month anniversary.

(6) Representing options to purchase shares of our common stock granted on January 17, 2006 that are currently exercisable or exercisable within 60 days. Mr. Ben-Yoram was granted 600,000 options to purchase shares of common stock pursuant to our 2005 Stock Option Plan, exercisable at \$0.10 per share until January 16, 2016. These options vest as follows: 25% on July 16, 2006, 4% on the 7 month and each successive month anniversary to and including the 23 month anniversary and the balance on the 24 month anniversary.

(7) Includes warrants exercisable into 75,000 shares of our common stock that are currently exercisable or exercisable within 60 days and 84,594 options to purchase shares of our common stock granted on January 17, 2006 that are currently exercisable or exercisable within 60 days. Mr. Braun was granted 600,000 options to purchase shares of common stock pursuant to our 2005 Stock Option Plan, exercisable at \$0.10 per share until January 16, 2016. These options vest as follows: 25% on July 16, 2006, 4% on the 7 month and each successive month anniversary to and including the 23 month anniversary and the balance on the 24 month anniversary.

(8) Representing options to purchase shares of our common stock granted on December 30, 2003 that are currently exercisable or exercisable within 60 days. Mr. Keret was granted 1,000,000 options to purchase shares of common stock pursuant to our 2005 Stock Option Plan, exercisable at \$0.10 per share until January 16, 2016. These options vest as follows: 25% on July 16, 2006, 4% on the 7 month and each successive month anniversary to and including the 23 month anniversary and the balance on the 24 month anniversary.

(9) Representing options to purchase shares of our common stock granted on December 30, 2003 that are currently exercisable or exercisable within 60 days. Ms. Burger was granted 1,000,000 options to purchase shares of common stock pursuant to our 2005 Stock Option Plan, exercisable at \$0.10 per share until January 16, 2016. These options vest as follows: 25% on July 16, 2006, 4% on the 7 month and each successive month anniversary to and including the 23 month anniversary and the balance on the 24 month anniversary.

(10) Includes options to purchase 4,365,408 shares of our common stock and warrants to purchase 2,475,000 shares of our common stock, 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 June 16, 2006 we had 63,743,483 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

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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 former 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 are engaged in the business of the development of the stem cell production technology and the commercialisation of cell therapy products. We were incorporated in the State of Nevada under the name A.I. Software, Inc. on May 11, 2001. Beginning in 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 production technology. This technology, if fully developed, 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, myeloma and a broad

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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 have 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 production technology we acquired from the Weizmann Institute of Science and the Technion-Israel Institute of Technology, on June 10, 2003, 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 .

From May 2003 until March 2006, our business has focussed on the development of the stem cell production technology that we license. Originally, our plan was to develop that technology to the point where we could sub-license it to medical scientists and practitioners for their use in producing cell therapy products for their own use or for sale in the marketplace. On March 6, 2006, we announced that our company was taking a new direction. Now, instead of looking to sub-lease the stem cell production technology, we will focus on the developing the technology with the goal of producing cell therapy products for sale in the marketplace.

#### *Our Current Business*

We are engaged in the business of the development of the stem cell production technology and the commercialisation of cell therapy products. We aim to become a leader in the production of stem cell based therapeutic products to improve the engraftment of hematopoietic stem cells in bone marrow transplants and 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 production of stem cell based therapeutic products to improve the engraftment of hematopoietic stem cells in bone marrow transplants and expansion hematopoietic stem cells found in umbilical cord blood, using the technology platform we license pursuant to our 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 production system for the treatment of severe blood disorders. The first product targets a critical global shortfall of matched tissue for bone marrow transplantation. We started initial pre-clinical trials on mice that have insufficient immune systems so as to simulate human blood and immune systems (SCID mice) on our first cell therapy product. We intend to test our first product in clinical trials to gain Federal Drug Administration approval.

#### **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

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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 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 myeloma,
- 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 thalassemia.

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

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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.

We entered into a consulting agreement as of April 1, 2005 with Biological Industries, Ltd., of Kibbutz Bet-HuEmek, MP Oshrat 25015 whereby our company and Biological Industries Ltd. have agreed to globally distribute joint project products in the field of serum-free media specially designed for hematopoietic and mesenchymal stem cells utilizing our PluriX™ Bioreactor system. Biological Industries Ltd. is a privately-held, leading biotechnology manufacturer and provider of a large range of animal cell culture products including sterile, sea, liquid and powdered synthetic media, supplements and novel serum free media products in the field of cellular biology. Biological Industries Ltd. exports products to thirty countries internationally. Biological Industries Ltd. will pay us a license fee equal to 5% of sales of serum-free media developed in the joint project products for seven years commencing on the date of the first sale. We have not yet completed the development of any joint project products and no sales have taken place pursuant to our agreement with Biological Industries.

### **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 autologous 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;
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- 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 autologous 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 production 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 autologous bone marrow

transplants in adults potentially feasible. We believe that the advantages in use of umbilical cord blood hematopoietic stem cells, combined with our potential cell therapy products would have the potential to change the way 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 production 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 production technology. This technology, if fully developed, may 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 production system that we can use to produce functional stem cells for sale to other research laboratories, umbilical cord blood banks, or clinics. We have named the technology 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 mimics 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 a similar 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 production of umbilical cord blood hematopoietic stem cells to proportions that will be enough for transplants in adults, without promoting differentiation.

We are designing and developing the PluriX Bioreactor system to perform controlled production 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 transplants in adults. 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

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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.

### **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. This means that healthy autologous 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 production, i.e. to grow 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 be used for allogenic production, i.e. to grow 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.
- Our PluriX Bioreactor system can be used to produce a high number of hematopoietic stem cells, which might 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.

### *Markets for Our Product and Services*

We plan to produce and sell stem cell products for use in bone marrow transplants. 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, if we succeed in developing stem cells that will be compatible with more patients, as we are trying to do, we estimate that the number of potential bone marrow transplants in the United States and Europe would likely 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, 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. If we are successful in developing our technology and products so that donor searches and repeat procedures are reduced, the annual expenditures for bone marrow transplant procedures may decrease.

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*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 products 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 covering a patent application entitled *Method and Apparatus for Maintenance and Production 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 applications have also been filed in a number of countries including the United States under patent application number 09/890,401. On January 28, 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 Production 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 No 6,911,201, allowance provides coverage to our concept of creating a three-dimensional bone-like environment that supports stem cell production without differentiation.

Our other issued patents were issued in South Africa (patent #2001/6486), Australia (patent #759719) Russia (patent #2249039) and New Zealand (patent #513303) between the years 2002 and 2005. These patents are due to expire in the years 2022 to 2025. These patents present 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. In addition, we plan to file applications, either alone or in conjunction with our exclusive licensors, for patents in the United States and equivalent applications in certain other countries claiming other aspects of our technology, products and processes.

The validity and breadth of claims in medical technology and products 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 products 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 can not 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 agreement, 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. For complete details regarding our license, please see the license agreement itself, which is incorporated by reference as an exhibit to the registration statement of which this prospectus forms a part.

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

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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 develop our technology and commercialise cell therapy products 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 develop our technology or maintain our competitive position with respect to our potential cell therapy products. 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 or products. 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 products 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 of our technology and the commercialisation our potential cell therapy products.

### *Research and Development*

#### Foundational Research

For the last five years, our former 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 production 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 adipose tissues 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.

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

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clinical trials designed to demonstrate the safety, efficacy and clinical benefits of selectively expanded stem cell populations from umbilical cord blood. We intend to carry out all research and development activities with the advice of a Food and Drug Administration advisor.

### *Employees*

We presently have 15 employees in research and development and 4 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 commercialisation 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 commercialise 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 and our potential products obsolete or noncompetitive, that we will be able to keep pace with new technological developments or that our potential products 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 and products are 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 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 use, and our potential products, 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., StemCell Technologies, Inc. and CellGenix. However, to the best of our knowledge none of these companies have developed a platform that can support production of hematopoietic stem cells without promoting their differentiation in cytokines free conditions.

### *Government Regulations and Supervision*

Once fully developed, we intend to market our stem cells to research laboratories, clinics and umbilical blood banks primarily in the United States and in Europe. Accordingly, we believe our research and development of our technology and the production and marketing of our stem cells are subject to the laws and regulations of governmental

authorities in the United States and all other countries where our technology will be used and our stem cells 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.

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## **The Regulatory Process**

In the United States and in Europe, regulatory approval of new medical devices and biological products involves a lengthy process 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 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.

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 stem cells produced by our PluriX Bioreactor system are 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 in the United States**

We are currently only in the developmental stage of our technology, PluriX Bioreactor system and potential products 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 and potential products 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

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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.

Where 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.

We believe that our PluriX Bioreactor system, if successfully developed, will be classified as a Class III medical device and be subject to the requirements of clinical testing to demonstrate safety and effectiveness and the approval of the Food and Drug Administration before we can market the stem cells.

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 will 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 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.

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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. If we are successful in developing our technology and obtaining regulatory approval to the point where we are ready to produce stem cells for sale, our laboratories where we will produce those cells will be subject to all Food and Drug Administration licensing, registration and inspection requirements.

### **Product Approval in Europe**

If we successfully develop our PluriX<sup>®</sup> bioreactor system and potential cell therapy products and seek regulatory approval in Europe, we believe our PluriX<sup>®</sup> 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 applicable 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

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standards to apply to a medical product. Receipt of permission to affix the CE Mark enables a company to sell a medical device or product 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, nor have we as yet requested such permission.

## **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.

We are engaged in the business of the development of the stem cell production technology and the commercialisation of cell therapy products. 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 production technology. This technology, if fully developed and commercialised, 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, myeloma and a broad range of complicated diseases and disorders.

From May 2003 until March 2006, our business has focussed on the development of the stem cell production technology that we license. Originally, our plan was to develop that technology to the point where we could sub-license it to medical scientists and practitioners for their use in producing cell therapy products for their own use or for sale in the marketplace. On March 6, 2006, we announced that our company was taking a new direction. Now, instead of looking to sub-lease the stem cell production technology, we will focus on the developing the technology with the goal of producing cell therapy products for sale in the marketplace.

Under our licensing agreement, we agreed to pay \$400,000 cash over time and we may pay royalties on our future sales and product or rights distribution transactions. Also, the licensors of the license agreement have 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 production technology we acquired from the Weizmann Institute of Science and the Technion-Israel Institute of Technology, on June 10, 2003, 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.

### *Plan of Operations*

Over the next twelve months, we intend to pursue our primary objective of developing our technology and process to the point where we can produce stem cell therapy products through the process performed in the PluriX Bioreactor.

We intend to first develop methods for the preparation of the cord blood seed and its freezing and thawing. We also intend to begin the development of the stromal cells and establish a master cell bank and working cell bank. We also intend to set up a quality assurance plan and compliance procedures and implement them. We also would like to set up a documentation center. If these stages of development go well, we may be in a position to execute pre-clinical studies to demonstrate the hematopoietic stem cells and how they may be a factor in repopulating mice bone marrow. When we are ready to begin regulatory activities, we may begin the process by

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determining exactly what we need to do and who we need to contact, preparing a pre-filing document and holding a pre-filing meeting with the Food and Drug Administration.

We also intend to initiate contact with research centers and cord blood banks to establish cooperative relations for future business development.

We plan to continue our cooperation with the Technion Institute of Technology in Israel regarding the Magnetron grant received from the Israeli government. Within this grant we, together with the Technion researchers will further develop the PluriX™ Bioreactor using biodegradable scaffold structures that imitate human bones.

We intend to consult with Food and Drug Administration consultants to assist us in determining the process toward gaining Food and Drug Administration regulatory approval.

We have not generated any revenues and our operating activities have used cash resources of \$1,443,954 for the nine month period ended March 31, 2006. This negative cash flow is attributable to our operation expenses, including but not limited to, research and development expense and the payment of our audit fees and legal fees. We anticipate that our operating expenses will increase as we intend to conduct detailed development of our first product - hematopoietic stem cells, animal pre-clinical trials and experiments and clinical trials and work towards its completion. We estimate our expenses in the next twelve months will be approximately \$2,500,000, generally falling in two major categories: research and development costs and general and administrative expenses.

#### Research and Development Costs

For the next twelve months, we estimate that our research and development costs will be approximately \$1,500,000. We intend to spend our research and development costs on optimizing the 3-D bioreactor operations, developing expanded hematopoietic stem cell products, implanting stem cells from stromal cell cultures of PluriX™ Bioreactors for production and on conducting studies on mice to examine stem cell development and production.

#### General and Administrative Expenses

For the next twelve months, we estimate that our general and administrative expenses will be approximately \$2,000,000. These expenses will include approximately \$1,000,000 on public relations and investor relations and approximately \$1,000,000 on office and miscellaneous charges, which consist primarily of charges incurred for purchase of office supplies and other administrative expenses. These expenses will also include professional fees, which consist primarily of accounting and auditing fees for the year-end audit and legal fees for securities advice, directors liability insurance and cost of fundraising.

We do not expect to generate any revenues in the next twelve months. Our products will likely not be ready for sale for at least five years, if at all.

In our management's opinion, we should achieve the following events or milestones in the next twelve months in order for us to begin generating revenues as planned in five years or more:

- Optimize 3-D PluriX™ Bioreactor operations We have made progress using the 3-D environment of the PluriX™ to produce a dense population of stromal supporting cells that provide a basis for stem cell in vitro production without differentiation. However, to have a potential product that we might eventually be able to market, we must continue to try to develop the bioreactor system until it can produce stem cells that will self-renew while remaining in their original state;
- Improve the analytical methods of our technology and processes;

- Conduct studies to analyze the hematopoietic stem cell to reconstitute the hematopoietic system within animal model. Trials are planned using SCID mice which are mice with insufficient immune systems that can be used
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to simulate human blood and immune systems. Using this model, the human hematopoietic stem cell may develop and differentiate Pluristem's in vitro production process to be analyzed in vivo.

- Clarify and finalize our regulatory and medical strategy for meeting with the Food and Drug Administration.
- Establish relations with research centers and cord blood banks.

### *Liquidity and Capital Resources*

During the nine month period ended March 31, 2006, we incurred a net loss of \$1,489,748, as compared to a net loss of \$2,131,003 in the nine month period ended March 31, 2005. This decrease in net loss resulted in part from a decrease in expenditures on research and development and general and administrative expenses.

We obtained funds to carry on our business from private placements we conducted in October of 2004 and January of 2005, which raised gross proceeds of approximately \$3,250,000 through the issuance of 32,500,000 units comprising one common share and one common share purchase warrants. As at March 31, 2006 we had cash of \$405,825 which was sufficient to fund our operations for approximately 2 months. On April 3, 2006 we raised gross proceeds of approximately \$3,000,000 through the issuance of senior secured convertible debentures.

While we expect that we have sufficient funds to operate until early spring of 2007, we will have to raise additional funds from the market before we have any cash flow from operations. We believe that it will take several years for us to complete the approval process for our products in the United States or any other jurisdiction. In addition, future decisions regarding any acquisitions that we may choose to make or product development that is beyond the scope of what is described in our Plan of Operations will require additional capital, which must be raised through the issuance additional securities and/or incurring more debt.

### *Research and Development*

Since June 10, 2003, the date we acquired Pluristem, Ltd., we set up and began research activities in our clean rooms and laboratory. We built bioreactors to conduct research and development in a 3-D environment and seeded stromal cells into the bioreactors to produce the stromal cell culture where the stem cells will be implanted. Throughout this period and into 2006, we will continue with the research and development activities referenced above. Since inception to March 31, 2006, we have spent \$3,658,024 on research and development. We hope that eventually, all of this cost will be passed on to our customers.

### *Purchase or Sale of Equipment*

With the acquisition of Pluristem Ltd., we obtained much of the specialized laboratory equipment that we need to conduct our research. This equipment included incubators, freezers, computers, hot plates, generators, microscopes, and other equipment. We expect that we now own most of the laboratory equipment that we will need to conduct our planned research and development for the next twelve months. We do not expect to purchase or sell any plant or significant equipment over the next twelve months.

### *Going Concern*

Due to our being a development stage company and not having generated revenues, in the consolidated financial statements for the year ended June 30, 2005 and for the nine month period ended March 31, 2006, we included an explanatory paragraph regarding concerns about our ability to continue as a going concern. Our consolidated financial statements contain additional note disclosures describing the circumstances that lead to this disclosure.



The continuation of our business is dependent upon us raising additional financial support. The issuance of additional equity securities by us could result in a significant dilution in the equity interests of our current stockholders. Obtaining commercial loans, assuming those loans would be available, will increase our liabilities and future cash commitments.

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*Recently Issued Accounting Standards*

In May 2005, the FASB issued Statement of Financial Accounting Standard No. 154 ( FAS 154 ), Accounting Changes and Error Corrections a replacement of APB No. 20, Accounting Changes and FAS No. 3, Reporting Accounting Changes in Interim Financial Statements . FAS 154 provides guidance on the accounting for and reporting of accounting changes and error corrections. APB Opinion 20 previously required that most voluntary changes in accounting principle to be recognized by including in the net income of the period of the change the cumulative effect of changing to the new accounting principle. FAS 154 requires retrospective application to prior periods' financial statements of a voluntary change in accounting principle unless it is impracticable. FAS 154 is effective for accounting changes and corrections of errors made in fiscal years beginning after December 15, 2005. We estimate that the adoption of FAS 154 will not have a significant impact on our results of operations, financial condition and liquidity.

On December 16, 2004, the Financial Accounting Standards Board (FASB) issued FASB Statement No. 123 (revised 2004) Share-Based Payment ( 123(R) ), which in revision of FASB Statement No. 123, Accounting For Stock-Based Compensation . Statement 123(R) supersedes APB Opinion No. 25, Accounting For Stock Issued To Employees , and amends FASB Statements No. 95, Statement of Cash Flows . Generally the approach in FASB Statement 123(R) is similar to the approach described in Statement 123. However, Statement 123(R) requires all share-based payments to employees, including grant of employees stock options, to be recognized in the income statements based on their fair value. Pro-forma disclosure is no longer an alternative. Statement 123(R) must be adopted no later than the period beginning after June 15, 2006. Early adoption will be permitted in periods in which financial statements have not yet been issued.

Statement 123(R) permits public companies to adopt its requirements using one of two methods:

- A Modified Prospective method in which compensation cost is recognized beginning with the effective date (a) based on the requirements of Statement 123(R) for all share-based payments granted after the effective date and (b) based on the requirements of Statement 123 for all awards granted to employees prior to the effective date of Statement 123(R) that remains unvested on the effective date.
- A Modified Retrospective method which includes the requirements of the modified prospective method described above but also permits entities to restate, based on the amounts previously recognized under Statement 123 for purpose of pro-forma disclosure, all periods presented.

We plan to adopt Statement 123(R) using the modified prospective method.

We are unable to estimate the future impact that Statement 123(R) will have on our financial position, results of operations or cash flows due to unknown events, such as the type and number of share-based payments that will be granted, their terms, and their vesting periods.

In March 2005, the SEC released SEC Staff Accounting Bulletin No. 107, Share-Based Payment ( SAB 107 ). SAB-107 provides the SEC staff's position regarding the application of Statement 123(R), which contains interpretive guidance related to the interaction between Statement 123R and certain SEC rules and regulations, and also provides the staff's views regarding the valuation of share-based payment arrangements for public companies. SAB 107 highlights the importance of disclosures made related to the accounting for share-based payment transactions.

### **APPLICATION OF CRITICAL ACCOUNTING POLICIES**

Our financial statements and accompanying notes are prepared in accordance with generally accepted accounting principles in the United States. Preparing financial statements requires management to make estimates and

assumptions that affect the reported amounts of assets, liabilities, revenue, and expenses. These estimates and assumptions are affected by management's application of accounting policies. We believe that understanding the basis and nature of the estimates and assumptions involved with the following aspects of our consolidated financial statements is critical to an understanding of our financials.

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*Acquisition of technology rights*

In the acquisition of stem cell production technology rights through the license agreement, we considered whether these rights meet the criteria of an asset or should be expensed. As a result of the negative cash flows that have occurred and are expected to continue in the foreseeable future, the PluriX Bioreactor system and license agreement technology assets which we acquired in the 2003 fiscal year were written off during the 2004 fiscal year.

*Going Concern*

Our annual financial statements have been prepared on the going concern basis, which assumes the realization of assets and liquidation of liabilities in the normal course of operations. The financial statements have been prepared assuming we will continue as a going concern. However, certain conditions exist which raise doubt about our ability to continue as a going concern. We have suffered recurring losses from operations and have accumulated losses of approximately \$6,139,104 since inception through the nine month period ended March 31, 2006.

*Off Balance Sheet Arrangements*

Our company has no off balance sheet arrangements that are not disclosed in our Annual Report on Form 10-KSB as filed with the Securities and Exchange Commission on September 23, 2005.

**DESCRIPTION OF PROPERTY**

Our principal offices are located at MATAM Advanced Technology Park, Building No. 20, Haifa, Israel 31905. Our telephone number is 011-972-4-850-1080. We lease our office space from MATAM Advanced Technology Park on a month to month basis and our monthly rental is approximately \$6,700. During the fiscal year ending June 30, 2005, we paid \$84,573 for rent and \$62,649 for the nine months ending March 31, 2006.

**MARKET FOR COMMON EQUITY AND RELATED STOCKHOLDER MATTERS**

On December 19, 2002, our common stock received approval for quotation on the National Association of Securities Dealers Inc.'s Over-the-Counter Bulletin Board under the name A.I. Software, Inc. and under the symbol AISF. On April 8, 2003, we effected a fourteen (14) for one (1) forward stock split. Accordingly, our symbol was changed to ASOW. On June 30, 2003, we effected a name change to Pluristem Life Systems, Inc. and our symbol was changed to PLRS. The following table reflects the high and low bid information for our common stock obtained from Yahoo! Finance and reflects inter-dealer prices, without retail mark-up, markdown or commission, and may not necessarily represent actual transactions.

The high and low bid prices of our common stock for the periods indicated below are as follows:

| <b>National Association of Securities Dealers<br/>OTC Bulletin Board</b> |                           |                          |
|--|---------------------------|--------------------------|
| <b>Quarter Ended<sup>(1)</sup></b>                                       | <b>High<sup>(2)</sup></b> | <b>Low<sup>(2)</sup></b> |
| March 31, 2006   | \$0.11                    | \$0.07                   |
| December 31, 2005  | \$0.20                    | \$0.08                   |
| September 30, 2005   | \$0.25                    | \$0.11                   |
| June 30, 2005  | \$0.29                    | \$0.17                   |

|                    |        |        |
|--------------------|--------|--------|
| March 31, 2005     | \$0.37 | \$0.22 |
| December 31, 2004  | \$0.32 | \$0.20 |
| September 30, 2004 | \$0.40 | \$0.16 |
| June 30, 2004      | \$0.75 | \$0.34 |
| March 31, 2004     | \$1.12 | \$0.59 |
| December 31, 2003  | \$1.24 | \$0.55 |

<sup>(1)</sup> Our common stock received approval for quotation on December 19, 2002. The first trade occurred January 21, 2003.

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(2) On April 8, 2003, we effected a 14 for 1 forward split of our common stock, as a result all stock prices have been adjusted on a post-split basis.

On June 16, 2006, the closing price for the common stock as reported by the quotation service operated by the OTC Bulletin Board was \$0.051.

As of June 16, 2006, there were 82 holders of record of our common stock. As of such date, 63,743,483 common shares were issued and outstanding.

Our common shares are issued in registered form. The Nevada Agency and Trust Company, Suite 880, Bank of America Plaza, 50 West Liberty Street, Reno, Nevada 89501 (Telephone: 775.322.0626; Facsimile: 775.322.5623) is the registrar and transfer agent for our common shares.

Shares of our common stock are subject to rules adopted by the Securities and Exchange Commission that regulate broker-dealer practices in connection with transactions in penny stocks. Penny stock is defined to be any equity security that has a market price (as defined) less than \$5.00 per share or an exercise price of less than \$5.00 per share, subject to certain exceptions. Our common stock are covered by the penny stock rules, which impose additional sales practice requirements on broker-dealers who sell to persons other than established customers and accredited investors. The term accredited investor refers generally to institutions with assets in excess of \$5,000,000 or individuals with a net worth in excess of \$1,000,000 or annual income exceeding \$200,000 or \$300,000 jointly with their spouse. The penny stock rules require a broker-dealer, prior to a transaction in a penny stock not otherwise exempt from the rules, to deliver a standardized risk disclosure document in a form prepared by the SEC which provides information about penny stocks and the nature and level of risks in the penny stock market. The broker-dealer also must provide the customer with current bid and offer quotations for the penny stock, the compensation of the broker-dealer and its salesperson in the transaction and monthly account statements showing the market value of each penny stock held in the customer's account. The bid and offer quotations, and the broker-dealer and salesperson compensation information, must be given to the customer orally or in writing prior to effecting the transaction and must be given to the customer in writing before or with the customer's confirmation. In addition, the penny stock rules require that prior to a transaction in a penny stock not otherwise exempt from these rules, the broker-dealer must make a special written determination that the penny stock is a suitable investment for the purchaser and receive the purchaser's written agreement to the transaction. These disclosure requirements may have the effect of reducing the level of trading activity in the secondary market for the stock that is subject to these penny stock rules. Consequently, these penny stock rules may affect the ability of broker-dealers to trade our securities.

## **DIVIDEND POLICY**

We have not declared or paid any cash dividends since inception and we do not intend to pay any cash dividends in the foreseeable future. Although there are no restrictions that limit our ability to pay dividends on our common shares other than as described below, we intend to retain future earnings, if any, for use in our operations and the expansion of our business.

## **EXECUTIVE COMPENSATION**

The following table summarizes, to the end of fiscal year ended June 30, 2005, the compensation of Shai Meretzki, who has served as our Chief Executive Officer from October 17, 2004 to September 26, 2005, Dr. Ze'evi Mendi, who served as our Chief Executive Officer from June 10, 2004 to October 17, 2004, Dr. Irit Arbel, who served as our Chief Executive Officer and a director from May 30, 2003 to June 10, 2004, and Mr. Harvey M.J. Lawson, who served as our Chief Executive Officer from May 11, 2001 to May 30, 2003 and as a director from May 11, 2001 to February 11,

2004. No other officers or directors received annual compensation in excess of \$100,000 during the most recently completed fiscal year and are considered to be named executive officers for the purposes of our executive compensation disclosure on this annual report.

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| SUMMARY COMPENSATION TABLE                                    |      |                     |              |                                  |  |   |                     |                        |
|---|------|---------------------|--------------|----------------------------------|--|---|---------------------|------------------------|
| Name and Principal Position                                   | Year | Annual Compensation |              |                                  | Long Term Compensation                     |   |                     | All Other Compensation |
|   |      | Salary (US\$)       | Bonus (US\$) | Other Annual Compensation (US\$) | Awards                                     |   | Payouts             |                        |
|   |      |                     |              |                                  | Securities Underlying Options/SARs Granted | Restricted Shares or Restricted Share Units | LTIP Payouts (US\$) |                        |
| Shai Meretzki<br>Chief Executive Officer                      | 2005 | 163,869             | Nil          | Nil                              | 2,851,170                                  | Nil   | Nil                 | Nil                    |
|   | 2004 | 105,000             | Nil          | Nil                              | Nil  | Nil   | Nil                 | Nil                    |
|   | 2003 | 18,500              | Nil          | Nil                              | Nil  | Nil   | Nil                 | Nil                    |
| Ze'evi Mendi<br>Chief Executive Officer                       | 2005 | 47,236              | Nil          | 10,000 <sup>(1)</sup>            | 70,495 <sup>(1)</sup>                      | Nil   | Nil                 | Nil                    |
|   | 2004 | Nil                 | Nil          | Nil                              | Nil  | Nil   | Nil                 | Nil                    |
|   | 2003 | Nil                 | Nil          | Nil                              | Nil  | Nil   | Nil                 | Nil                    |
| Dr. Irit Arbel<br>Former Chief Executive Officer and Director | 2005 | N/A                 | N/A          | N/A                              | N/A  | N/A   | N/A                 | N/A                    |
|   | 2004 | 108,000             | Nil          | Nil                              | 563,962                                    | Nil   | Nil                 | Nil                    |
|   | 2003 | Nil                 | Nil          | 20,000                           | Nil  | Nil   | Nil                 | Nil                    |
| Harvey Lawson<br>Former Chief Executive Officer & Director    | 2005 | N/A                 | N/A          | N/A                              | N/A  | N/A   | N/A                 | N/A                    |
|   | 2004 | N/A                 | N/A          | N/A                              | 56,396                                     | N/A   | N/A                 | N/A                    |
|   | 2003 | Nil                 | Nil          | Nil                              | N/A  | Nil   | Nil                 | Nil                    |

<sup>(1)</sup> Dr. Mendi was issued 50,000 common shares upon his termination as a director at a deemed price of \$0.20 per share for his services as our Chief Executive Officer and 70,495 options to purchase shares of our common stock, exercisable at a price of \$0.30 per share until February 15, 2008, for his services as a director of our company.

#### *Option Grants in the Last Fiscal Year*

During the fiscal year ended June 30, 2005, there were no stock options granted to our named executive officers.

#### *Aggregated Option/Exercises in Last Fiscal Year And 2004 Fiscal Year End Option/Values*

During the fiscal year ended June 30, 2005, no stock options were exercised by our named executive officers.

#### *Repricing of Options/SARS*

During the year ended June 30, 2005 our board of directors resolved to reduce the exercise price of the outstanding stock options granted to the directors, employees and consultants of our company under our 2003 Stock Option Plan to \$0.30 per share and subsequently to \$0.12 per share.

#### *Long-Term Incentive Plans-Awards in Last Fiscal Year*

We have no long-term incentive plans, other than the Stock Option Plan described below.



*Stock Option Plan*

On November 25, 2003, we adopted our 2003 Stock Option Plan, under which options to purchase up to 4,100,000 shares of our common stock can be granted to our directors, officers, employees and consultants. We granted a total of 3,645,780 options on December 30, 2003 with various exercise prices and expiration dates, to directors, officers, employees and consultants. On June 10, 2004 the former chief executive officer left our company and 156,734 of her options expired and were returned to the option pool. As at June 30, 2004, there were 610,954 unallocated options remaining under the 2003 Stock Option Plan. On July 6, 2004 we granted 451,170 options to the company's new chief financial officer. On February 15, 2005 we granted 70,495 options to Mendi Ze'evi, our former director and chief executive officer, exercisable at a price of \$0.30 per share until February 15, 2008. During the last quarter of 2004, 15,415 options expired and were returned to the option pool. During the year ended June 30, 2005, several of our employees left our company and 1,735,734 options expired and were returned to the option pool. On January 17, 2006 we granted 239,683 to two of our directors, exercisable at a price of \$0.12 per share until May 1, 2013.

On June 16, 2006, there were 68,941 of our common stock still available for future grant under the 2003 Stock Option Plan.

On November 21, 2005, we adopted our 2005 Stock Option Plan, under which options to purchase up to 15,000,000 shares of our common stock can be granted to our directors, officers, employees and consultants. We granted a total of 12,140,000 options on January 17, 2006 at an exercise price of \$0.10, expiring January 16, 2016, to directors, officers employees and consultants.

On June 16, 2006, there were 2,510,000 of our common stock still available for future grant under the 2005 Stock Option Plan.

On July 22, 2004 we granted 500,000 options exercisable at a price of \$0.40 per share until July 22, 2014 outside of our stock option plan. These options and an additional 500,000 options included in the 2003 Stock Option Plan expired, unexercised, on March 30, 2005.

*Compensation of Directors*

We reimburse our directors for expenses incurred in connection with attending board meetings and on April 15, 2004, we approved of the following compensation for directors: annual compensation of \$8,400 plus applicable taxes; meeting participation fees of \$750 plus taxes; and for meeting participation by telephone, 50% of the regular meeting compensation. During the fiscal year ended June 30, 2005 we paid a total of \$57,445 to directors as compensation.

Other than as described in the paragraph above, we have no present formal plan for compensating our directors for their service in their capacity as directors. Directors are entitled to reimbursement for reasonable travel and other out-of-pocket expenses incurred in connection with attendance at meetings of our board. The board may award special remuneration to any director undertaking any special services on behalf of our company other than services ordinarily required of a director. Other than indicated in this annual report, no director received and/or accrued any compensation for his or her services as a director, including committee participation and/or special assignments during the fiscal year ended June 30, 2005.

We did not grant any stock options to directors of our company during the year ended June 30, 2005.

*Executive Employment Agreements*

There are no written employment or consulting agreements between our company and any of our directors and executive officers, except for the following:

- (a) an agreement with Yossi Keret dated May 29, 2004, under which Mr. Keret is paid 33,000 New Israeli Shekels per month (US\$7,290 at a conversion rate of 4.52645 NIS to the \$US);
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- (b) a consulting agreement dated September 26, 2005 with Zami Aberman, under which Mr. Aberman is paid an equivalent of US\$13,000 per month in New Israeli Shekels at the then current exchange rate plus Value Added Tax; and
- (c) a consulting agreement dated November 24, 2005 with Meretzki Consulting Ltd., a company incorporated under the laws of the state of Israel and wholly owned by Dr. Shai Meretzki, under which Meretzki Consulting Ltd. is paid a monthly retainer of 60,000 New Israeli Shekels (\$12,755.50 USD at current exchange rate) plus Value Added Tax. Dr. Shai Meretzki will also be provided with a cellular phone and a company car pursuant to the terms of the consulting agreement.

For a portion of fiscal 2005, we paid Dr. Mendi Ze'evi, our former Chief Executive Officer, a monthly gross compensation of \$15,000. During the year ended June 30, 2005, we paid Dr. Ze'evi a total of \$47,236. On October 17, 2004, Dr. Mendi Ze'evi ceased to be CEO of our company and his contract was not renewed.

Arrangements and plans to provide pension, retirement or similar benefits for directors or executive officers will be decided upon by the compensation committee. We do not have any material bonus or profit sharing plans pursuant to which cash or non-cash compensation is or may be paid to our directors or executive officers, except that we have agreed to pay Mr. Aberman two (2%) percent of any financings we conduct through August 2007. We have no plans or arrangements in respect of remuneration received or that may be received by our executive officers to compensate such officers in the event of termination of employment (as a result of resignation, retirement, change of control) or a change of responsibilities following a change of control, where the value of such compensation exceeds \$60,000 per executive officer, except Dr. Shai Meretzki, whose termination provisions provide for 6 months' payment on termination, which at current salary would total approximately \$120,000. Additionally, Mr. Aberman's stock options fully vest upon a change of control.

#### *Pension, Retirement or Similar Benefit Plans*

There are no arrangements or plans in which we provide pension, retirement or similar benefits for directors or executive officers, except that our directors and executive officers may receive stock options at the discretion of our board of directors. We do not have any material bonus or profit sharing plans pursuant to which cash or non-cash compensation is or may be paid to our directors or executive officers, except that stock options may be granted at the discretion of our board of directors.

### **REPORTS TO SECURITY HOLDERS**

We are not required to deliver an annual report to our security holders but intend to voluntarily send an annual report, together with our annual audited financial statements. We are required to file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission. Our Securities and Exchange Commission filings are available to the public over the Internet at the SEC's website at <http://www.sec.gov>.

The public may read and copy any materials filed by us with the SEC at the SEC's Public Reference Room at 100 F Street, Washington DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. We are an electronic filer. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The Internet address of the site is <http://www.sec.gov>.

## **FINANCIAL STATEMENTS**

Our financial statements are stated in United States dollars (US\$) and are prepared in accordance with United States Generally Accepted Accounting Principles.

The following unaudited consolidated financial statements are filed as part of this registration statement:

Unaudited Consolidated Financial Statement as at March 31, 2006

Consolidated Balance Sheet at March 31, 2006

Consolidated Statements of Operations Nine Months and Three Months Ended March 31, 2006 and 2005 and for the period from May 11, 2001 (incorporation) through March 31, 2006

Consolidated Statements of Changes in Stockholders' Equity (Deficiency)

Consolidated Statements of Cash Flows Nine Months Ended March 31, 2006 and 2005 and for the period from May 11, 2001 (incorporation) through March 31, 2006

Notes to Consolidated Financial Statements Nine Months Ended March 31, 2006

The following audited consolidated financial statements are filed as part of this registration statement:

Audited Consolidated Financial Statements as at June 30, 2005

Report of Independent Registered Public Accounting Firm, dated September 21, 2005

Consolidated Balance Sheets as at June 30, 2005 and June 30, 2004

Consolidated Statements of Operations for the years ended June 30, 2005 and June 30, 2004 and for the period from May 11, 2001 (inception) through June 30, 2005

Consolidated Statements of Changes in Stockholders' Equity (Deficiency)

Consolidated Statements of Cash Flows for the years ended June 30, 2005 and June 30, 2004 and for the period from May 11, 2001 (inception) through June 30, 2005

Notes to the Consolidated Financial Statements

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**PLURISTEM LIFE SYSTEMS INC. AND ITS SUBSIDIARY**  
(A Development Stage Company)  
(Previous Name - A. I. SOFTWARE INC.)

**CONSOLIDATED FINANCIAL STATEMENTS**

**As of March 31, 2006**

**IN U.S. DOLLARS**

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**PLURISTEM LIFE SYSTEMS INC. AND ITS SUBSIDIARY**

(A Development Stage Company)

(Previous Name - A. I. SOFTWARE INC.)

**CONSOLIDATED BALANCE SHEET****In U.S. Dollars**

**March  
31,  
2006  
(Unaudited)**

**ASSETS****CURRENT ASSETS:**

|                             |            |
|-----------------------------|------------|
| Cash and cash equivalents   | \$ 405,825 |
| Prepaid expenses            | 78,380     |
| Other accounts receivables  | 96,767     |
| <u>Total</u> current assets | 580,972    |

|                                    |        |
|------------------------------------|--------|
| LONG-TERM RESTRICTED LEASE DEPOSIT | 30,819 |
|------------------------------------|--------|

|                    |        |
|--------------------|--------|
| SEVERANCE PAY FUND | 45,839 |
|--------------------|--------|

|                             |         |
|-----------------------------|---------|
| PROPERTY AND EQUIPMENT, NET | 253,568 |
|-----------------------------|---------|

|                            |         |
|----------------------------|---------|
| DEFERRED ISSUANCE EXPENSES | 112,568 |
|----------------------------|---------|

|                     |              |
|---------------------|--------------|
| <u>Total</u> assets | \$ 1,023,766 |
|---------------------|--------------|

The accompanying notes are an integral part of the consolidated financial statements.

**PLURISTEM LIFE SYSTEMS INC. AND ITS SUBSIDIARY**

(A Development Stage Company)

(Previous Name - A. I. SOFTWARE INC.)

**CONSOLIDATED BALANCE SHEET****In U.S. Dollars**

|  | <b>March<br/>31,<br/>2006<br/>(Unaudited)</b> |
|--|---|
| <b>LIABILITIES AND STOCKHOLDERS EQUITY</b>       |   |
| <b>CURRENT LIABILITIES:</b>                      |   |
| Know-how licensors                               | \$ 218,750                                    |
| Trade payables                                   | 187,661                                       |
| Accrued expenses                                 | 141,409                                       |
| Other accounts payable                           | 54,512  |
| <u>Total</u> current liabilities                 | 602,332                                       |
| <b>LONG-TERM LIABILITIES</b>                     |   |
| Accrued severance pay                            | 59,874  |
| <b>STOCKHOLDERS EQUITY</b>                       |   |
| Share capital:                                   |   |
| Common stock \$0.00001 par value:                |   |
| Authorized: 1,400,000,000 shares                 |   |
| Issued and Outstanding: 63,743,483 shares        | 636   |
| Additional paid-in capital                       | 6,500,028                                     |
| Deficit accumulated during the development stage | (6,139,104)                                   |
|  | 361,560                                       |
|  | \$ 1,023,766                                  |

The accompanying notes are an integral part of the consolidated financial statements.

**PLURISTEM LIFE SYSTEMS INC. AND ITS SUBSIDIARY**

(A Development Stage Company)

(Previous Name - A. I. SOFTWARE INC.)

**CONSOLIDATED STATEMENTS OF OPERATIONS (UNAUDITED)****In U.S. Dollars (except share and per share data)**

|   | <b>Nine Month Period Ended</b> |              | <b>Three Month Ended</b> |              | <b>Period From</b>  |
|---|--------------------------------|--------------|--------------------------|--------------|---------------------|
|   | <b>March 31,</b>               |              | <b>March 31,</b>         |              | <b>May 11, 2001</b> |
|   | <b>2006</b>                    | <b>2005</b>  | <b>2006</b>              | <b>2005</b>  | <b>(Inception)</b>  |
|   |                                |              |                          |              | <b>Through</b>      |
|   |                                |              |                          |              | <b>March 31,</b>    |
|   |                                |              |                          |              | <b>2006</b>         |
| Research and development costs, net   | \$ 867,843                     | \$ 1,437,801 | \$ 347,665               | \$ 995,730   | \$ 3,658,024        |
| General and administrative expenses   | 666,105                        | 725,492      | 253,426                  | 277,401      | 3,826,524           |
| In-process research and development write-off   | -                              | -            | -                        | -            | 246,470             |
|   | 1,533,948                      | 2,163,293    | 601,091                  | 1,273,131    | 7,731,018           |
| Financial expenses (income), net  | (44,200)                       | (32,290)     | 27,491                   | 148,918      | (1,591,914)         |
| Net loss for the period   | \$ 1,489,748                   | \$ 2,131,003 | \$ 628,582               | \$ 1,422,049 | \$ 6,139,104        |
| Basic and diluted net loss per share  | \$ (0.03)                      | \$ (0.06)    | \$ (0.01)                | \$ (0.03)    |                     |
| Weighted average number of shares used in computing basic and diluted net loss per share: | 50,180,355                     | 33,066,731   | 63,740,816               | 44,603,594   |                     |

The accompanying notes are an integral part of the consolidated financial statements.



**PLURISTEM LIFE SYSTEMS INC. AND ITS SUBSIDIARY**

(A Development Stage Company)

(Previous Name - A. I. SOFTWARE INC.)

**STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY) (UNAUDITED)****In U.S. Dollars (except shares data)**

|   | Common<br>Shares | Stock<br>Amount | Additional<br>paid-in<br>Capital | Receipts<br>On account<br>of shares | Deficit<br>Accumulated<br>during the<br>Development<br>Stage | Stock<br>(Deficiency) |
|---|------------------|-----------------|----------------------------------|-------------------------------------|--|-----------------------|
| Issuance of common stock on July 9, 2001  | 35,000,000       | \$ 350          | \$ 2,150                         | \$ -                                | \$ -   | \$ -                  |
| Balance as of June 30, 2001 (audited)   | 35,000,000       | 350             |                                  | -                                   | -  |                       |
| Net loss  | -                | -               | -                                | -                                   | (77,903)   |                       |
| Balance as of June 30, 2002   | 35,000,000       | 350             | 2,150                            | -                                   | (77,903)   |                       |
| Issuance of common stock on October 14, 2002,<br>Net of issuance expenses of \$17,359   | 14,133,000       | 141             | 83,450                           | -                                   | -  |                       |
| Forgiveness of debt   | -                | -               | 11,760                           | -                                   | -  |                       |
| Stocks cancelled on March 19, 2003  | (27,300,000)     | (273)           | 273                              | -                                   | -  |                       |
| Receipts on account of stock and warrants, net<br>of finders and legal fees of \$56,540 | -                | -               | -                                | 933,464                             | -  |                       |
| Net loss  | -                | -               | -                                | -                                   | (462,995)  |                       |
| Balance as of June 30, 2003 (audited)   | 21,833,000       | \$ 218          | \$ 97,633                        | \$ 933,464                          | \$ (540,898)   | \$                    |

The accompanying notes are an integral part of the consolidated financial statements.

**PLURISTEM LIFE SYSTEMS INC. AND ITS SUBSIDIARY**

(A Development Stage Company)

(Previous Name - A. I. SOFTWARE INC.)

**STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY) (UNAUDITED)****In U.S. Dollars (except share and per share data)**

|  | Common<br>Shares | Stock<br>Amount | Additional<br>paid-in<br>Capital | Receipts<br>on account<br>of shares | Deficit<br>accumulated<br>During the<br>development<br>stage | Total<br>Shareholders'<br>Equity<br>(Deficiency) |
|--|------------------|-----------------|----------------------------------|-------------------------------------|--|--|
| Balance as of July 1, 2003   | 21,833,000       | \$ 218          | \$ 97,633                        | \$ 933,464                          | \$ (540,898)   | \$ 490,200                                       |
| Issuance of common stock on July 16, 2003,<br>net of issuance expenses of \$70,110             | 725,483          | 7               | 1,235,752                        | (933,464)                           | -  | 307,296  |
| Issuance of common stock on January 20,<br>2004  | 3,000,000        | 30              | -                                | -                                   | -  | 29,700   |
| Issuance of warrants on January 20, 2004 for<br>finder's fee                                   | -                | -               | 192,000                          | -                                   | -  | 192,000  |
| Common stock granted to consultants on<br>February 11, 2004                                    | 1,000,000        | 10              | 799,990                          | -                                   | -  | 809,990  |
| Stock based compensation related to warrants<br>granted to consultants on December 31,<br>2003 | -                | -               | 357,618                          | -                                   | -  | 357,618  |
| Exercise of warrants on<br>April 19, 2004  | 300,000          | 3               | 224,997                          | -                                   | -  | 227,997  |
| Net loss for the year  | -                | -               | -                                | -                                   | (2,010,350)  | (2,010,350)                                      |
| Balance as of June 30, 2004  | 26,858,483       | \$ 268          | \$ 2,907,990                     | \$ -                                | \$ (2,551,248)   | \$ 357,235                                       |

The accompanying notes are an integral part of the consolidated financial statements.

**PLURISTEM LIFE SYSTEMS INC. AND ITS SUBSIDIARY**

(A Development Stage Company)

(Previous Name - A. I. SOFTWARE INC.)

**STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY) (UNAUDITED)****In U.S. Dollars (except share and per share data)**

|  | Common Stock<br>Shares | Stock<br>Amount | Additional<br>paid-in<br>capital | Receipts<br>on account<br>of shares | Deficiency<br>accumulated<br>During develop-<br>ment stage |
|--|------------------------|-----------------|----------------------------------|-------------------------------------|--|
| Balance as of July 1, 2004   | 26,858,483             | \$ 268          | \$ 2,907,990                     | \$ -                                | (2,551)  |
| Stock-based compensation related to warrants<br>granted to consultants on September 30, 2004   | -                      | -               | 161,641                          | -                                   |  |
| Issuance of common stock and warrants on November 30,<br>2004 related to the October 2004 Agreement net of<br>issuance costs of \$28,908 | 3,250,000              | 33              | 296,059                          | -                                   |  |
| Issuance of common stock and warrants on<br>January 26, 2005 related to the October 2004 Agreement net<br>of issuance costs of \$4,975   | 4,300,000              | 43              | 424,982                          | -                                   |  |
| Issuance of common stock and warrants on<br>January 31, 2005 related to the January 31, 2005 Agreement                                   | 7,000,000              | 70              | -                                | -                                   |  |
| Issuance of common stock and options on February 15, 2005<br>to former director of the company   | 50,000                 | (*)             | 14,500                           | -                                   |  |
| Issuance of common stock and warrants on<br>February 16, 2005 related to the January 31, 2005<br>Agreement                               | 5,000,000              | 50              | -                                | -                                   |  |

(\*) Less than one dollar

The accompanying notes are an integral part of the consolidated financial statements.

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**PLURISTEM LIFE SYSTEMS INC. AND ITS SUBSIDIARY**

(A Development Stage Company)

(Previous Name - A. I. SOFTWARE INC.)

**STATEMENTS OF CHANGES IN STOCKHOLDERS EQUITY (DEFICIENCY) (UNAUDITED)**

**In U.S. Dollars (except share and per share data)**

|                        |        | Additional<br>paid-in<br>capital | Receipts<br>on account<br>of shares | Deficit<br>accumulated<br>During the<br>development | Total<br>Shareholders |
|------------------------|--------|----------------------------------|-------------------------------------|---|-----------------------|
| Common Stock<br>Shares | Amount |                                  |                                     |   |                       |