

PLURISTEM LIFE SYSTEMS INC  
Form SB-2  
February 27, 2004

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

FORM SB-2

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

PLURISTEM LIFE SYSTEMS, INC.

(Name of small business issuer in its charter)

Nevada

2836

98-0351734

State or jurisdiction of  
incorporation or organization

(Primary Standard Industrial  
Classification Code Number)

(I.R.S. Employer  
Identification No.)

MATAM Advanced Technology Park, Building No. 20, Haifa, Israel 31905

011-972-4-850-1080

(Address and telephone number of principal executive offices)

MATAM Advanced Technology Park, Building No. 20, Haifa, Israel 31905

011-972-4-850-1080

(Address of principal place of business or intended principal place of business)

Dr, Irit Arbel - Chief Executive Officer  
c/o The Nevada Agency and Trust Company  
Suite 880 - Bank of America Plaza  
50 West Liberty Street  
Reno, Nevada 89501

(Name, address and telephone number of agent for service)

Copy of communications to:

Bernard Pinsky, Esq.  
Clark, Wilson  
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Vancouver, British Columbia, Canada V6C 3H1  
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Approximate date of proposed sale to the public: From time to time after the effective date of this registration statement.

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 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 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. [ ]

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	Proposed maximum aggregate offering price	Amount of registration fee
Common Stock to be offered for resale by certain selling security holders	4,500,000 <sup>(2)</sup>	\$0.66 <sup>(7)</sup>	\$2,970,000	\$376.30
Common Stock to be offered for resale by certain selling security holders upon exercise of share purchase warrants	3,300,000 <sup>(3)</sup>	\$0.75 <sup>(8)</sup>	\$2,475,000	\$313.58
Common Stock to be offered for resale by a selling security holder upon exercise of share purchase warrants	300,000 <sup>(4)</sup>	\$0.75 <sup>(8)</sup>	\$225,000	\$28.51
Common Stock to be offered for resale by certain other selling security holders	725,483 <sup>(5)</sup>	\$0.66 <sup>(7)</sup>	\$478,818.78	\$60.67
Common Stock to be offered for resale by certain other selling security holders upon exercise of share purchase warrants	725,483 <sup>(6)</sup>	\$2.25 <sup>(8)</sup>	\$1,632,336.70	\$206.82
Common Stock to be offered for resale by certain other selling security holders upon exercise of share purchase warrants	725,483 <sup>(6)</sup>	\$2.70 <sup>(8)</sup>	\$1,958,804.10	\$248.18

Total Registration Fee		\$1,234.06
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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 150% of the 3,000,000 shares of our common stock that were sold to certain selling security holders pursuant to the Securities Purchase Agreements entered into between the selling security holders and our company dated January 15, 2004, which include the shares of our common stock, if any, issuable to these selling security holders as liquidated damages for breach of certain covenants contained in or as a result of adjustments contemplated by certain provisions of the respective Securities Purchase Agreements or related Registration Rights Agreements.
3. Represents 110% of the 3,000,000 shares of our common stock that are issuable to certain security holders upon exercise of warrants issued in connection with the Securities Purchase Agreements entered into between the selling security holders and our company dated January 15, 2004, which include the shares of our common stock, if any, issuable to these selling security holders as a result of adjustments to the warrants to be made as liquidated damages for breach of certain covenants contained in or as a result of adjustments contemplated by certain provisions of the respective Securities Purchase Agreements or related Registration Rights Agreements.
4. Represents 300,000 shares of our common stock that are issuable to a selling security holder upon exercise of the warrants issued as finder's fee in connection with the Securities Purchase Agreements entered into between certain selling security holders and our company dated January 15, 2004.
5. Represents 725,483 shares of our common stock that were sold to certain selling security holders in a private placement which closed in July of 2003.
6. Represents 1,450,966 shares of our common stock that are issuable to certain selling security holders upon exercise of warrants issued in a private placement which closed in July of 2003. 725,483 of those warrants are exercisable at the price of \$2.25 per share and will expire on July 16, 2004. 725,483 of those warrants are exercisable at the price of \$2.70 per share and will expire on July 16, 2008.
7. Fee 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 February 23, 2004.
8. Pursuant to Rule 457(c) and (g), the proposed maximum offering price per share is based on the exercise price therefor on the date hereof.

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  
\_\_\_\_\_,  
2004

PLURISTEM LIFE SYSTEMS, INC.  
A NEVADA CORPORATION

SHARES OF COMMON STOCK OF PLURISTEM LIFE SYSTEMS, INC.

This prospectus relates to the resale by certain selling security holders of Pluristem Life Systems, Inc. of up to 10,276,449 shares of our common stock. The selling security holders may offer to sell the shares of common stock being offered in this prospectus at fixed prices, at prevailing market prices at the time of sale, at varying prices or at

negotiated prices.

We will not receive any proceeds from the resale of shares of our common stock by the selling security holders. We will pay for expenses of this offering.

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

Our common stock is traded on the National Association of Securities Dealers OTC Bulletin Board under the symbol "PLRS". On February 23, 2004, the closing bid price of our common stock was \$0.65 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 9 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 \_\_\_\_\_, 2004.

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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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finance our operation during the period required to resolve the problems or delays.

We need to raise additional financing to support the research and development of our PluriX™ Bioreactor system in the future but we cannot be sure we will be able to obtain additional financing on terms favourable to us when needed. If we are unable to obtain additional financing to meet our needs, our operations may be adversely affected or terminated. 11

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If we do not keep pace with our competitors and with technological and market changes, our technology may become obsolete and our business may suffer. 12

We depend to a significant extent on certain key personnel, the loss of any of whom may materially and adversely affect our company. 12

Our success depends in large part on our ability to develop and protect our PluriX™ Bioreactor system technology. If our patents and proprietary right agreements do not provide sufficient protection for our PluriX™ Bioreactor system technology, our business and competitive position will suffer. 12

We may be subject to intellectual property litigation such as patent infringement claims, which could adversely affect our business. 13

Potential product liability claims could adversely affect our future earnings and financial condition. 13

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 13

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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. 14

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

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

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

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

#### Number of Shares Being Offered

This prospectus relates to the resale by certain selling security holders of Pluristem Life Systems, Inc. of up to 10,276,449 shares of our common stock in connection with the resale of:

- up to 4,500,000 shares of our common stock, representing 150% of the 3,000,000 shares of our common stock that were sold to certain selling security holders pursuant to the Securities Purchase Agreements entered into between the selling security holders and our company dated January 15, 2004, which include up to 1,500,000 shares of our common stock, if any, issuable to these selling security holders as liquidated damages for breach of certain covenants contained in or as a result of adjustments contemplated by certain provisions of the respective Securities Purchase Agreements or related Registration Rights Agreements - see "Description of the Agreements with Certain Selling Security Holders in the January 2004 Private Placement";

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- up to 3,300,000 shares of our common stock, representing 110% of the 3,000,000 shares of our common stock that are issuable to certain security holders upon exercise of warrants issued in connection with the Securities Purchase Agreements entered into between the selling security holders and our company dated January 15, 2004, which include up to 300,000 shares of our common stock, if any, issuable to these selling security holders as a result of adjustments to the warrants to be made as liquidated damages for breach of certain covenants contained in or as a result of adjustments contemplated by certain provisions of the respective Securities Purchase Agreements or related Registration Rights Agreements - see "Description of the Agreements with Certain Selling Security Holders in the January 2004 Private Placement";
- up to 300,000 shares of our common stock that are issuable to a selling security holder upon exercise of the warrants issued as a finder's fee in connection with the Securities Purchase Agreements entered into between certain selling security holders and our company dated January 15, 2004 - see "Description of the Agreements with Certain Selling Security Holders in the January 2004 Private Placement."
- up to 725,483 shares of our common stock that were sold to certain selling security holders in a private

placement which closed in July, 2003 - see "Description of the Agreements with Certain Selling Security Holders in the July 2003 Private Placement."; and

- up to 1,450,966 shares of our common stock that are issuable to certain selling security holders upon exercise of warrants issued in a private placement which closed in July, 2003 - see "Description of the Agreements with Certain Selling Security Holders in the July 2003 Private Placement.".

The selling security holders may sell the shares of common stock in the public market or through privately negotiated transactions or otherwise. The selling shareholders may sell these shares of common stock through ordinary brokerage transactions, directly to market makers or through any other means described in the section entitled "Plan of Distribution".

#### Number of Shares Outstanding

There were 26,558,483 shares of our common stock issued and outstanding as at February 23, 2004.

#### Use of Proceeds

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

#### Summary of Financial Data

The summarized financial data presented below is derived from and should be read in conjunction with our audited consolidated financial statements for the years ended June 30, 2003 and June 30, 2002, and our unaudited consolidated financial statements for the six-month period ended December 31, 2003, (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 40 of this prospectus.

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	For the 6-month period ended December 31, 2003 (unaudited)	For the 6-month period ended December 31, 2002 (unaudited)
Revenue	Nil	Nil
Net Loss for the Period	\$693,084	\$40,302
Net loss Per Share- basic and diluted	\$0.03	\$0.001
	As at December 31, 2003 (unaudited)	As at December 31, 2002 (unaudited)
Working Capital (Deficiency)	\$(190,701)	\$(18,570)
Total Assets	\$610,339	\$170
Total Share Capital	\$1,333,610	\$99,635
Accumulated deficit	\$(1,233,982)	\$(118,205)



Total Stockholders' Equity (Deficiency)	\$99,628	\$(18,570)
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	For the year ended June 30, 2003	For the year ended June 30, 2002
Revenue	Nil	Nil
Net Loss for the Period	\$462,995	\$77,903
Net loss Per Share - basic and diluted	\$0.01	\$0.03
	As at June 30, 2003	As at June 30, 2002
Working Capital (Deficiency)	\$261,619	\$(75,403)
Total Assets	\$994,592	\$16,536
Total Share Capital	\$1,031,315	\$2,500
Accumulated deficit	\$(540,898)	\$(77,903)
Total Stockholders' Equity	\$490,417	\$(75,403)

## 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.

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### RISKS RELATED TO OUR BUSINESS AND COMPANY

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

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

We have not generated any revenues since our inception and we will, in all likelihood, continue to incur operating expenses without significant revenues until we successfully develop and commercialise our stem cell expansion technology. Our primary source of funds has been the sale of our common stock. We cannot assure that we will be

able to generate any significant revenues or income. These circumstances make us dependent on additional financial support until profitability is achieved. There is no assurance that we will ever be profitable, and we had a going concern note as described in an explanatory paragraph to our consolidated financial statements for the year ended June 30, 2003.

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

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

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

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

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

We raised net proceeds of \$1,235,752 in a private placement of our securities which closed in July of 2003 and net proceeds of \$1,320,000 in another private placement of our securities which closed in January of 2004 to support the development and commercialization of our PluriX™ Bioreactor system. These funds are expended to fund operations until early fall, 2004. Our ability to continue to develop and commercialize the PluriX™ Bioreactor system is dependent upon our ability to raise significant additional financing when needed. If we are unable to obtain such financing, we will not be able to fully develop and commercialize our technology. Our future capital requirements will depend upon many factors, including:

- continued scientific progress in our research and development programs;
- costs and timing of conducting clinical trials and seeking regulatory approvals and patent prosecutions;
- competing technological and market developments;
- our ability to establish additional collaborative relationships; and

- the effect of commercialization activities and facility expansions if and as required.

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

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

Once fully developed, we intend to market our PluriX™ Bioreactor system primarily in the United States, Europe and Japan. We must obtain the approval of the Food and Drug Administration before commercialization of our technology may commence in the United States and similar agencies in Europe. We may also be required to obtain additional approvals from foreign regulatory authorities to commence our marketing activities in those jurisdictions. If we cannot demonstrate the safety, reliability and efficacy of our PluriX™ Bioreactor system, or of the cells produced in the PluriX™ Bioreactor system, including long-term sustained cell engraftment, or if one or more patients die or suffer severe complications in future clinical trials, the Food and Drug Administration or other regulatory authorities could delay or withhold regulatory approval of our technology.

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

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

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

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

The market for our technology is very competitive, is subject to rapid technological changes and varies for different individual products. We believe that there are potentially many competitive approaches being pursued in competition

to our technology, including some by private companies for which information is difficult to obtain.

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

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

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

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

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

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

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

Our success will also depend in part on our ability to develop commercially viable technology without infringing the proprietary rights of others. Although we have not been subject to any filed infringement claims, other patents could exist or could be filed which would prohibit or limit our ability to develop and market our PluriX™ Bioreactor system in the future. In the event of an intellectual property dispute, we may be forced to litigate. Intellectual property litigation

would divert management's attention from developing our technology and would force us to incur substantial costs regardless of whether we are successful. An adverse outcome could subject us to significant liabilities to third parties, and force us to curtail or cease the development and commercialization of our PluriX™ Bioreactor system.

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

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

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

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

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

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

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

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

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

in our common stock.

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

See "Market for Common Equity and Related Security Holder Matters".

#### FORWARD-LOOKING STATEMENTS

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

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

#### SECURITIES AND EXCHANGE COMMISSION'S PUBLIC REFERENCE

Any member of the public may read and copy any materials filed by us with the Securities and Exchange Commission at the SEC's Public Reference Room at 450 Fifth Street, NW, Washington, D.C. 20549. Information on the operation of the Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet website (<http://www.sec.gov>) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

#### THE OFFERING

This prospectus relates to the resale by certain selling security holders of Pluristem Life Systems, Inc. of up to 10,276,449 shares of our common stock in connection with the resale of:

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- up to 4,500,000 shares of our common stock, representing 150% of the 3,000,000 shares of our common stock that were sold to certain selling security holders pursuant to the Securities Purchase Agreements entered into between the selling security holders and our company dated January 15, 2004, which include the shares of our common stock, if any, issuable to these selling security holders as liquidated damages for breach of certain covenants contained in or as a result of adjustments contemplated by certain provisions of the respective Securities Purchase Agreements or related Registration Rights Agreements - see "Description of the Agreements with Certain Selling Security Holders in the January 2004 Private Placement";
- up to 3,300,000 shares of our common stock, representing 110% of the 3,000,000 shares of our common stock that are issuable to certain security holders upon exercise of warrants issued in connection with the Securities Purchase Agreements entered into between the selling security holders and our company dated January 15, 2004, which include the shares of our common stock, if any, issuable to these selling security holders as a

result of adjustments to the warrants to be made as liquidated damages for breach of certain covenants contained in or as a result of adjustments contemplated by certain provisions of the respective Securities Purchase Agreements or related Registration Rights Agreements - see "Description of the Agreements with Certain Selling Security Holders in the January 2004 Private Placement";

- up to 300,000 shares of our common stock that are issuable to a selling security holder upon exercise of the warrants issued as finder's fee in connection with the Securities Purchase Agreements entered into between certain selling security holders and our company dated January 15, 2004. - see "Description of the Agreements with Certain Selling Security Holders in the January 2004 Private Placement."
- up to 725,483 shares of our common stock that were sold to certain selling security holders in a private placement which closed in July, 2003 - see "Description of the Agreements with Certain Selling Security Holders in the July 2003 Private Placement."; and
- up to 1,450,966 shares of our common stock that are issuable to certain selling security holders upon exercise of warrants issued in a private placement which closed in July, 2003 - see "Description of the Agreements with Certain Selling Security Holders in the July 2003 Private Placement.".

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

#### USE OF PROCEEDS

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

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

#### DETERMINATION OF OFFERING PRICE

This prospectus covers the resale by the selling security holders named in this prospectus of up to 10,276,449 shares of our common stock. The selling security holder may offer to sell the shares of our common stock being offered in this prospectus at fixed prices, at prevailing market prices at the time of sale, at varying prices or at negotiated prices. We will not receive any proceeds from the resale of shares of our common stock by the selling security holder.

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#### SELLING SECURITY HOLDERS

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

The following table sets forth certain information regarding the beneficial ownership of shares of common stock by the selling security holders as of February 23, 2004, and the number of shares of common stock covered by this prospectus. The number of shares in the table represents an estimate of the number of shares of common stock to be offered by the selling security holder.

The selling security holders identified by footnote 1 in the table below acquired their beneficial interests in the shares being offered hereby in private placements described in this Prospectus under the caption "Description of the Agreements with Certain Selling Security Holders in the January 2004 Private Placement." The selling security holders identified by footnotes 4 and 5 in the table below acquired their beneficial interests in the shares being offered hereby in private placements described in this Prospectus under the caption "Description of the Agreements with Certain Selling Security Holders in the July 2003 Private Placement."

Beneficial ownership is determined in accordance with SEC rules and includes voting or investment power with respect to the securities. This includes shares which a person or entity has the right to acquire in the next 60 days. However, each selling security holder identified by footnotes 1 or 3 in the table below is subject to certain limitations on the exercise of their warrants, if any. The most significant of these limitations is that such selling security holder may not exercise its warrants, if such conversion or exercise would cause such holder's beneficial ownership of our Common Stock (excluding shares underlying any of their unexercised warrants) to exceed 4.99% of the outstanding shares of Common Stock. Also, for such security holders, the number of shares registered also includes the number of shares which might be issuable on the occurrence of certain events which have not yet occurred and may not occur. Therefore, although they are included in the table below, the number of shares of Common Stock for some listed selling security holders may include shares that are not subject to purchase during the 60-day period. Other than the relationships described below, none of the selling security holders had or have any material relationship with us. None of the selling security holders is a broker-dealer or an affiliate of a broker-dealer to our knowledge.

Name of Selling Security Holder and Position, Office or Material Relationship with Pluristem	Common Shares owned by the Selling Security Holder	Number of Shares Issuable Upon Exercise of all of the Share Purchase Warrants	Shares Offered Pursuant to this Offering	Number of Shares Owned by Selling Security Holder After Offering and Percent of Total Issued and Outstanding if All Shares Offered are Sold	
				# of Shares	% of Class
Wayne Saker	200,000 <sup>(1)</sup>	200,000 <sup>(1)</sup>	400,000 <sup>(2)</sup>	0	0
Notzer Chesed	200,000 <sup>(1)</sup>	200,000 <sup>(1)</sup>	400,000 <sup>(2)</sup>	0	0
Alpha Capital AG	800,000 <sup>(1)</sup>	800,000 <sup>(1)</sup>	1,600,000 <sup>(2)</sup>	0	0
Generation Capital Associates	200,000 <sup>(1)</sup>	200,000 <sup>(1)</sup>	400,000 <sup>(2)</sup>	0	0
Professional Traders Fund, LLC	200,000 <sup>(1)</sup>	200,000 <sup>(1)</sup>	400,000 <sup>(2)</sup>	0	0

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David Klugmann	100,000 <sup>(1)</sup>	100,000 <sup>(1)</sup>	200,000 <sup>(2)</sup>	0	0
Bristol Investment Fund, Ltd.	600,000 <sup>(1)</sup>	600,000 <sup>(1)</sup>	1,200,000 <sup>(2)</sup>	0	0
Gross Foundation, Inc.	200,000 <sup>(1)</sup>	200,000 <sup>(1)</sup>	400,000 <sup>(2)</sup>	0	0
Stonestreet LP	400,000 <sup>(1)</sup>	400,000 <sup>(1)</sup>	800,000 <sup>(2)</sup>	0	0
Brickman Investments	100,000 <sup>(1)</sup>	100,000 <sup>(1)</sup>	200,000 <sup>(2)</sup>	0	0



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Yokim Asset Management Corp.	0	300,000 <sup>(3)</sup>	300,000	0	0
Ilana Rachmilovitz	100,000 <sup>(4)</sup>	200,000 <sup>(5)</sup>	300,000	0	0
Osnat Reuveni	83,333 <sup>(4)</sup>	166,666 <sup>(5)</sup>	249,999	0	0
Elazar Nehoray	69,444 <sup>(4)</sup>	138,888 <sup>(5)</sup>	208,332	0	0
Iris Nehoray	69,444 <sup>(4)</sup>	138,888 <sup>(5)</sup>	208,332	0	0
Altshuler Shaham Ltd.	55,556 <sup>(4)</sup>	111,112 <sup>(5)</sup>	166,668	0	0
Tsuot Sufa Mutual Fund Ltd.	27,778 <sup>(4)</sup>	55,556 <sup>(5)</sup>	83,334	0	0
David Weiss	27,778 <sup>(4)</sup>	55,556 <sup>(5)</sup>	83,334	0	0
Ruth Karasik	55,556 <sup>(4)</sup>	111,112 <sup>(5)</sup>	166,668	0	0
Hirsch Wolf	83,333 <sup>(4)</sup>	166,666 <sup>(5)</sup>	249,999	0	0
Ultimedia Sales Inc.	55,556 <sup>(4)</sup>	111,112 <sup>(5)</sup>	166,668	0	0
Shlomo Shmuelov	13,889 <sup>(4)</sup>	27,778 <sup>(5)</sup>	41,667	0	0
Magellan Summit Ltd.	11,039 <sup>(4)</sup>	22,078 <sup>(5)</sup>	33,117	0	0
Joseph Zikri	31,111 <sup>(4)</sup>	62,222 <sup>(5)</sup>	93,333	0	0
Yossef Meir Blonder	19,444 <sup>(4)</sup>	38,888 <sup>(5)</sup>	58,332	0	0
Ehud Feldman	22,222 <sup>(4)</sup>	44,444 <sup>(5)</sup>	66,666	0	0
TOTAL	3,725,483	4,750,966	8,476,449	0	0%

(1)

Represents shares of common stock that were sold to the selling security holder or shares of our common stock that are issuable to the selling security holder upon exercise of the warrant issued to such holder in connection with the Securities Purchase Agreement dated January 15, 2004 between the holder and our company.

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(2) We are registering shares equal to 150% of the shares of common stock sold to the holder plus 110% of the shares issuable to the holder upon exercise of those warrants to include shares of our common stock which might be issuable to the selling security holder as liquidated damages or as adjustment in the event of the breach of certain covenants contained in that Securities Purchase Agreement and related Registration Rights Agreement - see "Description of the Agreements with Certain Selling Security Holders in the January 2004 Private Placement." All such shares are also being offered pursuant to this Offering.

(3)

Represents the shares of our common stock that are issuable to the selling security holder upon exercise of a warrant issued to the selling security holder as a finder's fee in connection with the Securities Purchase Agreements entered into between certain selling security holders and the company dated January 15, 2004 - see "Description of the Agreements with Certain Selling Security Holders in the January 2004 Private Placement."

(4) Represents the shares of our common stock sold to the selling security holder in a private placement which closed in July, 2003 - see "Description of the Agreements with Certain Selling Security Holders in the July 2003 Private Placement."

(5) Represents the shares of our common stock that are issuable to the selling security holder upon exercise of warrants issued in the private placement which closed in July, 2003. Half of the warrants issued to the selling security holder in the private placement, which closed in July, 2003 will expire on July 16, 2004 while the balance of the warrants will expire on July 16, 2008 - see "Description of the Agreements with Certain Selling Security Holders in the July 2003 Private Placement."

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

#### PLAN OF DISTRIBUTION

The selling security holders may, from time to time, sell all or a portion of the shares of common stock on any market upon which the common stock may be quoted (currently the National Association of Securities Dealers OTC Bulletin Board), in privately negotiated transactions or otherwise. Such sales may be at fixed prices prevailing at the time of sale, at prices related to the market prices or at negotiated prices. The shares of common stock being offered for resale by this prospectus may be sold by the selling security holders by one or more of the following methods, without limitation:

- (a) block trades in which the broker or dealer so engaged will attempt to sell the shares of common stock as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- (b) purchases by broker or dealer as principal and resale by the broker or dealer for its account pursuant to this prospectus;
- (c) an exchange distribution in accordance with the rules of the exchange;
- (d) ordinary brokerage transactions and transactions in which the broker solicits purchasers;
- (e) privately negotiated transactions;
- (f) market sales (both long and short to the extent permitted under the federal securities laws);
- (g) at the market to or through market makers or into an existing market for the shares;
- (h) through transactions in options, swaps or other derivatives (whether exchange listed or otherwise);
- (i) a combination of any aforementioned methods of sale; and
- (j) any other method permitted pursuant to applicable law.

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

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

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

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

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

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

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

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

interest may be required to make in respect thereof.

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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.

**DESCRIPTION OF THE AGREEMENTS WITH CERTAIN SELLING SECURITY HOLDERS  
IN THE JANUARY 2004 PRIVATE PLACEMENT**

We are registering a portion of the shares offered in this prospectus to satisfy our obligations to certain selling security holders of our common stock who participated in our January 2004 private placement.

Under a Securities Purchase Agreement, dated as of January 15, 2004, between our company and those selling security holders who participated in our January 2004 private placement, the selling security holders collectively purchased 3,000,000 shares of our common stock at the price of \$0.50 per share. In connection with the purchase of our common stock by these holders, we issued to these holders warrants to purchase our common stock in an amount equal to one (1) share of common stock for each share of common stock purchased under the Securities Purchase Agreement.

The warrants are exercisable at a per share exercise price equal to \$0.75. This exercise price is also subject to adjustment if there are certain capital adjustments or similar transactions, such as a stock split or merger. The warrants provide for cashless exercise rights if, at the time they are exercised after May 15, 2004, there is no effective registration statement covering the resale of the holder's shares. The warrants expire approximately three years after issuance, provided, that, under certain conditions (including there being an effective registration statement and the closing price of our common stock being more than \$1.00 for each of 10 consecutive trading days), we will have the option to accelerate the expiration date to a date we choose, so long as it is not less than 60 days from the date of our election of that option.

The terms of the warrants specify that the holder can exercise its warrant by giving notice to our company. Each warrant exercise is subject to the following limitation: the holder may not exercise its warrant to the extent that such exercise would result in such holder and its affiliates beneficially owning more than 4.99% of our then outstanding common stock (after taking into account the shares of our common stock issuable upon such warrant exercise). If the holder then disposes of some or all of its holdings, it can again exercise its warrants.

Pursuant to the Securities Purchase Agreement and a Registration Rights Agreement executed and delivered at the same time, we are obligated initially to register under the Securities Act 150% of the number of shares of our common stock sold to the selling security holders who participated in the January 2004 private placement and 110% of the number of shares of our common stock issuable upon exercise of the warrants issued in that private placement. We are also obligated to keep the registration statement of which this prospectus forms a part effective until the earliest of the date on which the holders may sell without restriction all shares registered on their behalf under this prospectus under Rule 144 promulgated under the Securities Act, or the date on which such holders no longer own any of those shares of our common stock or any of those warrants. Additional obligations regarding our registration obligations are described below in this section.

In the Securities Purchase Agreement, we have agreed that, with certain exceptions pre-approved by the holders, we will not enter into any offer or sale of our common stock (or securities convertible into our common stock) with any third party on any date which is earlier than 180 days after the effective date of this prospectus (plus the number of days, if any, during which the registration statement is suspended in the interim). This 180 days prohibition period may be shortened if certain conditions are met (including there being an effective registration statement and the closing price of our common stock being more than \$0.80 for each of 10 consecutive trading days).

If we enter into a new third party transaction in breach of our obligations, we will be obligated to pay liquidated damages to the holders by issuing to the holders additional shares of our common stock equal to the number derived from dividing the total purchase price paid by the holders by an adjusted per share purchase price, less the number of our common shares already issued to such holders previously in the private placement. The adjusted per share purchase price will be determined based on the lowest of:

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(1) the holder's per share purchase price multiplied by the lower of:

(X) ninety percent (90%), or

(Y) the fraction, the numerator of which is the per share purchase price or conversion price of our common stock in the new transaction, and the denominator is \$0.75; or

(2) seventy percent (70%) of the lower of:

(X) the lowest fixed purchase price of any shares of our common stock to be sold in the new transaction, or

(Y) the lowest conversion price which would be applicable under the terms of the new transaction.

We will also adjust the number of warrants issued to such holders to equal the highest of:

(1) the number of shares underlying the warrants as originally contemplated by the Securities Purchase Agreement, or

(2) the number of shares equal to the higher of

(a) one hundred percent (100%), or

(b) the fraction the numerator of which is the number of shares which are eligible to be purchased under the warrant, option or other right issued in the new transaction and the denominator is the total number of shares issued or issuable under the new transaction (without including the number of shares represented in the numerator),

multiplied by the number of shares derived by dividing the total purchase price paid by the holders by the lowest of:

(X) the bid price for the trading day immediately preceding the initial closing date of the new transaction,

(Y) \$0.50, and

(Z) the adjusted per share purchase price for the holders as described above.

We will also adjust the exercise price for the warrants to be equal to the lowest of:

(1) the holder's per share exercise price multiplied by the fraction the numerator of which is the holder's existing per share exercise price of our common stock and the denominator is \$0.75;

(2) the lowest exercise price applicable to the new transaction; and

(3) one hundred fifty percent (150%) of the adjusted per share purchase price for holders as described above.

The holders have consented to us entering a new transaction for the sale of our securities that meets certain terms and conditions. These include:

(A) the offer and sale is made only to one or more accredited investors;

(B) the maximum amount raised in the offer and sale is \$1,500,000, less any amount raised in previous allowed new transactions; and

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(C) the sale price or conversion price is at least \$0.75 and the exercise price of warrants is at least \$1.125.

If we enter into an allowed new transaction, we may be obligated to issue to the holders additional shares of our common stock equal to the number of shares derived from dividing the total purchase price paid by the holders by an alternative per share purchase price, less the number of our common shares already issued to such holders previously on account of the holder's purchase price. The alternative per share purchase price will be determined based on the lowest of:

(1) the holder's per share purchase price, or

(2) seventy percent (70%) of the lower of:

(X) the lowest fixed purchase price of any shares of our common stock to be sold in the new transaction; and

(Y) the lowest conversion price which would be applicable under the terms of the new transaction.

We may also be required to adjust the number of warrants issued to the holders to equal to the highest of:

(1) the number of shares underlying the warrants as originally contemplated by the Securities Purchase Agreement, or

(2) the number of shares equal to the higher of

(a) one hundred percent (100%); and

(b) the fraction the numerator of which is the number of shares which are eligible to be purchased under the warrant, option or other right issued in the new transaction and the denominator is the total number of shares issued or issuable under the new transaction (without including the number of shares represented in the numerator),

multiplied by the number of shares derived by dividing the total purchase price paid by the holders by the lower of:

(X) \$0.50; and

(Y) the alternative per share purchase price for the initial closing date of the allowed new transaction;

We will also adjust the exercise price for the warrants to be equal to the lower of:

(1) the holder's existing per share exercise price; and

(2) the lowest exercise price applicable to the allowed new transaction.

The additional shares, if any, which might be issued to a holder on account of any of the adjustments referred to in the preceding paragraphs are covered by the registration statement and this prospectus.

Under the Registration Rights Agreement, we will be obligated to pay liquidated damages to the holders of our common stock who are parties to that agreement, if the Registration Statement is not filed by February 29, 2004, and if it is not declared effective by May 15, 2004 or if, the effectiveness of the Registration Statement is subsequently suspended for more than certain permitted periods. The permitted suspension periods are up to two periods during any consecutive 12-month period, but each period shall not be for more than 15 days or begin less than 10 days after the preceding suspension period ended. (The first date any such suspension commences, beyond such permitted restrictions, is referred to as a restricted sale date.)

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The amount that we must pay to these holders in respect of the liquidated damages associated with the delays in the effective date or after a restricted sale date will be

(A) 2% of the purchase price paid by each holder in the January 2004 private placement during the first three 30-day periods (or part), and

(B) 3% of the principal amount of all that purchase price for each subsequent 30-day period (or part).

After the effective date, the purchase price used in determining the liquidated damages will be based on the remaining unsold shares of Common Stock held by the holder. Notwithstanding the foregoing, no such liquidated damages will be due for the delay in the filing or the effective date if the effective date of this Prospectus actually occurs by June 14, 2004.

The holders have the right to have these liquidated damages paid in shares of Common Stock (valued at the per share purchase price). The additional shares, if any, which might be issued to a holder of the Common Stock in payment of these liquidated damages are covered by the Registration Statement and this Prospectus.

Specific amounts referred to or described in the above description in this subject are subject to adjustment in the event there are capital adjustments or similar private placement, such as a stock split or merger.

If at any time the number of shares of Common Stock to which the holders of our Common Stock and Warrants from the January 2004 private placement are entitled exceeds 85% of the number of shares of Common Stock actually included or registered under the Registration Statement, then we are required to amend the Registration Statement or file a new registration statement for additional shares of our Common Stock in an amount equal to the sum of:

(i) one hundred fifty percent (150%) of the number of shares theretofore issued to the holders plus the number of shares previously issued on exercise of the holders' Warrants,

(ii) the number of adjustment shares referred to above in this section or shares issued as liquidated damages as described above, if any, previously issued or currently issuable, and

(iii) one hundred ten percent (110%) of the number of shares covered by the unexercised Warrants.

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

DESCRIPTION OF THE AGREEMENTS WITH CERTAIN SELLING SECURITY HOLDERS  
IN THE JULY 2003 PRIVATE PLACEMENT

We are registering 2,176,449 shares of our common stock, which represent the shares of our common stock that were sold or are issuable upon the exercise of warrants issued to certain selling security holders in the private placement that closed on July 16, 2003. The securities were sold under Subscription Agreements made by our company with those selling security holders who collectively purchased a total of \$1,305,869.40 in value of our securities. In the private placement, we sold 725,483 units of our securities to a number of investors at the price of \$1.80 per unit. Each unit of our securities sold consisted of one share of our common stock and two warrants. One warrant to purchase one share of our common stock is exercisable at the price of \$2.25 per share until July 16, 2004 and the second warrant to purchase one share of our common stock is exercisable at the price of \$2.70 per share until July 16, 2008. The warrants will expire if not exercised by the date indicated. All warrants are subject to adjustment if there are capital adjustments or similar transactions, such as a stock split or merger. The terms of the warrants specify that the holder can exercise its warrant by giving notice to our company. The warrants and all rights attributed to them are transferable or assignable at the sole discretion of the warrant holder, subject to applicable securities laws and regulatory requirements.

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LEGAL PROCEEDINGS

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

DIRECTORS, EXECUTIVE OFFICERS, PROMOTERS AND CONTROL PERSONS

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

Name	Position Held with the Company	Age	Date First Elected or Appointed
Dr. Irit Arbel	President, Chief Executive Officer and Director	43	May 30, 2003
Meir Segev	Director	53	March 18, 2003
Doron Shorrer	Director	51	October 2, 2003
Hava Meretzki	Director	34	October 2, 2003
Robert Pico	Director	58	October 9, 2003
Shmuel Levi	Chief Financial Officer	55	December 17, 2003
Dr. Shai Meretzki	Chief Technology Officer	34	June 10, 2003

Business Experience



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

Dr. Irit Arbel

Dr. Irit Arbel was appointed as our Chief Executive Officer and a director of our Company on May 30, 2003. Dr. Arbel earned her Post Doctorate degree in 1997 in Neurobiology, after performing research in the area of Multiple Sclerosis. Following years of research in the fields of Alzheimer disease, immunology and osteoporosis with numerous publications, Dr. Arbel acquired a wealth of managerial experience through her position as Israeli Sales Manager of Merck, Sharp & Dohme, a leading pharmaceutical company, from 1998 to 2002. From 1995 to 1997, Dr. Arbel served as the head of research for Hadassa - Ein Karem Hospital in Jerusalem, Israel. Dr Arbel specialized in the use of pharmaceuticals for neurology, ophthalmology and dermatology treatments. Dr. Arbel also holds a Chemical Engineering degree from the Technion, Israel Institute of Technology.

Meir Segev

Meir Segev was appointed as a director of the Company on March 18, 2003. Mr. Segev graduated from the University of Haifa in 1997 with a Bachelor of Arts degree in political science. In addition to the usual course of work in political science, Mr. Segev also attended business management courses such as information technology financial management, solving conflicts in the workplace and negotiation management. In 2003, he graduated from the advanced management program at Wharton Business School in Philadelphia, PA.

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Mr. Segev has over 20 years of professional experience with the Israel Security Agency. He first joined the Israel Security Agency in 1982. Most recently, Mr. Segev served as the headquarters division head of the Israel Security Agency and was in charge of the management and strategic planning of resources and budget for the entire organization.

Doron Shorrer

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

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

Hava Meretzki

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

Robert Pico

Mr. Pico was appointed a director on October 9, 2003. Mr. Pico is presently Vice President of Business Development at TranSwitch Corporation (NASDAQ:TXCC). Mr. Pico leads all M&A activities and initialization of start-up companies through seed funding for companies that include: Teraop, Optix, IC41C, Onex (acquired by TXCC), SOSI (acquired by TXCC). Mr. Pico additionally invests on behalf of TranSwitch in companies that demonstrate significant growth opportunities including Accordian Networks. Mr. Pico performs all contract negotiations for TranSwitch when acquiring third party intellectual property such as VLSI cell libraries and semiconductor foundry service contracts from suppliers such as Texas Instruments (NYSE:TXN), TSMC in Taiwan and LSI Logic (NYSE:LSI). Mr. Pico has led the TranSwitch team consummating more than 10 acquisitions and formation of start-up companies spanning Israel, North America, Europe, and Asia. Mr. Pico is a Board member of several of these companies. Mr. Pico joined TranSwitch in 1988 and assisted in its public offering in 1995 on the NASDAQ Exchange.

Mr. Pico has a breadth of corporate management expertise spanning engineering, operations and business development. Prior to his tenure at TranSwitch he held senior positions in both large multi-national corporations such as ITT and United Technologies. Mr. Pico holds a BSEE and MS in Physics from the University of Hartford and Trinity College respectively and has completed his requirements for an MBA in Marketing from the University of Hartford.

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Shmuel Levi

Mr. Levi was appointed CFO on December 17, 2003, and prior to that was CFO of our wholly owned subsidiary, Pluristem, Ltd. From 1976 to 1986, Mr. Levi was employed by Delta Galil Industries Ltd., where he held various responsibilities in the fields of economics and finance. From 1986 to 1991, Mr. Levi was the Senior Vice-President for Finance and Administration of North Hills Israel Ltd., where he had an active role its formation as a subsidiary to a public company in the United States. Mr. Levi served as a Corporate Finance Manager of STRAUSS Group from 1991 to 1996. His duties at STRAUSS Group comprised of finance, accounting, economics, budgeting and control, including due diligence responsibility for the acquisition of a subsidiary. From 1996 to 1999, Mr. Levi was the Vice-President for Finance and Control (CFO) for RAFAEL, where he was responsible for finance, economic affairs and budgeting and control. From 1999 to 2003, Mr. Levi has acted various advisory capacities (CFO) in the fields of planning and budgeting, accounting, costing and control, financial reports, financial restructuring and economics affairs. Concurrently, Mr. Levi was involved in due diligence activities for private placements.

Mr. Levi obtained a B.Sc. in Economics and Management Engineering in 1973 and a M.Sc. in Economics in 1976, both from the Faculty of Industrial Engineering, The Technion, Haifa, Israel. Mr. Levi served as an Adjunct Senior Teaching Associate with the Faculty of Industrial and Management Engineering at The Technion.

Dr. Shai Meretzki

Dr. Shai Meretzki was the founder and the chief technology officer of our wholly owned subsidiary, Pluristem, Ltd. He received his Ph.D. in biotechnology at the Technion-Israel Institute of Technology in 2002. Dr. Meretski has conducted extensive research on the subject of stem cell expansion. His research project for his Ph.D. thesis was "Stationary packed bed bioreactor for propagation of transplantable human haemopoietic stem cells." From 1995 to

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1996, Dr. Meretzki was employed at the Department of Chemical Engineering at the Technion-Israel Institute of Technology. From 1997 to 2001, he was an instructor teaching medical students cell biology and hematology at the Rappaport Faculty of Medicine in Haifa, Israel. From 2001 to 2002, Dr. Meretzki was in charge of biological and chemical research and development for Polyheal, Ltd. in Nesher, Israel.

### Significant Employees

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

### Family Relationships

Shai and Hava Meretzki are husband and wife.

### Involvement in Certain Legal Proceedings

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

1. any bankruptcy petition filed by or against any business of which such person was a general partner or executive officer either at the time of the bankruptcy or within two years prior to that time;
2. any conviction in a criminal proceeding or being subject to a pending criminal proceeding (excluding traffic violations and other minor offenses);
3. being subject to any order, judgment, or decree, not subsequently reversed, suspended or vacated, of any court of competent jurisdiction, permanently or temporarily enjoining, barring, suspending or otherwise limiting his involvement in any type of business, securities or banking activities; and
4. being found by a court of competent jurisdiction (in a civil action), the Commission or the Commodity Futures Trading Commission to have violated a federal or state securities or commodities law, and the judgment has not been reversed, suspended, or vacated.

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## SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth, as of February 23, 2004, certain information with respect to the beneficial ownership of our common stock by each security holder known by us to be the beneficial owner of more than 5% of our common stock and by each of our current directors and executive officers. Each person has sole voting and investment power with respect to the shares of common stock, except as otherwise indicated. Beneficial ownership consists of a direct interest in the shares of common stock, except as otherwise indicated.

Title of Class	Name and Address of Beneficial Owner	Amount and Nature of Beneficial Owner	Percentage of Class <sup>(1)</sup>
Common Shares	CEDE & Co. PO Box 20 Bowling Green Station New York, NY 10004	8,525,300	32.1%
Common Shares		5,102,784 <sup>(2)</sup>	19.21%

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	Shai Meretzki 38 Raul Wallenberg Haifa, Israel		
Common Shares	Ankor LLC <sup>(3)</sup> Lichenstein 3, AP 15 Vienna A - 1090, Austria	1,834,000	6.91%
Common Shares	Doron Shorer 33 Koreh Hadorot Street Jerusalem, Israel 93393	225,588 <sup>(4)</sup>	0.85%
Common Shares	Dr. Irit Arbel 6 Hadishon Street Jerusalem, Israel 96596	505,968 <sup>(5)</sup>	1.91%
Common Shares	Meir Segev Beit-Izhak, Israel 42920	179,188 <sup>(6)</sup>	0.67%
Common Shares	Hava Meretzki 38 Raul Wallenberg Haifa, Israel	169,188 <sup>(4)</sup>	0.64%
Common Shares	Robert Pico 3 Field Drive Woodbridge, Connecticut 06525	84,600 <sup>(4)</sup>	0.32%
Common Shares	Shmuel Levi 14 Hanita Street Nahariya L3, Israel 22385	300,784 <sup>(4)</sup>	1.13%
Common Shares	Directors and Officers (as a group)	6,568,100 <sup>(7)</sup>	24.73%

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(1)

Based on 26,558,483 shares of common stock issued and outstanding as of February 23, 2004. Except as otherwise indicated, we believe that the beneficial owners of the common stock listed above, based on information furnished by such owners, have sole investment and voting power with respect to such shares, subject to community property laws where applicable. Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Shares of common stock subject to options or warrants currently exercisable, or exercisable within 60 days, are deemed outstanding for purposes of computing the percentage ownership of the person holding such option or warrants, but are not deemed outstanding for purposes of computing the percentage ownership of any other person.

(2)

4,802,000 of which are registered under the name of A.R.Y. Holdings Ltd., which are owned and controlled by Dr. Shai Meretzki. 300,784 of which are options to purchase shares of common stock granted on December 30, 2003 that are currently exercisable or exercisable within 60 days.

(3)

Ankor L.L.C. is owned and controlled by Dr. Alexander Korat.

(4)

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

(5)

375,968 of which are options to pur