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UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549

**SCHEDULE 14A**

(Rule 14a-101)  
SCHEDULE 14A INFORMATION

Proxy Statement Pursuant to Section 14(a) of the  
Securities Exchange Act of 1934  
(Amendment No. \_\_)

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

Preliminary Proxy Statement.

Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2)).

Definitive Proxy Statement.

Definitive Additional Materials.

Soliciting Material Pursuant to §240.14a-12.

**Pluristem Therapeutics Inc.**

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if Other Than the Registrant)

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Payment of Filing Fee (Check the appropriate box):

No fee required.

Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

(1) Title of each class of securities to which transaction applies:

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(2) Aggregate number of securities to which transaction applies:

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(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

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(4) Proposed maximum aggregate value of transaction:

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(5) Total fee paid:

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Fee paid previously with preliminary materials.

Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

(1) Amount Previously Paid:

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(2) Form, Schedule or Registration Statement No.:

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(3) Filing Party:

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(4) Date Filed:

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**PLURISTEM THERAPEUTICS INC.**

**NOTICE OF ANNUAL MEETING OF STOCKHOLDERS**

To Be Held On May 17, 2011

You are hereby notified that the annual meeting of stockholders of Pluristem Therapeutics Inc., or the Company, will be held on the 17<sup>th</sup> day of May 2011 at 5:00 p.m., local time, at our offices, Matam Advanced Technology Park Building No. 20, Haifa, Israel, 31905, for the following purposes:

1. To elect eight directors to serve until the next annual meeting of stockholders and until their respective successors shall have been duly elected and qualified; and
2. To consider and act upon such other business as may properly come before the meeting or any adjournment or postponement thereof.

All stockholders are cordially invited to attend the annual meeting. If your shares are registered in your name, please bring the admission ticket attached to your proxy card. If your shares are registered in the name of a broker, trust, bank or other nominee, you will need to bring a proxy or a letter from that broker, trust, bank or other nominee or your most recent brokerage account statement, that confirms that you are the beneficial owner of those shares. If you do not have either an admission ticket or proof that you own shares of the Company, you will not be admitted to the meeting.

The Board of Directors has fixed the close of business on April 14, 2011, as the record date for the meeting. Only stockholders on the record date are entitled to notice of and to vote at the meeting and at any adjournment or postponement thereof.

Your vote is important regardless of the number of shares you own. The Company requests that you complete, sign, date and return the enclosed proxy card without delay in the enclosed postage-paid return envelope, even if you now plan to attend the annual meeting. You may revoke your proxy at any time prior to its exercise by delivering written notice or another duly executed proxy bearing a later date to the Secretary of the Company, or by attending the annual meeting and voting in person.

**INTERNET AVAILABILITY OF PROXY MATERIALS**

This notice of meeting, the proxy statement, annual report and proxy card are available at [http://www.pluristem.com/index.php?option=com\\_content&view=article&id=164&Itemid=115](http://www.pluristem.com/index.php?option=com_content&view=article&id=164&Itemid=115).

By order of the Board of Directors,

**Yaky Yanay, Chief Financial Officer and Secretary**

April 14, 2011

**IMPORTANT: In order to secure a quorum and to avoid the expense of additional proxy solicitation, please sign, date and return your proxy promptly in the enclosed envelope even if you plan to attend the meeting personally. Your cooperation is greatly appreciated.**

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**PLURISTEM THERAPEUTICS INC.**  
Matam Advanced Technology Park  
Building No. 20  
Haifa, Israel, 31905

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**PROXY STATEMENT**

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**INTRODUCTION**

This proxy statement and the accompanying proxy are being mailed by Pluristem Therapeutics Inc., or the Company, to the holders of record of the Company's outstanding shares of Common Stock, \$0.00001 par value per share, or Common Stock, commencing on or about April 14, 2011. The accompanying proxy is being solicited by the Board of Directors of the Company, or the Board, for use at the annual meeting of stockholders of the Company, or the Meeting, to be held on the 17<sup>th</sup> day of May 2011 at 5:00 p.m. local time, at our offices, Matam Advanced Technology Park Building No. 20, Haifa, Israel, 31905 and at any adjournment or postponement thereof. The cost of solicitation of proxies will be borne by the Company. Directors, officers and employees of the Company may assist in the solicitation of proxies by mail, telephone, telefax, in person or otherwise, without additional compensation. Brokers, custodians and fiduciaries will be requested to forward proxy soliciting materials to the owners of stock held in their names and the Company will reimburse them for their reasonable out-of-pocket expenses incurred in connection with the distribution of such proxy materials.

The Board has fixed April 14, 2011 as the record date for the Meeting. Only stockholders of record on April 14, 2011, or the Record Date, are entitled to notice of and to vote at the Meeting or any adjournment or postponement thereof. On April 14, 2011, there were issued and outstanding 41,607,517 shares of Common Stock. Each share of Common Stock is entitled to one vote per share.

The Company's Bylaws provide that a quorum shall consist of the representation at the Meeting, in person or by proxy, of stockholders entitled to vote at least thirty three and one third percent (33 1/3%) of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy. Abstentions may be specified on all proposals. Abstentions will be counted as present for purposes of determining a quorum and will be counted as not approving the proposal in question. Submitted proxies which are left blank will also be counted as present for purposes of determining a quorum, but are not counted for purposes of determining whether a proposal has been approved in matters where the proxy does not confer the authority to vote on such proposal, and thus have no effect on its outcome.

The affirmative vote of the holders of a majority of the stock having voting power present in person or represented by proxy shall be sufficient for the election of each of the director nominees, and for the approval of any other business which may properly be brought before the Meeting or any adjournment or postponement thereof.

All shares of Common Stock represented in person or by valid proxies received by the Company prior to the date of, or at, the Meeting will be counted for purposes of determining the presence of a quorum for taking action on the proposals set forth below and be voted as specified in the proxies or voting instructions. With regard to the election of directors, votes may be cast for or against particular director nominees, left blank or stockholders may abstain from voting for each nominee. Votes that are left blank will be voted FOR the election of the directors named on the proxy. With regard to other matters that may properly come before the Meeting, votes will be cast at the discretion of the proxies.

Broker non-votes occur when a beneficial owner of shares held in "street name" does not give instructions to the broker or nominee holding the shares as to how to vote on matters deemed "non-routine." Generally, if shares are held in street name, the beneficial owner of the shares is entitled to give voting instructions to the broker or nominee holding the shares. If the beneficial owner does not provide voting instructions, the broker or nominee can still vote the shares with respect to matters that are considered to be "routine," but not with respect to "non-routine" matters. In the event that a broker, bank, or other agent indicates on a proxy that it does not have discretionary authority to vote certain shares on a non-routine proposal, then those shares will be treated as broker non-votes.

Proposal No. 1 (election of directors) is a non-routine proposal; your broker, bank or other agent is not entitled to vote your shares without your instructions.

Any stockholder who has submitted a proxy may revoke it at any time before it is voted, by written notice addressed to and received by our Secretary, by submitting a duly executed proxy bearing a later date or by electing to vote in person at the Meeting. The mere presence at the Meeting of the person appointing a proxy does not, however, revoke the appointment.

On or about April 14, 2011, this proxy statement, together with the related proxy card, is being mailed, at our expense, to our stockholders of record as of the Record Date. Our annual report to our stockholders for the fiscal year ended June 30, 2010, or Fiscal 2010, including our financial statements, is being mailed, at our expense, together with this proxy statement to all of our stockholders of record as of the Record Date. In addition, we have provided brokers, dealers, banks, voting trustees and their nominees, at our expense, with additional copies of our annual report so that our record holders could supply these materials to our beneficial owners as of the Record Date.

**IMPORTANT:** If your shares are held in the name of a brokerage firm, bank, nominee or other institution, you should provide instructions to your broker, bank, nominee or other institution on how to vote your shares. Please contact the person responsible for your account and give instructions for a proxy to be completed for your shares.

Our website address is included several times in this proxy statement as a textual reference only and the information in our website is not incorporated by reference into this proxy statement.

#### **PROPOSAL NO. 1 — ELECTION OF DIRECTORS**

At the Meeting, eight directors are to be elected, which number shall constitute our entire Board, to hold office until the next annual meeting of stockholders and until their successors shall have been duly elected and qualified. Unless otherwise specified in the proxy, it is the intention of the persons named in the enclosed form of proxy to vote the stock represented thereby for the election as directors, each of the nominees whose names and biographies appear below. All of the nominees whose names and biographies appear below are presently our directors. In the event any of the nominees should become unavailable or unable to serve as a director, it is intended that votes will be cast for a substitute nominee designated by the Board. The Board has no reason to believe that the nominees named will be unable to serve if elected. Each nominee has consented to being named in this proxy statement and to serve if elected.

#### **Principal Employment and Experience of Director Nominees**

The following information is furnished with respect to the persons nominated for election as directors, all of these nominees are current members of our Board:

Name	Age	Present Principal Employer and Prior Business Experience
Zami Aberman	57	Mr. Aberman became our Chief Executive Officer and President in September 2005 and a director of the Company in November 2005. Mr. Aberman has served as our Chairman of the Board since April 2006, and between May 2007 and February 2009 he was Co-Chairman with Mr. Mark Germain. He has 25 years of experience in marketing and management in the high technology industry. Mr. Aberman has held positions of Chief Executive Officer and Chairman positions in companies in Israel, the United States, Europe, Japan and Korea. Mr. Aberman operated within high-tech global companies in the fields of automatic optical inspection, network security, video over IP, software, chip design and robotics. He has served as the chairman of Rose Hitech Ltd., a private investment company. He has served in the past as the 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., a company involved in data management. Prior to that, Mr. Aberman served as the President and CEO of Elbit Vision System Ltd. (EVSNF. OB), a company engaged in automatic optical inspection. Prior to his service with the Company, Mr. Aberman has served as President and CEO of Netect Ltd., specializing in the field of internet security software and was the Co-Founder, President and CEO of Associative Computing Ltd., which developed an associative parallel processor for real-time video processing. He has also served as Chairman of Display Inspection Systems Inc., specializing in laser based inspection machines and as President and CEO of Robomatix Technologies Ltd.

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

We believe that Mr. Aberman's qualifications to sit on our Board of Directors include his years of experience in the financial markets in Israel and globally, as well as his experience in serving as the CEO of publicly traded entities.

Israel Ben-Yoram\* 50 Mr. Ben-Yoram became a director of the Company in January 2005. He has been a director and partner in the accounting firm of Mor, Ben-Yoram and Partners in Israel since 1985. In addition, since 1992, Mr. Ben-Yoram has been a shareholder and has served as the head director of Mor, Ben-Yoram Ltd., a private company in Israel in parallel to the operation of Mor, Ben-Yoram and Partners. This company provides management services, economic consulting services and other professional services to businesses. Furthermore, Mr. Ben-Yoram is the CEO of Eshed Dash Ltd. and Zonbit Ltd. During 2003-2004 Mr. Ben-Yoram served as a director of Brainstorm Cell Therapeutics Inc. (BCLI) and Smart Energy solutions, Inc. (SMGY), both of which were traded on the NASDAQ.

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 LL.B. and an MBA from Tel Aviv University and an LL.M. from Bar Ilan University. In addition, Mr. Ben-Yoram is qualified in arbitration and in mediation.

We believe that Mr. Ben-Yoram's qualifications to sit on our Board of Directors include his years of experience in the high-tech industry, his experience serving as a director of NASDAQ companies, as well as his knowledge and familiarity with corporate finance and accounting.

Isaac Braun\* 58 Mr. Braun became a director of the Company in July, 2005. Mr. Braun is a business veteran with entrepreneurial, industrial and manufacturing experience. He is a co-founder and has been a 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 capital and business development.

We believe that Mr. Braun's qualifications to sit on our Board of Directors include his years of experience in the high-tech industry, as well as his knowledge and familiarity with corporate finance.

Mark Germain*	60	<p>Mr. Germain became a director of the Company in May 2007. Between May 2007 and February 2009, Mr. Germain served as Co-Chairman of our Board. For more than five years, Mr. Germain has been a merchant banker serving primarily the biotech and life sciences industries. He has been involved as a founder, director, chairman of the board of, and/or investor in, over twenty companies in the biotech field, and assisted many of them in arranging corporate partnerships, acquiring technology, entering into mergers and acquisitions, and executing financings and going public transactions. He graduated from New York University School of Law in 1975, Order of the Coif, and was a partner in a New York law firm practicing corporate and securities law before leaving in 1986. Since then, and until he entered the biotech field in 1991, he served in senior executive capacities, including as president of a public company, which was sold in 1991. In addition to being Co-Chairman of the Company, Mr. Germain is a director of the following publicly traded companies: Stem Cell Innovations, Inc., ChromaDex, Inc., Ommimune Corp. and Collexis Holdings, Inc. He is also a co-founder and director of a number of private companies in the biotechnology field.</p> <p>We believe that Mr. Germain's qualifications to sit on our Board of Directors include his years of experience in the biotech industry, his experience serving as a director of public companies, as well as his knowledge and familiarity with corporate finance.</p>
Hava Meretzki	42	<p>Ms. Meretzki became a director of the Company in October, 2003. Ms. Meretzki is an attorney and is a partner in the law firm of Meretzki - Tavor 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 is a member of the committee that nominates legal advisers for Israeli governmental companies.</p> <p>Ms. Meretzki received a Bachelors Degree in Law from the Hebrew University in 1991 and was admitted to the Israel Bar Association in 1993.</p> <p>We believe that Ms. Meretzki's qualifications to sit on our Board of Directors include her years of experience with legal and corporate governance matters.</p>
Nachum Rosman*	65	<p>Mr. Rosman became a director of the Company in October 2007. In 1999, Mr. Rosman founded Talecity Ltd., a movie production company, and has since been serving as its Chief Financial Officer. In addition he provides management and consulting services to startup companies in the financial, organizational and human resource aspects of their operations. Mr. Rosman also serves as a director at several privately held companies. Throughout his career, Mr. Rosman held Chief Executive Officer and Chief Financial Officer positions in Israel, the United States and England. In these positions he was responsible, among other things, for finance management, fund raising, acquisitions and technology sales.</p> <p>Mr. Rosman holds a B.Sc. in Management Engineering and an M.Sc. in Operations Research from the Technion, Haifa, Israel. Mr. Rosman also participated in a Ph.D. program in Investments and Financing at the Tel Aviv University, Israel.</p> <p>We believe that Mr. Rosman's qualifications to sit on our Board of Directors include his years of experience in the high-tech industry, as well as his knowledge and familiarity with corporate finance.</p>
Doron Shorrer*	58	<p>Mr. Shorrer became a director of the Company in October, 2003. Mr. Shorrer also serves as a director of other companies: AIG Israel Insurance Company Ltd., Omer Insurance Mutual Fund, Provident Fund for employees of the Israel Electric Company Ltd., and Massad Bank from the International Bank group - a company that is trading at the Tel-Aviv Stock Exchange. Between 1999 and 2004 he was Chairman of the Boards of Phoenix Insurance Company, one of the largest insurance companies in Israel, and of Mivtachim Pension Benefit Group, the largest pension fund in Israel. Prior to serving in these positions, Mr. Shorrer held senior positions 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.</p>

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).

We believe that Mr Shorrer's qualifications to sit on our Board of Directors include his years of experience in the high-tech industry, his vast skill and expertise in accounting and economics, as well as his knowledge and familiarity with corporate finance.

Shai Pines 57 Mr. Pines became a director of the Company in December 2008. Mr. Pines is a lawyer admitted to practice law in the State of Israel since 1981. He is a partner with, and heads the Commercial and International Transactions Department, of the Israeli law firm of Hamburger Evron & Co. From 2000 to 2009 Mr. Pines served as a member of the Supervisory Board of Globe Trade Centre SA (GTC), a Polish company, which is traded on the Warsaw Stock Exchange, and from 2000 to 2005 as a member of the Supervisory Board of GTC International BV, a Dutch private company. Mr. Pines is also a member of the Board of Governors of the Law Faculty of the Tel-Aviv University since 2006. Mr. Pines holds an MBA degree from Kellogg School of Management, Northwestern University, & the Leon Recanati Graduate School of Business Administration, Tel-Aviv University and an LL.B. degree from Tel-Aviv University.

We believe that Mr. Pines's qualifications to sit on our Board of Directors include his years of experience in the high-tech industry, his experience serving as a director of public companies, as well as his knowledge and familiarity with corporate finance.

\* The Board determined that this director is "independent" as defined by the rules of the Securities and Exchange Commission, or SEC, and NASDAQ Stock Market, or NASDAQ, rules and regulations. None of the independent directors has any relationship with us besides serving on our Board.

#### Required Vote

The affirmative vote of the holders of a majority of the stock having voting power present in person or represented by proxy shall be sufficient for the election of each of the director nominees.

**The Board recommends a vote FOR the election of each of the director nominees named above.**

## CORPORATE GOVERNANCE

### Committees and Meetings of Our Board of Directors

The Board held 7 meetings during Fiscal 2010. Throughout this period, each member of our Board who was a director in Fiscal 2010 attended or participated in at least 75% of the aggregate of the total number of meetings of our Board held during the period for which such person has served as a director, and the total number of meetings held by all committees of our Board on which each the director served during the periods such director served, except for Hava Meretzki. Our Board has two standing committees: the Compensation Committee and the Audit Committee.

**Compensation Committee.** The members of our Compensation Committee are Doron Shorrer, who serves as the Chairman of such committee, Nachum Rosman and Israel Ben-Yoram. The Board has determined that all of the members of the Compensation Committee are "independent" as defined by the rules of the SEC and NASDAQ rules and regulations. The Compensation Committee operates under a written charter that is posted on our website at [www.pluristem.com](http://www.pluristem.com). The primary responsibilities of our Compensation Committee include:

- Reviewing, negotiating and approving, or recommending for approval by our Board, the salaries and incentive compensation of our executive officers;
- Administering our equity based plans and making recommendations to our Board with respect to our incentive-compensation plans and equity-based plans; and
- Periodically reviewing and making recommendations to our board with respect to director compensation.

The Compensation Committee meets without the presence of any executive officer whose compensation it is then approving. The Compensation Committee may delegate any authority granted to it with respect to officer compensation to the Chair or any other member of the Compensation Committee in its sole discretion.

Our Compensation Committee held three meetings during Fiscal 2010.

**Audit Committee.** The members of our Audit Committee are Doron Shorrer, who serves as the Chairman of such committee, Nachum Rosman and Israel Ben-Yoram. Our Board has determined that Israel Ben-Yoram is an "audit committee financial expert" as defined by SEC rules and that all members of the Audit Committee are "independent" as defined by the rules of the SEC and the NASDAQ rules and regulations. The Audit Committee operates under a charter that is posted on our website at [www.pluristem.com](http://www.pluristem.com). The primary responsibilities of our Audit Committee include:

- Appointing, compensating and retaining our registered independent accounting firm;
- Overseeing the work performed by any independent accounting firm;
- Assisting the Board in fulfilling its responsibilities by reviewing: (i) the financial reports provided by us to the SEC, our stockholders or to the general public, and (ii) our internal financial and accounting controls; and

- Recommending, establishing and monitoring procedures designed to improve the quality and reliability of the disclosure of our financial condition and results of operations.

Our Audit Committee held seven meetings during Fiscal 2010.

**Nominating/Corporate Governance: Director Candidates.** The Company does not have a Nominating Committee or Corporate Governance Committee or any committees of a similar nature, nor any charter governing the nomination process. Our Board does not believe that such committees are needed for a company our size. However, our independent directors will consider stockholder suggestions for additions to our Board.

All directors nominees to the Board are selected and recommended to the Board by a majority of independent directors of the Company. In considering whether to recommend any particular candidate for inclusion in the Board's slate of recommended director nominees, our independent directors will apply criteria including the candidate's integrity, business acumen, knowledge of our business and industry, age, experience, diligence, conflicts of interest and the ability to act in the interests of all stockholders. No particular criteria will be a prerequisite or will be assigned a specific weight, nor do we have a diversity policy. We believe that the backgrounds and qualifications of our directors, considered as a group, should provide a composite mix of experience, knowledge and abilities that will allow the Board to fulfill its responsibilities.

The Company has never received communications from stockholders recommending individuals to any of our independent directors. Therefore we do not yet have a policy with regard to the consideration of any director candidates recommended by stockholders. In Fiscal 2010, we did not pay a fee to any third party to identify or evaluate, or assist in identifying or evaluating, potential nominees for our Board. We have not received any recommendations from stockholders for Board nominees. All of the nominees for election at the Meeting are current members of our Board.

**Board Leadership Structure.** Our leadership structure includes the positions of Chairman of the Board and Chief Executive Officer. The Company believes this structure is appropriate for a company of our size and complexity because the Chairman and Chief Executive Officer (a) is most familiar with the Company's business and industry, (b) posses detailed and in-depth knowledge of the issues, opportunities and challenges facing the Company, and is thus best positioned to develop agendas to ensure the Board's time and attention are focused on matters which are critical to the Company, and (c) conveys a clear, cohesive message to our stockholders, employees and industry partners.

Mr. Zami Aberman serves both as our Chairman of the Board and Chief Executive Officer. In his position as Chairman of the Board, Mr. Aberman is responsible for setting the agenda and priorities of the Board. As Chief Executive Officer, Mr. Aberman leads our day-to-day business operations and is accountable directly to the full Board. As Chief Executive Officer, Mr. Aberman has day-to-day responsibility, together with Mr. Yaky Yanay, our Chief Financial Officer, for our management operations and for general oversight of our business and the various management teams that are responsible for our day-to-day operations. We believe that this structure provides an efficient and effective leadership model for the Company.

The Company has a lead independent director who is elected annually by our Board. We believe that the combined role of Chairman and Chief Executive Officer, together with an empowered lead independent director, is the optimal Board structure to provide independent oversight and hold management accountable while ensuring that our Company's strategic plans are pursued to optimize long-term shareholder value.

Because the Chairman of the Board is also the Chief Executive Officer, the Board has designated an independent director to serve as the lead independent director to enhance the Board's ability to fulfill its responsibilities independently. The Board appointed Doron Shorrer as lead independent director. The lead independent director serves as the liaison between the Chairman and the independent directors.

**Risk Oversight.** The Board, including the Audit Committee and Compensation Committee, periodically reviews and assesses the significant risks to the Company. Our management is responsible for the Company's risk management process and the day-to-day supervision and mitigation of risks. These risks include strategic, operational, competitive, financial, legal and regulatory risks. Our Board leadership structure, together with the frequent interaction between our directors and management, assists in this effort. Communication between our Board and management regarding long-term strategic planning and short-term operational practices include matters of material risk inherent in our business.

The Board plays an active role, as a whole and at the committee level in overseeing management of the Company's risks. Each of our Board Committees is focused on specific risks within their areas of responsibility, but the Board believes that the overall enterprise risk management process is more properly overseen by all of the members of the Board. The Audit Committee is responsible for overseeing the management of financial and accounting risks. The Compensation Committee is responsible for overseeing the management of risks relating to executive compensation plans and arrangements. While each committee is responsible for the evaluation and management of such risks, the entire Board is regularly informed through committee reports. The Board incorporates the insight provided by these reports into its overall risk management analysis.

The Board administers its risk oversight responsibilities through the Chief Executive Officer and the Chief Financial Officer, who, together with management representatives of the relevant functional areas review and assess the operations of the Company as well as operating management's identification, assessment and mitigation of the material risks affecting our operations.

#### COMMUNICATING WITH OUR BOARD OF DIRECTORS

Our Board will give appropriate attention to written communications that are submitted by stockholders, and will respond if and as appropriate. Mr. Doron Shorrer, one of our independent directors and the Chairman of our Audit Committee, with the assistance of our outside counsel, is primarily responsible for monitoring communications from our stockholders and for providing copies or summaries to the other directors as he considers appropriate. Communications are forwarded to all directors if they relate to substantive matters and include suggestions or comments that Mr. Shorrer considers to be important for the directors to know. In general, communications relating to corporate governance and long-term corporate strategy are more likely to be forwarded than communications relating to ordinary business affairs, personal grievances and matters as to which we tend to receive repetitive or duplicative communications.

Stockholders who wish to send communications on any topic to our Board should address such communications to: Pluristem Therapeutics, Inc., c/o Doron Shorrer, at the address on the first page of this proxy statement.

#### ATTENDANCE AT SPECIAL AND ANNUAL STOCKHOLDER MEETINGS

We encourage our directors to attend our special and annual stockholders meetings. Mr. Zami Aberman, one of our directors, attended our last annual stockholder meeting.

#### EXECUTIVE COMPENSATION

The following table shows the compensation paid to the following persons for Fiscal 2010 and the fiscal year ended June 30, 2009. We do not have executive officers besides our Chief Executive Officer and our Chief Financial Officer, nor did we during Fiscal 2010.

SUMMARY COMPENSATION TABLE

Name and Principal Position	Fiscal Year	Salary (\$)(1)	Stock-based Awards (\$)(2)	Non-Equity Incentive Plan Compensation (\$)	All Other Compensation (\$)	Total (\$)
Zami Aberman	2010	331,917(3)	227,068	0	0	558,985
Chief Executive Officer	2009	247,918(3)	332,380	0	0	580,298
Yaky Yanay	2010	159,820	107,362	0	19,385(4)	286,567
Chief Financial Officer	2009	140,974	159,057	0	19,220(4)	319,251

(1) Salary payments which were in New Israeli Shekel, or NIS, were translated into US\$ at the then current exchange rate for each payment.

(2) The fair value recognized for the stock-based awards was determined as of the grant date in accordance with FASB ASC Topic 718. Assumptions used in the calculations for these amounts are included in Note 2(i) to our consolidated financial statements for fiscal 2010 included in our Annual Report on Form 10-K.

(3) Includes \$11,960 and \$16,757 paid to Mr. Aberman as compensation for services as a director in 2010 and 2009, respectively.

(4) Represents cost to us in connection with the car made available to Mr. Yanay. The Company also pays the tax associated with this benefit which is part of the amount in the Salary column in the table above.

We have the following written agreements and other arrangements concerning compensation with our executive officers:

(a) As of July 2009, and upon initiation of our clinical trial, Mr. Aberman's compensation was increased from \$20,000 to \$25,000 (before the voluntary reduction discussed below). In addition, Mr. Aberman is entitled once a year to receive an additional amount that equals the monthly consulting fee. The U.S. dollar rate will be not less than 4.35 NIS per \$. All amounts above are paid plus value added tax. Mr. Aberman will also be entitled to one and a half percent (1.5%) from amounts received by us from non diluting funding and strategic deals.

During November 2008 until April 2009, Mr. Aberman participated in a voluntary reduction of 25% of the monthly consulting fee he was entitled to receive, and a full reduction of the annual additional amount that equals the monthly consulting fee, in exchange for issuance of 133,036 shares of our common stock.

During May 2009 until April 2010, Mr. Aberman participated in another voluntary reduction of 15%, in exchange for 35,500 shares of our common stock.

Starting May 2010, Mr. Aberman agreed to participate in an additional voluntary reduction of 15%, which will last 12 months. In exchange for the salary reduction and waiving his rights to receive 25 accrued vacation days, he received 78,267 shares of our common stock.

(b) Mr. Yanay's monthly salary was 35,500 NIS. In addition, Mr. Yanay is entitled once a year to receive an additional amount that equals his monthly salary. Mr. Yanay is provided with a cellular phone and a company car pursuant to the terms of his agreement. Furthermore, Mr. Yanay was entitled to a bonus of 1.4% from amounts received by us from non diluting funding and strategic deals.

On September 23, 2009, the Board approved that Mr. Yanay's monthly salary will be increased from 35,500 NIS to 42,500 NIS and he will be entitled to a 1.0% bonus of any non diluting amounts received by the company, including strategic deals.

During November 2008 until April 2009, Mr. Yanay participated in a voluntary reduction of 25% on the monthly salary he was due to receive, in exchange for the issuance of 45,000 shares of our common stock.

During May 2009 until April 2010, Mr. Yanay participated in an additional voluntary reduction of 15% on his monthly salary and a full reduction of his annual additional amount that equals his monthly salary, in exchange for 21,300 shares of common stock.

Starting May 2010, Mr. Yanay agreed to participate in another voluntary reduction of 15%, which will last 12 months. In exchange for the salary reduction and waiving his rights to receive 20 accrued vacation days, he received 35,243 shares of our common stock.

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, except for the following: (i) Mr. Aberman will be entitled to receive an adjustment fee that equals the monthly consulting fees multiplied by 3 plus the number of years the Consulting Agreement is in force from the second year, but in any event no more than nine years in the aggregate; and (ii) Mr. Yanay may be entitled, under Israeli law and practice, to a severance payment that equals a month's salary for each twelve-month period of employment with the company. (iii) In addition, Mr. Yanay and Mr. Aberman are entitled to acceleration of the vesting of their stock options and restricted stock in the following circumstances: (1) if we terminate their employment they will be entitled to acceleration of 100% of any unvested options and restricted stock, and (2) if they resign, they will be entitled to acceleration of 50% of any unvested options and restricted stock.

*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. Our directors and executive officers may receive stock options or restricted shares at the discretion of our Board in the future.

**Outstanding Equity Awards at the End of Fiscal 2010**

The following table presents the outstanding equity awards held as of June 30, 2010 by our executive officers:

Name	Number of Securities Underlying Unexercised				Stock Awards	
	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised option (#) unexercisable	Option exercise price(\$)	Option expiration date	Number of shares that have not vested (#)	Market value of shares that have not vested (\$)
Zami Aberman	22,500	-	4.40	1/16/2016	-	-
	30,000	-	4.00	10/30/2016	-	-
	250,000	-	3.50	1/23/2017	-	-
	105,000	-	4.38	12/25/2017	-	-
	91,671	18,329(1)	0.62	10/30/2018	-	-
	-	-	-	-	46,664(3)	\$ 53,664
Yaky Yanay*	62,500	-	4.38	12/25/2017	-	-
	12,500	-	4.00	9/17/2016	-	-
	50,000	-	3.50	1/23/2017	-	-
	45,836	9,164(2)	0.62	10/30/2018	-	-
	-	-	-	-	23,330(4)	\$ 26,830
	-	-	-	-	35,243(6)	\$ 40,529
	-	-	-	-	52,500(8)	\$ 60,375

\* The above securities do not include warrants received from participation in equity investments.

- (1) Options to purchase 18,329 shares vest in one installment of 4,583 shares on July 30, 2010, and three installments of 4,582 shares on each of August 30, 2010, September 30, 2010 and October 30, 2010.
- (2) Options to purchase 9,164 shares vest in four installments of 2,291 shares on each of July 30, 2010, August 30, 2010, September 30, 2010 and October 30, 2010.
- (3) 46,664 restricted shares vest in eight installments of 5,833 shares on each of July 12, 2010, August 12, 2010, September 12, 2010, October 12, 2010, November 12, 2010, December 12, 2010, January 12, 2011 and February 12, 2011.
- (4) 23,330 restricted shares vest in two installments of 2,917 shares on each of July 12, 2010 and August 12, 2010, and six installments of 2,916 shares on each of September 12, 2010, October 12, 2010, November 12, 2010, December 12, 2010, January 12, 2011 and February 12, 2011.
- (5) 81,915 restricted shares vest in one installment of 40,959 shares on November 10, 2010, and six installments of 6,826 shares on each of December 10, 2010, January 10, 2011, February 10, 2011, March 10, 2011, April 10, 2011 and May 10, 2011.
- (6) 35,243 restricted shares vest in one installment of 17,621 shares on November 10, 2010, and 6 installments of 2,937 shares on December 10, 2010, January 10, 2011, February 10, 2011, March 10, 2011, April 10, 2011 and May 10, 2011.
- (7) 105,000 restricted shares vest in six installments of 5,834 shares on each of July 22, 2010, August 22, 2010, September 22, 2010, October 22, 2010, November 22, 2010, and December 22, 2010, and twelve installments of 5,833 shares on each of January 22, 2011, February 22, 2011, March 22, 2011, April 22, 2011, May 22, 2011, June 22, 2011, July 22, 2011, August 22, 2011, September 22, 2011, October 22, 2011, November 22, 2011 and December 22, 2011.
- (8) 52,500 restricted shares vest in twelve installments of 2,917 shares on each of July 22, 2010, August 22, 2010, September 22, 2010, October 22, 2010, November 22, 2010, December 22, 2010, January 22, 2011, February 22, 2011, March 22, 2011, April 22, 2011, May 22, 2011 and June 22, 2011, and six installments of 2,916 shares on each of July 22, 2011, August 22, 2011, September 22, 2011, October 22, 2011, November 22, 2011 and December 22, 2011.

*Aggregated Option/Exercises in Fiscal 2010 and Year End Option/Values*

During Fiscal 2010, no stock options were exercised by our executive officers.

*Long-Term Incentive Plans*

We have no long-term incentive plans, other than an option plan from 2003 and an incentive equity award plan from 2005 that was amended and restated on January 21, 2009.

**COMPENSATION OF DIRECTORS**

**Director Compensation Table for Fiscal 2010**

The following table provides information regarding compensation earned by, awarded or paid to each person for serving as a director who is not an executive officer during Fiscal 2010:

Name	Fees Earned or Paid in Cash (\$)	Stock-based Awards (\$)(1)	Total (\$)
Mark German	9,224	38,590	47,814
Nachum Rosman	15,440	38,590	54,030
Doron Shorrer	13,738	38,590	52,328
Hava Meretzki	9,289	38,590	47,879
Isaac Braun	11,270	38,590	49,860
Israel Ben-Yoram	14,702	38,590	53,292
Shai Pines	11,311	38,590	49,901

- (1) The fair value recognized for the stock-based awards was determined as of the grant date in accordance with FASB ASC Topic 718. Assumptions used in the calculations for these amounts are included in Note 2(i) to our consolidated financial statements for fiscal 2010 included in our Annual Report on Form 10-K.

We reimburse our directors for expenses incurred in connection with attending board meetings and provide the following compensation for directors: annual compensation of \$10,000; meeting participation fees of \$750 per in-person meeting; and for meeting participation by telephone, \$350 per meeting. On May 17, 2007, the Board decided that the dollar rate would be not less than 4.25 NIS per dollar. Starting November 2008, the directors participated in a voluntary reduction of 25% on their monthly fee in exchange for issuance of shares of our common stock.

On February 11, 2010 the compensation committee decided to change the meeting participation fees of Zami Aberman to a fixed compensation in the amount of total compensation received in the past 12 months (\$4,100).

During fiscal 2010 we paid a total of \$84,974 to directors as compensation. This amount does not include compensation to Mr. Aberman in his capacity as a director which is reflected in the Summary Compensation Table for Fiscal 2010 above. As of June 30, 2010, the directors (not including the chairman) held 1,374,333 options, restricted shares and restricted share units of which 1,055,913 were exercisable or vested, as the case may be.

The vesting of directors' stock options and restricted stock accelerates in the following circumstances: (1) termination of a director's position by the stockholders will result in the acceleration of 100% of any unvested options and (2) termination of a director's position by resignation will result in the acceleration of 50% of any unvested options.

Other than as described 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 our behalf other than services ordinarily required of a director. Other than as indicated in this proxy statement, no director received and/or accrued any compensation for his or her services as a director, including committee participation and/or special assignments during Fiscal 2010.

On September 23, 2009, the Compensation Committee approved an aggregate bonus of 2.5% for our 7 non-executive directors from any non-diluting amounts received by the Company (not including OCS grants), including strategic deals.

#### EXECUTIVE OFFICERS

The following table identifies our current executive officers:

Name	Age	Capacities in Which Served	In Current Position Since
Zami Aberman	57	Chief Executive Officer, President, Director and Chairman of the Board of Directors	September 26, 2005 November 21, 2005 April 3, 2006
Yaky Yanay	39	Chief Financial Officer and Secretary	November 1, 2006

## **Business Experience**

The following is a brief account of the education and business experience of each executive officer (except for Mr. Zami Aberman, whose background is described above under the caption "Principal Employment and Experience of Director Nominees") 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 they were employed.

**Yaky Yanay** Our Chief Financial Officer, Mr. Yaky Yanay, is responsible for supervising the preparation of our financial statements. Mr. Yanay has over 12 years of experience in implementation of U.S. GAAP. Mr. Yanay was appointed as our Chief Financial Officer and Secretary in November 2006. Prior to joining us, Mr. Yanay was the Chief Financial Officer of Elbit Vision Systems Ltd., a public company traded over the OTC Bulletin Board. Prior to that Mr. Yanay served as manager of audit groups of the technology sector at Ernst & Young Israel, implementing audits in accordance with U.S. GAAP. Mr. Yanay serves as a director of Elbit Vision System Ltd. He holds a bachelor's degree with honors in business administration and accounting and is a Certified Public Accountant in Israel.

## **Section 16(a) Beneficial Ownership Reporting Compliance**

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires our executive officers and directors, and persons who own more than 10% of our Common Stock, to file reports regarding ownership of, and transactions in, our securities with the SEC and to provide us with copies of those filings. Based solely on our review of the copies of such forms received by us, or written representations from certain reporting persons, we believe that during Fiscal 2010, all filing requirements applicable to our officers, directors and ten percent beneficial owners were complied with.

## **REPORT OF THE AUDIT COMMITTEE**

In the course of our oversight of the Company's financial reporting process, we have: (1) reviewed and discussed with management the audited financial statements for Fiscal 2010; (2) discussed with Kost, Forer, Gabbay & Kassierer, a member of Ernst & Young Global, or E&Y, the Company's independent registered public accounting firm, the matters required to be discussed by the statement on Auditing Standards No. 61, Communication with Audit Committees, as amended (AICPA, Professional Standards, Vol. 1, AU section 380), as adopted by the Public Company Accounting Oversight Board; (3) received the written disclosures and the letter from the independent registered public accounting firm required by applicable requirements of the standards of the Public Company Accounting Oversight Board regarding the independent accountant's communications with the Audit Committee concerning independence, and has discussed with the independent accountant the independent accountant's independence; (4) discussed with the independent registered public accounting firm its independence; and (5) considered whether the provision of nonaudit services by the independent registered public accounting firm is compatible with maintaining its independence and concluded that it is compatible at this time.

Based on the foregoing review and discussions, the Audit Committee recommended to the Board that the audited financial statements be included in the Company's Annual Report on Form 10-K for Fiscal 2010, for filing with the SEC.

By the Audit Committee of the Board of  
Directors of Pluristem Therapeutics Inc.  
Doron Shorrer, Chairman  
Nachum Rosman  
Israel Ben-Yoram

#### INFORMATION CONCERNING OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Our Audit Committee has retained E&Y, as our independent registered public accounting firm for Fiscal 2010. E&Y performed the audit of our financial statements since inception. Neither E&Y nor any of its directors has any direct or indirect financial interest in or any connection with us in any capacity other than as auditors. We do not expect to have a representative of E&Y to attend the Meeting. The following table summarizes the fees E&Y billed for the last two fiscal years:

	Twelve months ended on June 30, 2010	Twelve months ended on June 30, 2009
Audit Fees	\$ 70,000	\$ 40,000
Audit-Related Fees	None	None
Tax Fees	\$ 5,000	\$ 13,250
All Other Fees	\$ 8,879	\$ 19,135
Total Fees	<u>\$ 83,879</u>	<u>\$ 72,385</u>

**Audit Fees.** These fees were comprised of professional services rendered in connection with the audit of our consolidated financial statements for our annual report on Form 10-K and the review of our quarterly consolidated financial statements for our quarterly reports on Form 10-Q that are customary under auditing standards generally accepted in the United States. In addition, these fees include amounts paid in connection with preparing an attestation report of our registered public accounting firm regarding internal control over financial reporting. Due to recent change in the law, we were not required to obtain such attestation report.

**Tax Fees.** These fees relate to our tax compliance and tax planning.

**All Other Fees.** These fees were comprised mainly of fees relating to the preparation and filing of an application with the Israeli Office of Chief Scientist and ongoing advice in executing the approved applications.

#### **Pre-Approval Policies and Procedures**

SEC rules require that before E&Y is engaged by us to render any auditing or permitted non-audit related service, the engagement be:

1.     approved by our Audit Committee; or
2.     entered into pursuant to pre-approval policies and procedures established by the Audit Committee, provided the policies and procedures are detailed as to the particular service, the Audit Committee is informed of each service, and such policies and procedures do not include delegation of the Audit Committee's responsibilities to management.

The Audit Committee pre-approves all services provided by our independent auditors. All of the above services and fees were reviewed and approved by the Audit Committee before the services were rendered.

The Audit Committee has considered the nature and amount of fees billed by E&Y, and believes that the provision of services for activities unrelated to the audit is compatible with maintaining E&Y's independence.

None of the audit-related fees billed in Fiscal 2010 and during the twelve months ended June 30, 2010 related to services provided under the de minimis exception to the SEC's Audit Committee pre-approval requirements.

## CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The Audit Committee reviews and monitors all related person transactions which may be entered into by the Company as required by rules of the NASDAQ.

No director, executive officer, principal stockholder holding at least 5% of our Common Stock, or any family member thereof, had any material interest, direct or indirect, in any transaction, or proposed transaction, during the year ended June 30, 2010, in which the amount involved in the transaction exceeded or exceeds the lesser of \$120,000 or one percent of the average of our total assets at the year end for the last two completed fiscal years.

## STOCKHOLDER PROPOSALS

Stockholders who wish to submit proposals for inclusion in our proxy statement and form of proxy relating to our next annual meeting of stockholders must advise our Secretary of such proposals in writing by July 16, 2011.

Stockholders who wish to present a proposal at our next annual meeting of stockholders without inclusion of such proposal in our proxy materials must advise our Secretary of such proposals in writing by October 1, 2011.

If we do not receive notice of a stockholder proposal within this timeframe, our management will use its discretionary authority to vote the shares they represent, as the Board may recommend. We reserve the right to reject, rule out of order, or take other appropriate action with respect to any proposal that does not comply with these requirements.

## SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information, to the best knowledge and belief of the Company, as of, April 7, 2011 (unless provided herein otherwise), with respect to holdings of our Common Stock by (1) each person known by us to be the beneficial owner of more than 5% of the total number of shares of our Common Stock outstanding as of such date; (2) each of our directors, which includes all nominees; (3) each of our executive officers; and (4) all of our directors and our current executive officers as a group.

Name and Address of Beneficial Owner	Number of Shares <sup>(1)</sup>	Percentage
<b><u>Directors and Named Executive Officers</u></b>		
Zami Aberman Chief Executive Officer, Chairman of the Board, President and Director	1,205,820 <sup>(2)</sup>	2.9%
Shai Pines Director	76,642	*
Hava Meretzki Director	177,334 <sup>(3)</sup>	*
Doron Shorrer Director	208,898 <sup>(4)</sup>	*
Israel Ben-Yoram Director	188,918 <sup>(5)</sup>	*
Isaac Braun Director	176,065 <sup>(6)</sup>	*
Nachum Rosman Director	155,892 <sup>(7)</sup>	*
Mark Germain Director	421,642 <sup>(8)</sup>	1.0%
Yaky Yanay Chief Financial Officer and Secretary	506,130 <sup>(9)</sup>	1.2%
<b><u>Directors and Executive Officers as a group (9 persons)</u></b>		<b>3,117,341<sup>(10)</sup></b> <b>7.2%</b>
<b><u>5% Shareholders</u></b>		
Uri Heller 22 Magal, Savion, Israel 69629	3,814,287 <sup>(11)</sup>	8.8%

\* = less than 1%

(1) Based on 41,607,517 shares of Common Stock issued and outstanding as of April 7, 2011. 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 rights to purchase or through the conversion of a security currently exercisable or convertible, or exercisable or convertible within 60 days, are reflected in the table above and 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) Includes options to acquire 517,500 shares.

(3) Includes options to acquire 95,192 shares.

(4) Includes options to acquire 116,756 shares.

(5) Includes options to acquire 94,276 shares.

(6) Includes options to acquire 93,923 shares.

(7) Includes options to acquire 63,750 shares.

(8) Includes options to acquire 307,500 shares.

(9) Includes options to acquire 180,000 shares and warrants to acquire 20,000 shares.

(10) Includes options to acquire 1,468,897 shares and 20,000 warrants.

(11) This information is based on a report from American Stock Transfer and Trust Company, LLC, the Company's transfer agent dated April 7, 2011, and includes warrants to purchase 1,867,858 shares.

#### **HOUSEHOLDING OF ANNUAL MEETING MATERIALS**

Some banks, brokers and other nominee record holders may be participating in the practice of "householding" proxy statements and annual reports. This means that only one copy of our proxy statement or annual report may have been sent to multiple stockholders in your household. We will promptly deliver a separate copy of either document to you if you call or write us at the address shown on the first page of this proxy statement. If you want to receive separate copies of the annual report and any proxy statement in the future or if you are receiving multiple copies and would like to receive only one copy for your household, you should contact your bank, broker, or other nominee record holders, or you may contact us at the address shown on the first page of this proxy statement or by phone at 011-972-74-710-7171.

**OTHER MATTERS**

As of the date of this proxy statement, our management knows of no matter not specifically described above as to any action which is expected to be taken at the Meeting. The persons named in the enclosed proxy, or their substitutes, will vote the proxies, insofar as the same are not limited to the contrary, in their best judgment, with regard to such other matters and the transaction of such other business as may properly be brought at the Meeting.

**PLEASE DATE, SIGN AND RETURN THE PROXY CARD AT YOUR EARLIEST CONVENIENCE IN THE ENCLOSED RETURN ENVELOPE. A PROMPT RETURN OF YOUR PROXY CARD WILL BE APPRECIATED AS IT WILL SAVE THE EXPENSE OF FURTHER MAILINGS.**

By Order of the Board of Directors

/s/ Yaky Yanay

Yaky Yanay  
Chief Financial Officer and Secretary

Haifa, Israel  
April 14, 2010

\* \* \*

PLURISTEM THERAPEUTICS INC.

ANNUAL MEETING OF THE STOCKHOLDERS

MAY 17, 2011

PROXY CARD

THE FOLLOWING PROXY IS BEING SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS OF PLURISTEM THERAPEUTICS INC.

The undersigned stockholder of Pluristem Therapeutics Inc. (the "Company") hereby appoints Zami Aberman and Yaky Yanay, or any of them, as proxy and attorney of the undersigned, for and in the name(s) of the undersigned, to attend the annual meeting of stockholders of the Company (the "Stockholders Meeting") to be held at the Company's offices at Matam Advanced Technology Park Building No. 20, Haifa, Israel, 31905 on Tuesday, May 17, 2010, at 5:00 p.m. local time, and any adjournment thereof, to cast on behalf of the undersigned all the votes that the undersigned is entitled to cast at such meeting and otherwise to represent the undersigned at the Stockholders Meeting with all powers possessed by the undersigned if personally present at the Stockholders Meeting, including, without limitation, to vote and act in accordance with the instructions set forth below. The undersigned hereby acknowledges receipt of the Notice of Annual Meeting of Stockholders and revokes any proxy heretofore given with respect to such meeting.

The votes entitled to be cast by the undersigned will be cast as instructed below. If this Proxy Card is executed but no instruction is given, the votes entitled to be cast by the undersigned will be cast "FOR" each nominee in Proposal No. 1.

**PLEASE VOTE, DATE, SIGN AND MAIL YOUR PROXY CARD IN THE ENVELOPE PROVIDED AS SOON AS POSSIBLE.**

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE ELECTION OF EACH OF THE PRESIDING DIRECTORS LISTED BELOW.

1. Proposal No. 1 – Election of Directors: To elect the following nominees to the Board of Directors to serve as directors of the Company until the next annual meeting of the stockholders and until his or her successor is elected and qualified or his earlier resignation or removal:

Zami Aberman	For <input type="checkbox"/>	Against <input type="checkbox"/>	Abstain <input type="checkbox"/>
Israel Ben-Yoram	For <input type="checkbox"/>	Against <input type="checkbox"/>	Abstain <input type="checkbox"/>
Isaac Braun	For <input type="checkbox"/>	Against <input type="checkbox"/>	Abstain <input type="checkbox"/>
Mark Germain	For <input type="checkbox"/>	Against <input type="checkbox"/>	Abstain <input type="checkbox"/>
Hava Meretzki	For <input type="checkbox"/>	Against <input type="checkbox"/>	Abstain <input type="checkbox"/>
Shai Pines	For <input type="checkbox"/>	Against <input type="checkbox"/>	Abstain <input type="checkbox"/>
Nachum Rosman	For <input type="checkbox"/>	Against <input type="checkbox"/>	Abstain <input type="checkbox"/>
Doron Shorrer	For <input type="checkbox"/>	Against <input type="checkbox"/>	Abstain <input type="checkbox"/>

In their discretion, the proxies are authorized to vote upon such other business as may properly come before the Stockholders Meeting.

MARK HERE IF YOU PLAN TO ATTEND THE MEETING

MARK HERE FOR ADDRESS CHANGE AND NOTE AT RIGHT

SEE REVERSE SIDE	CONTINUED AND TO BE SIGNED ON REVERSE SIDE	SEE REVERSE SIDE
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**Note: Please sign exactly as your name appears hereon. Joint owners should each sign. When signing as attorney, executor, administrator, trustee or guardian, please give full title as such. If a corporation, please sign in full corporate name by an authorized officer or if a partnership, please sign in full partnership name by an authorized person.**

Signature: \_\_\_\_\_  
Print Name of Stockholder: \_\_\_\_\_  
Print Name of Signer: \_\_\_\_\_  
Print Title of Signer: \_\_\_\_\_  
Number of shares of Common Stock: \_\_\_\_\_

Date: \_\_\_\_\_

Signature: \_\_\_\_\_  
Print Name of Stockholder: \_\_\_\_\_  
Print Name of Signer: \_\_\_\_\_  
Print Title of Signer: \_\_\_\_\_  
Number of shares of Common Stock: \_\_\_\_\_

Date: \_\_\_\_\_