מסמך רישום

PLURISTEM THERAPEUTICS, INC.

פלוריסטם תרפיוטיקס אינק.

("החברה")

רישום למסחר של 26,429,278 מניות רגילות רשומות על שם בנות 0.00001 דולר ארה"ב ערך נקוב כל אחת (להלן: "**מניות רגילות**") מונפקות; וכן רישום למסחר של עד 5,108,306 מניות רגילות שינבעו ממימוש אופציות **(options)**, מיחידות של מניות מוגבלות **(RSUs)** וממניות מוגבלות **(RS)** קיימות בלתי סחירות אותן החברה רשאית להקצות במסגרת תוכניות אופציות, מתוכן הוקצו בפועל על ידי החברה 4,772,033 אופציות לקבלת מניות רגילות ויחידות של מניות מוגבלות וכן רישום למסחר של עד 14,262,623 מניות רגילות שינבעו ממימוש כתבי אופציה **(warrants)**, שהחברה הקצתה בפועל, ובסך הכל, עד 45,800,207 מניות רגילות.

ניירות הערך של החברה רשומים למסחר בבורסה לניירות ערך בארה"ב:

National Association of Securities Dealers Automated Quotation (NASDAQ) Capital Market

סימון ניירות הערך של החברה בבורסה בארה"ב: **PSTI**

סימון ניירות הערך של החברה בבורסה לניירות ערך בתל אביב: פלתר

ניירות הערך של החברה יירשמו למסחר לפי הוראות פרק ה3 לחוק ניירות ערך, התשכ"ח-1968, ולפיכך דיווחי החברה יהיו בשפה האנגלית ותוכנם יהיה בהתאם למתכונת הדיווח שלה בחו"ל.

תאריך: דצמבר 12, 2010

תוכן עניינים

חלק ראשון - כללי

חלק שני - מסמכים נוספים בשפת המקור (אנגלית)

חלק ראשון - כללי

1. **שם החברה, תאריך ההתאגדות ומקום ההתאגדות:** החברה, פלוריסטם תרפיוטיקס אינק. (Pluristem Therapeutics Inc.), התאגדה ב 11 במאי, 2001 במדינת נבאדה, ארה"ב.

2. **סוגי ניירות הערך שהנפיקה החברה:** מניות רגילות בנות 0.00001 דולר ארה"ב ע.נ. כל אחת[1] (להלן: "**מניות רגילות**").

3. **מקום רישום ניירות הערך למסחר:** National Association of Securities Dealers Automated Quotation (NASDAQ) Capital Market (להלן: "**נאסד"ק**").

4. **התאריך שבו נרשמו ניירות הערך לראשונה למסחר בנאסד"ק:** 10 בדצמבר, 2007.

5. **פרטי מען החברה**

מען רשום:

בחו"ל: 50 West Liberty St., Suite 880, Reno, Nevada, 89501, USA

בישראל: מרכז תעשיות מדע (מת"מ), בניין 20, חיפה, 31905.

מספר טלפון:

מספר הטלפון בישראל: 074-710-7171

מספר הפקס בישראל: 074-710-7172

מספר הטלפון ומספר הפקס בחו"ל: אין.

6. **סימון ניירות הערך**

6.1. בבורסה בחו"ל (נאסד"ק): PSTI

6.2. בבורסה לניירות ערך בתל אביב בע"מ (להלן: "**הבורסה**"): פלתר

7. **אנשי קשר של החברה**

7.1. איש קשר עם גופי הפיקוח והאכיפה של הדין הזר:

השם: Oded Har-Even, Esq.

מען: 1290 Avenue of the Americas, New York, NY 10104

טלפון: 212-660-5002

פקס: 212-660-3001

7.2. איש קשר עם רשות ניירות ערך:

השם: עו"ד ערן בן דור

מען: רוטשילד 45-41, תל אביב

טלפון: 03-7955522

פקס: 03-7955520

7.3. שם מורשה להעברת מניות (Transfer Agent)

American Stock Transfer and Trust Company, LLC

[1] לפרטים אודות ניירות ערך המירים למניות החברה שהנפיקה החברה, ראה סעיף 8.2 להלן.

8. <u>סוג וכמות ניירות הערך הרשומים למסחר בנאסד"ק</u>

8.1 <u>הרכב ההון המונפק</u>

8.1.1 14,300,842 מניות רגילות, רשומות על שם, חופשיות וסחירות.

8.1.2 12,128,436 מניות רגילות מוגבלות למסחר בהתאם לדיני ניירות הערך בארה"ב שתעודות המניה בגינן נושאות Legend, מתוכן 7,693,436 מניות רגילות מוגבלות למסחר אשר ניתן להסיר את ה- Legend שנושאות תעודות המניה שלהן.

8.1.3 26,429,278 המניות רשומות על שם בעלי המניות ואינן מניות למוכ"ז.

8.2 <u>מניות נשוא ניירות ערך המירים</u>

8.2.1 עד 5,108,306 מניות רגילות שינבעו ממימוש אופציות **(options)**, מיחידות של מניות מוגבלות **(RSUs)** וממניות מוגבלות **(RS)** קיימות בלתי סחירות אותן החברה רשאית להקצות במסגרת תוכניות אופציות[2]. עד עתה הקצתה החברה 4,772,033 אופציות לקבלת מניות רגילות ויחידות של מניות מוגבלות לעובדים, נושאי משרה ונותני שירותים. 4,673,078 מניות הרגילות שתנבענה ממימוש אופציות ומיחידות של מניות הינן חופשיות וסחירות בהתאם למסמך רישום על Form S-8 שהוגש ביום 20 באוקטובר, 2009. 98,955 יחידות של מניות מוגבלות אינן חופשיות ונושאות Legend.

במקרה של מימוש אופציות בגין מניות רגילות שלא נרשמו תחת מסמך רישום על Form S-8, המניות הרגילות תהיינה מוגבלות למסחר ותשאנה Legend, עד אשר תרשמנה תחת מסמך רישום על Form S-8 או תימכרנה תחת פטור מתאים מרישום.

8.2.2 עד 14,262,623 מניות רגילות שינבעו ממימוש כתבי אופציה **(warrants)**, מתוכן 2,940,404 מניות רגילות רשומות על שם, חופשיות וסחירות, 2,776,050 מניות רגילות, שאילו היו מוקצות היו מוגבלות למסחר בהתאם לדיני ניירות הערך בארה"ב, ו- 8,546,169 מניות רגילות שאם היו מוקצות, ניתן היה להסיר את ה- Legend שנושאות תעודות המניה שלהן.

8.3 **<u>הון רשום</u>**

8.3.1 ההון הרשום של החברה מורכב ממאה מיליון (100,000,000) מניות רגילות בנות 0.00001 דולר ארה"ב ע"נ כל אחת, וכן מעשרה מיליון (10,000,000) מניות בכורה בנות 0.00001 דולר ארה"ב ע"נ כל אחת.

8.3.2 נכון ליום ה- 25 בנובמבר, 2010, הון המניות המונפק של החברה היה מורכב מ- 26,429,278 מניות רגילות בנות 0.00001 דולר ארה"ב ע"נ כל אחת.

8.4 החברה מתחייבת, כי כל עוד מניותיה רשומות למסחר בבורסה, היא לא תוציא, לא תקצה ולא תנפיק מניות מסוג שונה מזה הרשום למסחר בבורסה, למעט בהקצאה המקיימת את הוראות סעיף 346ב(א)(1) לחוק ניירות ערך, התשכ"ח - 1968. כמו כן, החברה מתחייבת כי כל עוד מניותיה רשומות למסחר בבורסה, כל מניותיה המונפקות תהיינה נפרעות במלואן.

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[2] על פי תוכנית האופציות של החברה משנת 2005, כפי שתוקנה מעת לעת, החברה רשאית להקצות על פי תוכנית זאת מניות וניירות ערך שונים כמפורט בתוכנית בכמות המשקפת 16% מהון המניות של החברה מיד לפני ההקצאה על בסיס דילול מלא. לאור זאת, ככל שהון המניות של החברה גדל, גדל מספר ניירות הערך שהחברה יכולה להקצות על פי התוכנית האמורה. למרות האמור, הכמות המקסימאלית שאישורה למסחר מבוקש תעמוד על 5,108,306 מניות רגילות. במקרה של גידול בכמות ניירות הערך תחת תוכנית האופציות האמורה או בכלל, תפנה החברה לבורסה בבקשה להגדיל את כמות ניירות הערך הרשומים למסחר ולא יוקצו כל ניירות ערך עד לקבלת אישור הרישום למסחר.

9. <u>עיקרי הזכויות הנלוות למניות הרגילות של החברה</u>:

להלן יתוארו עיקרי הזכויות הנלוות למניות הרגילות של החברה, על פי דיני מדינת נבאדה ועל-פי ה- Restated Articles of Incorporation וה- Amendment and Restated Bylaws (להלן: "**Bylaws**") של החברה. האמור להלן הינו תיאור כוללני שאינו מתיימר להיות תיאור ממצה או פרשנות מוסמכת של הדין ואינו מהווה תחליף לעיון ב- Restated Articles of Incorporation ועיון ב- Bylaws של החברה. כמו כן, תקציר זה אינו מתיימר להיות סיכום של דיני מדינת נבאדה, לתאר כל חוק פדראלי של ארה"ב העוסק בניירות ערך, את תקנות או כללי ה- SEC, החלים אף הם על החברה ובעלי מניותיה.

מובהר בזאת כי הואיל והחברה מאוגדת לפי חוקי נבאדה, דיני החברות של ישראל אינם חלים עליה. לפיכך, אזכור של הוראות הדין בישראל בפירוט להלן, הינו לצורכי השוואה בלבד.

9.1. **<u>זכויות הצבעה</u>**

כל מניה רגילה מקנה למחזיק בה זכות להצביע באסיפות הכלליות של החברה ולהצביע בקול אחד לגבי כל מניה רגילה. באסיפה במניין חוקי, המחזיקים ברוב המניות יכולים לבחור את חברי הדירקטוריון של החברה או להחליט בכל נושא העומד לדיון בפני האסיפה, אלא אם נדרש רוב מיוחד על פי ה- Articles of Incorporation של החברה. נכון למועד מסמך רישום זה, לא נקבע רוב מיוחד על פי ה- Articles of Incorporation של החברה.

9.2. **<u>הזכות להשתתף בחלוקת דיבידנד</u>**

על פי החוק בנבאדה, החברה יכולה להחליט לחלק דיבידנד לבעלי מניותיה. לא ניתן לבצע חלוקת דיבידנד אם:

9.2.1. החלוקה תמנע מן החברה את היכולת לעמוד בחבויותיה בהגיע מועד קיומן במהלך העסקים הרגיל.

9.2.2. שווי הנכסים הכולל של החברה יפחת מסכום התחייבויותיה בתוספת הסכום שיידרש, אילו הייתה החברה מגיעה לידי פירוק במועד החלוקה, על מנת לספק בעלי זכויות עדיפות בפירוק, שזכויותיהם גוברות על זכויותיהם של בעלי מניות הנהנים מן החלוקה.

9.3. **<u>שינוי בהון מניות - עקרונות החוק בנבאדה</u>**

9.3.1. למעט אם נאמר אחרת ב- Articles of Incorporation, שינוי במספר המניות של החברה על ידי הגדלה או הקטנה במספר המניות הרשומות מכל סוג או סדרה, ובמקביל הגדלה או הקטנה (בהתאמה) של מספר המניות המונפקות מאותו סוג או סדרה (באותו יחס), ייעשה בהחלטה של הדירקטוריון, ללא צורך באישור בעלי המניות. ההחלטה יכולה לכלול אף שינוי בערך הנקוב של סוג המניות שהוגדל או הוקטן. נכון למועד מסמך רישום זה, לא נקבע רוב מיוחד על פי ה- Articles of Incorporation של החברה.

9.3.2. למעט אם נאמר אחרת ב- Articles of Incorporation, שינוי במספר המניות של החברה על ידי הקטנה במספר המניות המונפקות מכל סוג או סדרה, מבלי להקטין (בהתאמה) את מספר המניות הרשומות מאותו סוג או סדרה (באותו יחס), ייעשה בהחלטה של הדירקטוריון, ובכפוף לאישור בעלי המניות המייצגים רוב מכוח ההצבעה של כל סוג או סדרה אשר הושפע מהשינוי, ללא תלות בהגבלות על כוח ההצבעה. נכון למועד מסמך רישום זה, לא נקבע רוב מיוחד על פי ה- Articles of Incorporation של החברה.

9.3.3. על אף האמור לעיל, אם הצעה להגדלת או הקטנת מספר המניות הרשומות מסדרה או מסוג מסוים תפגע בעדיפות או כל זכות אחרת של מניות מונפקות מסוג אחר, אזי יש לקבל, בנוסף לכל אישור נדרש אחר, את אישור בעלי המניות המייצגים רוב מכוח ההצבעה של כל סוג או סדרה אשר נפגע, ללא תלות בהגבלות על כוח ההצבעה.

9.4. **<u>אסיפות בעלי מניות</u>**

9.4.1. <u>אסיפות שנתיות</u> – אסיפה כללית שנתית לצורך בחירת דירקטורים ולצורך קבלת החלטות אחרות, תיערך מדי שנה במועד ובמיקום כפי שייקבע מעת לעת על ידי הדירקטוריון. כל בעל מניות המחזיק בלפחות 5% ממניות החברה והמשתתף באסיפה רשאי לעלות נושא לדיון בפני האסיפה.

9.4.2. <u>אסיפות מיוחדות</u> – בשונה מן הדין הישראלי, על פי ה- Bylaws של החברה, ניתן לזמן אסיפות מיוחדות בכל עת על ידי נשיא החברה או מזכיר החברה בהתאם להחלטת דירקטוריון, או לבקשת בעל מניה המחזיק לפחות ב- 10% מהון המניות המונפקות בנות זכות הצבעה. האסיפות תערכנה בכל מקום במדינת נבאדה או מחוצה לה כפי שיקבע על ידי הדירקטוריון ויצוין בהודעת הזימון לאסיפה.

9.4.3. <u>מניין חוקי (Quorum)</u> – המניין החוקי באסיפה כללית הינו 33 ושליש אחוזים (33 1/3%) מהון המניות המונפק של בעלי המניות הזכאים להצביע בהתאם למרשם בעלי המניות במועד הקובע, הנוכחים באסיפה בעצמם או באמצעות מיופי כוחם. בהיעדר מניין חוקי, האסיפה תדחה מעת לעת, בהתאם להחלטת רוב בעלי המניות הנוכחים ומבלי צורך לתת הודעה בדבר הדחיה. באסיפה נדחית כאמור, אם נוכח מניין חוקי, תוכל להתקבל כל החלטה שאמורה היתה להתקבל באסיפה בהתאם להודעה המקורית. מנין חוקי באסיפה נדחית הינו עשרה אחוזים (10%) מבעלי המניות המונפקות הזכאיות להצביע בהתאם למרשם בעלי המניות במועד הקובע, הנוכחים באסיפה בעצמם או באמצעות מיופי כוחם.

9.4.4. <u>ייפוי כוח (Proxies)</u> – בכל אסיפת בעלי מניות בעל מניה רשאי למנות אדם אחר לפעול עבורו (להלן: "**מיופה כוח**") באמצעות מסמך ייפוי כוח בכתב אשר ייחתם ויוגש למזכיר החברה. במידה וקיים יותר ממיופה כוח אחד לאותו בעל מניות, רוב מיופי הכוח הנוכחים בישיבה או לפחות אחד ממיופי הכוח הנוכח בישיבה, יפעיל את סמכויותיו כמיופה כוחו של בעל המניות כפי שמפורט במסמך ייפוי הכוח.

9.4.5. <u>הודעות</u> – לכל בעל מניה הזכאי להשתתף באסיפה תשלח הודעה בכתב חתומה על ידי נשיא החברה, סגן נשיא החברה, מזכיר החברה, עוזר מזכיר או כל אדם שמונה לכך על-ידי הדירקטוריון, על כינוס אסיפה כללית של בעלי מניות. ההודעה תפרט את מקום האסיפה, מועד האסיפה (תאריך ושעה) ומטרת האסיפה. עותק של ההודעה ימסר באופן אישי באמצעות דואר רשום, פקסימיליה או דואר אלקטרוני, לא פחות מעשרה ימים ולא יותר משישים ימים לפני מועד האסיפה. זאת בשונה מן הדין הישראלי, בו הודעה על אסיפה כללית תפורסם עשרים ואחד ימים לפחות לפני כינוס האסיפה (למעט במקרים מיוחדים ולמעט כאשר ניתן להצביע באסיפה באמצעות כתבי הצבעה).

9.4.6. <u>אסיפה בהעדר הודעה</u> – החלטה שנתקבלה ע"י 90% מבעלי זכות ההצבעה באסיפת בעלי מניות או בישיבת דירקטוריון, ובתנאי שהתקיים מניין חוקי, בכתב או באמצעות נוכחותם בישיבה והסכמתם בע"פ נכללה בפרוטוקול הישיבה או בהשתתפותם בדיונים מבלי הבעת התנגדות, יהיה דינה כדין החלטה שנתקבלה באסיפת בעלי מניות או ישיבת דירקטוריון שניתנה עליה הודעה כאמור.

9.5. **<u>הדירקטוריון</u>**

9.5.1. עסקי החברה ינוהלו על ידי הדירקטוריון, בכפוף ל- Articles of Incorporation וה- Bylaws של החברה.

9.5.2. <u>מספר הדירקטורים</u> – מספר חברי הדירקטוריון יקבע מעת לעת בהחלטת דירקטוריון, אך לא יפחת מאחד (1) ולא יעלה על שלושה עשר (13) דירקטורים. דירקטור אינו חייב להיות בעל מניות. כיום מונה הדירקטוריון 8 דירקטורים.

9.5.3. <u>בחירת הדירקטורים</u> – דירקטורים ייבחרו מדי שנה באסיפה השנתית של בעלי המניות. נתפנתה משרת דירקטור בשל מוות, פקיעת כהונה או התפטרות, יהיו חברי הדירקטוריון הנותרים רשאים להמשיך במילוי תפקידיהם כדירקטורים ובלבד שמספרם לא יפחת מהמניין החוקי.

9.5.4. יו"ר הדירקטוריון ייבחר מתוך חבריו על פי רצונו ושיקול דעתו של הדירקטוריון. היו"ר ינהל את ישיבות הדירקטוריון ואסיפות בעלי המניות ויהיה בעל סמכויות נוספות כפי שיקבע הדירקטוריון.

9.5.5. <u>התפטרות דירקטור ופיטורי דירקטור</u> – כאשר דירקטור מודיע על התפטרותו, הדירקטוריון או בעלי המניות רשאים למנות דירקטור במקומו וכהונתו תתחיל כאשר ההתפטרות תקבל תוקף. על פי מסמכי ההתאגדות של החברה, בעלי מניות המחזיקים בשני שלישים (2/3) ממניות החברה רשאים בכל עת לסיים כהונת דירקטור אחד או יותר באסיפה מיוחדת למטרה זו. הפסקת כהונה תהא בת תוקף באופן מיידי, אף בטרם בחירת דירקטור חדש.

9.5.6. <u>ישיבת דירקטוריון שנתית</u> – מיד בסיום האסיפה הכללית השנתית תיערך ישיבת דירקטוריון שנתית במניין חוקי מבלי צורך ליתן הודעה על קיומה. באם לא תיערך אסיפה במועד האמור, תיערך ישיבה מיוחדת כפי שיקבע על ידי הדירקטוריון בהודעה על ישיבה מיוחדת.

9.5.7. <u>ישיבה רגילה</u> – ישיבה רגילה של הדירקטוריון תיערך בכל מקום במדינת נבאדה או מחוצה לה כפי שיקבע על ידי יושב ראש הדירקטוריון או בהסכמה בכתב של כל הדירקטורים. בהעדר קביעה או הסכמה כזו, תיערך הישיבה במשרדה הרשום של החברה. ישיבה רגילה יכולה להיערך בלא צורך בהודעה כפי שיקבע מזמן לזמן על ידי הדירקטוריון.

9.5.8. <u>ישיבה מיוחדת</u> – ניתן לערוך ישיבה מיוחדת של הדירקטוריון בכל עת במשרדה הרשום של החברה או בכל מקום במדינת נבאדה או מחוצה לה. יושב ראש הדירקטוריון, או הנשיא או סגן הנשיא או כל דירקטור רשאים לזמן ישיבה מיוחדת. עם זאת, אם מספר הדירקטורים בחברה עומד על שישה (6) דירקטורים או יותר, נדרשים שני (2) דירקטורים על מנת לזמן ישיבה מיוחדת.

9.5.9. הודעה בכתב על ישיבה מיוחדת של הדירקטוריון תימסר באופן אישי לכל דירקטור, באמצעות דואר רשום, פקסימיליה דואר אלקטרוני או באמצעי אחר של תקשורת כתובה שתשלח לכתובתו כפי שמופיעה במרשם החברה ובהעדרה, במקום הרגיל בו נערכות ישיבות הדירקטוריון. אם נשלחה הודעה על ידי הדואר, תחשב ההודעה כאילו נמסרה כהלכה, אם הגיעה ליעדה לפחות חמישה (5) ימים קודם למועד הישיבה ואם נשלחה הודעה באמצעות פקס, דואר אלקטרוני או מסירה ביד, תוך עשרים וארבע (24) שעות קודם למועד הישיבה.

9.5.10. כל דירקטור רשאי לוותר בכתב על הודעת הזימון לישיבה, לפני הישיבה או אחריה או לאשר את פרוטוקול הישיבה ועובדה זו תצוין במרשם החברה או בפרוטוקול הישיבה.

9.5.11. <u>מניין חוקי (Quorum)</u> – המניין החוקי הינו רוב הדירקטורים המכהנים, אך לא פחות מאחד. בהעדר מניין חוקי, תדחה הישיבה ליום ולשעה שיקבעו על ידי רוב הדירקטורים הנוכחים ותינתן הודעה על מועד הישיבה הנדחית לדירקטורים החסרים.

9.5.12. <u>הרוב הנדרש לקבלת החלטות</u> – החלטת הדירקטוריון תאושר ברוב הדירקטורים הנוכחים והמצביעים בישיבה, אלא אם נקבע רוב אחר בדיני מדינת נבאדה או במסמכי ההתאגדות של החברה. נכון למועד מסמך רישום זה, לא נקבע רוב אחר על פי דיני מדיני נבאדה או במסמכי ההתאגדות של החברה.

9.5.13. הדירקטוריון רשאי לקבל החלטות אף ללא התכנסות בפועל, ובלבד שכל הדירקטורים הזכאים להשתתף בדיון ולהצביע בעניין שהובא להחלטה, הסכימו בכתב ואישרו בחתימתם את ההחלטות שהתקבלו בפרוטוקול הישיבה.

9.5.14. הקמת וועדות – הדירקטוריון רשאי, בהחלטה של רוב חברי הדירקטוריון, להקים ועדות דירקטוריון ולהאציל להן מסמכויותיו. כל ועדה תמנה לפחות דירקטור אחד.

9.6. תיקון מסמכי ההתאגדות של החברה

9.6.1. Articles of Incorporation

על פי הדין החל במדינת נבאדה, תיקון או שינוי ה- Articles of Incorporation של החברה מחייב את ההליך הבא:

9.6.1.1. על הדירקטוריון לאמץ החלטה לגבי התיקון המוצע ולזמן אסיפה מיוחדת של בעלי המניות הזכאים להצביע על התיקון או להנחות שהתיקון יידון באסיפה השנתית הבאה.

9.6.1.2. אם התיקון המוצע משנה לרעה עדיפות או זכות אחרת של מניות מסדרה או סוג מסוים, אזי יש לקבל את הסכמת רוב בעלי המניות המונפקות בנות זכות-הצבעה מאותו סוג מניות, בנוסף לכל אישור אחר, בהתעלם מכל הגבלה על כוח ההצבעה.

9.6.1.3. ניתן לקבוע ב- Articles of Incorporation כי נדרש רוב גדול יותר ביחס לתיקונים מסוימים. נכון למועד מסמך רישום זה, לא נקבע רוב מיוחד.

9.6.2. By-laws

9.6.2.1. תיקון על ידי בעלי המניות – תיקון או החלפה של ה- By-laws של החברה יכול להתבצע בכל אסיפה של בעלי המניות באישור רוב מבעלי המניות המונפקות בנות זכות-הצבעה למינוי דירקטורים, כאשר בזימון האסיפה ייכלל השינוי או התיקון המוצע.

9.6.2.2. תיקון על ידי הדירקטוריון – לחילופין, תיקון או החלפה של ה- By-laws יכול להתבצע על ידי החלטת הדירקטוריון בכל ישיבה, לרבות By-laws שאומצו על ידי בעלי המניות. עם זאת, בעלי המניות רשאים לקבוע מפעם לפעם, בהצבעה ברוב של ששים ושישה אחוזים (66%), סעיפים מסוימים שהדירקטוריון לא רשאי לשנותם. נכון למועד מסמך רישום זה, לא נקבעו סעיפים כאמור.

9.7. זכויות בפירוק

על פי החוק בנבאדה, החלטה על פירוק תתקבל באסיפה מיוחדת בהסכמת רוב בעלי המניות. בפירוק החברה, הדירקטורים של החברה ימונו לנאמנים ויפרעו את כל חובותיה והתחייבויותיה של החברה. נאמני החברה יחלקו את נכסיה העודפים של החברה, בהתחשב בזכויות שהוקנו לסוג מניות כלשהו, המונפק באותה עת, בין מחזיקי המניות בשיעור יחסי לסכום שנפרע או שזוכה כנפרע על ערכן הנקוב של המניות.

9.8. תביעות נגזרות

על פי החוק בנבאדה, קודם להגשת תביעה נגזרת, על בעל מניות המבקש לתבוע בתביעה נגזרת, לפנות לדירקטוריון החברה או ליתר בעלי המניות בבקשה למצות את זכויות החברה בדרך של תובענה. בהגשת תביעה נגזרת, יפרט התובע את הפעולות שנקט מול הדירקטוריון או סמכות מקבילה בחברה (ובהעדרן, יפרט מדוע) והסיבות בשלן לא הוגשה תובענה על ידי הדירקטוריון. התובע עשוי להידרש על ידי בית המשפט לתת בטחונות להוצאות בהתבסס על הטעם שאין אפשרות סבירה שהתביעה תיטיב עם החברה, או בנסיבות אחרות.

9.9. **<u>רכש</u>**

9.9.1. בשונה מהדין הישראלי, החוק בנבאדה שולל באופן זמני את כוח ההצבעה של "מניות שליטה" (כהגדרתן להלן) של אדם או קבוצה אשר רכשו זכות המקנה "שליטה" ב"חברה מנפיקה" (כהגדרתן להלן, בהתאמה). "**מניות שליטה**" הינן מניות בחברה מנפיקה אשר יאפשרו לרוכש להיות בעל שליטה ואשר נרכשו תוך 90 הימים שקדמו להצבעה. "**שליטה**" מוגדרת כבעלות במניות אשר מאפשרות לרוכש להפעיל לפחות חמישית מכוח ההצבעה של החברה בבחירת דירקטורים. "**חברה מנפיקה**" הינה חברה העושה עסקים בנבאדה, ישירות או דרך חברה קשורה, ואשר במרשם בעלי מניותיה רשומים לפחות 200 בעלי מניות, וכתובתם של לפחות 100 מהם הינה בנבאדה ומופיעה בפנקסי המניות של החברה.

זכויות ההצבעה במניות השליטה יקבעו בהחלטת בעלי המניות המחזיקים ברוב המניות בנות זכות הצבעה, או אם הרכישה של מניות השליטה תשנה לרעה כל העדפה או זכות אחרת ביחס לסוג מניות או סדרה, על ידי בעלי המניות המחזיקים ברוב המניות מאותו סוג או סדרה שיושפע מהשינוי, למעט המניות אשר לבעל העניין יש זכויות הצבעה בהן. ההחלטה תתקבל באסיפה שנתית או מיוחדת.

9.9.2. נכון ליום 25 בנובמבר, 2010 לחברה קיימים 157 בעלי מניות רשומים, כאשר 1 מהם בעל כתובת בנבאדה. לכן החברה אינה חברה מנפיקה כהגדרתה בחוק מדינת נבאדה ולכן לא חלה על בעלי מניות שליטה בה, ככל שקיימים, המגבלה האמורה לעיל.

9.10. **<u>זכויות נוספות</u>**

החוק בנבאדה קובע כי אין לבעלי המניות זכות להשתתף בהקצאות עתידיות, אלא אם נקבע אחרת ב- Articles of Incorporation. נכון למועד מסמך רישום זה, לא נקבע אחרת ב- Articles of Incorporation של החברה.

9.11. **<u>שינוי הזכויות הצמודות למניות</u>**

שינוי הזכויות הצמודות למניה יכול להיעשות על ידי תיקון או שינוי ה- Articles of Incorporation של החברה. על תיקון כזה להיות מאושר על ידי בעלי המניות המחזיקים ברוב מניות מאותו סוג או סדרה המושפעים מהתיקון.

9.12. **<u>עסקאות עם בעלי עניין</u>**

9.12.1. בהתאם לחוק בנבאדה, חברה מקומית ("**חברה מקומית**" הינה חברה אשר התאגדה במדינת נבאדה ואשר במרשם בעלי מניותיה קיימים מעל 200 בעלי מניות) אינה יכולה לבצע עסקאות ("**עסקאות**" מוגדרות כמיזוג או איחוד של חברה עם בעל עניין או עם חברה אחרת שהיא במישרין או בעקיפין בעלת מניה שהיא בעלת עניין, או שהיא חברה קשורה לבעלת המניות או שתהיה כזו לאחר העסקה, או מכירה, השכרה, שעבוד או כל צורה של העברה של נכסים של החברה המקומית לבעל העניין, בשווי שוק של 5% או יותר מנכסי החברה המקומית, או בשווי שוק של 5% או יותר משווי המניות המונפקות של החברה המקומית, או בשווי של 10% או יותר מכושר ההשתכרות או ההכנסה הנקייה של החברה המקומית) עם בעל מניה שהינו בעל עניין בעסקה שלוש שנים מיום היווצרות העניין האמור. אלא אם כן, העסקה בה בעל המניות הפך בראשונה להיות בעל עניין אושרה על ידי הדירקטוריון לפני שבעל המניה הפך לבעל עניין.

9.12.2. נכון ליום 25 בנובמבר, 2010 לחברה היו 157 בעלי מניות רשומים ועל כן אינה נכנסת בגדר חברה מקומית לצרכי האמור בפסקה 9.12.1 לעיל.

9.12.3. עסקאות של החברה עם נושאי משרה בה:

על פי החוק בנבאדה, חברה יכולה לבצע עסקאות עם דירקטור, מנהל, או תאגיד אחר אשר הדירקטור או המנהל בחברה הינו דירקטור או מנהל בו או בעל אינטרס כספי בו, רק בהתקיים התנאים הבאים:

9.12.3.1. עובדה זו ידועה לדירקטוריון או לועדה ואלו אישרו את החוזה או העסקה בתום לב וברוב הנדרש לעסקה מבלי שנכללו בהצבעה קולות הדירקטורים בעלי העניין;

9.12.3.2. עובדה זו ידועה לבעלי המניות או לועדה ואלו אישרו את החוזה או העסקה בתום לב וברוב קולות של מחזיקי רוב זכויות ההצבעה בחברה מבלי שנכללו בהצבעה קולות בעלי העניין;

9.12.3.3. עובדה זו לא היתה ידועה לדירקטור או למנהל בעת ההתקשרות או העסקה כאשר הובאה לאישור הדירקטוריון; או

9.12.3.4. החוזה או העסקה הינם הוגנים כלפי החברה בעת שאושרו.

9.12.4. כללי הנאסד"ק דורשים כי רוב חברי הדירקטוריון בחברה יהיו דירקטורים "עצמאיים" כמוגדר בכללים אלו.

9.12.5. כללי הנאסד"ק דורשים, בין השאר, כי כל עסקאות בעלי עניין תהיינה תחת פיקוח ועדת הביקורת או ועדה דומה מטעם הדירקטוריון. החברה כפופה לכללי ה- SEC, הדורשים סטנדרטים מחמירים מדירקטורים חברי ועדת הביקורת.

9.12.6. כללי ה- SEC דורשים, בין השאר, כי חברה המוגדרת כ- "Smaller Reporting Company", כמו החברה, תדווח על כל עסקה בשווי של יותר מהנמוך מבין 120 אלף דולר או 1% או יותר ממוצע סך הנכסים של החברה על פי דוחו"ת סוף השנה שלה בשנתיים האחרונות, שהינה בין החברה ל"**אדם מקורב**" (דירקטור, חברי הנהלה, חבר בועדת דירקטוריון, מחזיק ב- 5% או יותר מזכויות ההצבעה בחברה וקרוב משפחה מדרגה ראשונה של אלו).

9.13. **<u>דרך הצבעה</u>**

הצבעה של בעל מניה אשר מניותיו מוחזקות בחשבון המסלקה ב- DDTC (Depository Trust & Clearance Corporation) באסיפת בעלי מניות של החברה, תתאפשר עם המצאת "אישור בעלות" לחברה על ידי בעל המניה לגבי החזקת מניות במועד הקובע להשתתפות באסיפה, כשהוא חתום על ידי חבר המסלקה באמצעותו מחזיק בעל המניה את המניה בחברה. בעל מניה שיצביע באמצעות כתב הצבעה, שיפורסם על ידי החברה באמצעות המגנ"א, יצרף את אישור הבעלות לכתב ההצבעה; בעל מניה שיהיה נוכח באסיפה, ימציא לחברה את אישור הבעלות בתחילת האסיפה.

טרם מועד האסיפה, תפנה החברה למסלקה בבקשה לקבלת יתרת נייר הערך הרשומה לזכות כל אחד מחברי המסלקה ביום הקובע ולקבלת ייפוי כוח מהמסלקה, והכל כמפורט בחוקי העזר של המסלקה. המסלקה תמסור לחברה רשימה כוללת של שמות חברי הבורסה בצירוף יתרת נייר הערך הרשומה במסלקה לזכות כל אחד מהחברים, וכן ייפויי כוח לחברי המסלקה ולקוחותיהם להצביע באסיפה הכללית בשמה ובמקומה של המסלקה, והכל בנוסח המפורט בחוקי העזר של המסלקה. החברה תבדוק לגבי כל חבר מסלקה כי סך כל הכמות בגינה נמסרו לה אישור בעלות על ידי זכאים לזכותם רשום נייר ערך אצל אותו חבר, אינה עולה על יתרת נייר הערך הרשומה במסלקה לזכות החבר, זאת כמפורט בחוקי העזר של המסלקה.

10. <u>אישור הבורסה לניירות ערך בתל אביב בע"מ</u>

הבורסה נתנה את אישורה לרשום בה למסחר מניות רגילות וכן מניות רגילות שתנבענה ממימוש אופציות בלתי סחירות וממימוש Warrants, כאמור בסעיפים 8.1 ו- 8.2 לעיל.

אין לראות באישור האמור של הבורסה אישור לפרטים המובאים במסמך הרישום או למהימנותם או לשלמותם ואין בו משום הבעת דעה על החברה או על טיבם של ניירות הערך המוצעים במסמך הרישום או על המחיר בו הם מוצעים.

חלק שני - מסמכים נוספים בשפת המקור (אנגלית)

ראה מצ"ב.

EDGAR Submission Header Summary

Submission Type	**10-K**
Live File	**on**
Return Copy	**on**
Submission Contact	**Yaron Kleiner**
Submission Contact Phone Number	**011-972-54-2233-054**
Exchange	**NASD**
Confirming Copy	**off**
Filer CIK	**0001158780**
Filer CCC	**plrs4*il**
Period of Report	**06/30/10**
Smaller Reporting Company	**on**
Shell Company	**No**
Voluntary Filer	**No**
Well-Known Seasoned Issuer	**No**
Notify via Filing website Only	**off**
Emails	**edgar@z-k.co.il**

Documents

10-K	**zk1008800.htm**
	10-K
EX-23.1	**exhibit_23-1.htm**
	Exhibit 23.1
EX-31.1	**exhibit_31-1.htm**
	Exhibit 31.1
EX-31.2	**exhibit_31-2.htm**
	Exhibit 31.2
EX-32.1	**exhibit_32-1.htm**
	Exhibit 32.1
EX-32.2	**exhibit_32-2.htm**
	Exhibit 32.2
GRAPHIC	**ey_color.jpg**

Module and Segment References

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

FORM 10-K

(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended **June 30, 2010**

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from [ ] to [ ]

Commission file number **001-31392**

PLURISTEM THERAPEUTICS INC.

(Name of registrant as specified in its charter)

Nevada	**98-0351734**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
MATAM Advanced Technology Park, Building No. 20, Haifa, Israel	**31905**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number **011-972-74-7107171**

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, par value $0.00001	**Nasdaq Capital Market**

Securities registered pursuant to Section 12(g) of the Act:

None.
(Title of class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

☐ Yes ☐ No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☐	Accelerated filer ☐	Non-accelerated filer ☐
Smaller reporting company ☒		(do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes ☐ No ☒

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked prices of such common equity, as of the last business day of the registrant's most recently completed second fiscal quarter.

$19,997,604

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

21,829,350 as of September 1, 2010

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Our financial statements are stated in thousands United States Dollars (US$) and are prepared in accordance with United States Generally Accepted Accounting Principles (U.S. GAAP).

In this annual report, unless otherwise specified, all dollar amounts are expressed in United States dollars.

As used in this annual report, the terms "we", "us", "our", “the Company”, and "Pluristem" mean Pluristem Therapeutics Inc. and our wholly owned subsidiary, unless otherwise indicatec

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

The statements contained in this Annual Report on Form 10-K that are not historical facts are "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. Such forward-looking statements may be identified by, among other things, the use of forward-looking terminology such as "believes," "intends," "plans" "expects," "may," "will," "should," or "anticipates" or the negative thereof or other variations thereon or comparable terminology, and similar expressions are intended to identify forward-looking statements. We remind readers that forward-looking statements are merely predictions and therefore inherently subject to uncertainties and other factors and involve known and unknown risks that could cause the actual results, performance, levels of activity, or our achievements, or industry results, to be materially different from any future results, performance, levels of activity, or our achievements, or industry results, expressed or implied by such forward-looking statements. Such forward-looking statements appear in Item 1 – “Business” and Item 7 – “Management’s Discuss and Analysis of Financial Condition and Results of Operations,” as well as elsewhere in this Annual Report and include statements regarding the following: the expected development and potential benefits from our products in treating various medical conditions, finishing our Phase I clinical trials and entering Phase II clinical trials and achieving regulatory approvals, upgrading our 3-D bioreactor operations, developing capabilities for new clinical indications of placenta expanded cells (PLX), the potential market demand for our products, our expectations regarding our short- and long-term capital requirements, our outlook for the coming months and information with respect to any other plans and strategies for our business.

The factors discussed herein, including those risks described in Item 1A. “Risk Factors”, and expressed from time to time in our filings with the Securities and Exchange Commission could cause actual results and developments to be materially different from those expressed in or implied by such statements. The forward-looking statements are made only as of the date of this filing, and except as required by law we undertake no obligation to publicly update such forward-looking statements to reflect subsequent events or circumstances.

PART I

Item 1. Business.

Our Current Business

We are a bio-therapeutics company dedicated to the commercialization of non-personalized (allogeneic) cell therapy products for the treatment of several severe degenerative, ischemic and autoimmune disorders. We are developing a pipeline of products, stored ready-to-use, that are derived from human placenta, a non-controversial, non-embryonic, adult stromal cell source. The placental adherent stromal cells (ASCs) are grown in the Company's proprietary PluriX™ three-dimensional bioreactor, which imitates the natural microstructure of the body.

We were incorporated in the State of Nevada under the name "A.I. Software, Inc." on May 11, 2001. Since 2003, we own 100% of the issued and outstanding shares of a research and development company based in Israel called Pluristem, Ltd., which is our wholly owned subsidiary.

Pluristem's first product in development, PLX-PAD, is intended to improve the quality of life of millions of people suffering from peripheral artery disease (PAD). Phase I clinical trials for PLX-PAD are now in progress in Germany and the US. The Phase I study is designed to evaluate the safety of using PLX-PAD in patients with critical limb ischemia (CLI), the end stage of PAD.

We are currently focusing on clinical indication that the route of administration is intramuscular, which means that the cells are administrated locally to the muscle and not systemically. This route of administration may be applicable for several different indications, such as: PAD, CLI, intermittent claudication, neuropathic pain, wound healing and orthopedic injuries. In addition the company reported pre-clinical studies utilizing our proprietary PLX during the systemic administration in treating for multiple sclerosis, ischemic stroke, and inflammatory bowel disease (IBD).

Once we have products ready for commercialization, we will evaluate our various sale and marketing alternatives, including licensing of our technology to other companies, manufacturing and direct sales or entering into marketing collaborations.

Scientific Background

Cell therapy is an emerging and promising field within the regenerative medicine area. The characteristics and properties of the cells vary as a function of source tissue and growth conditions. The placenta provides a unique renewable uncontroversial source of non-embryonic adult cells, representing a new vision and frontier in the cell therapy field.

The use of our placenta cells for human therapy does not require tissue matching prior to administration. Thus, allows for the development of a ready to use "of the shelf" product.

Our Technology

We develop and intend to commercialize cell therapy production technologies and products. We are expanding non-controversial placental-derived ASCs via a proprietary three dimensional (3D) process, termed PluriX™, into therapeutics for a variety of degenerative, ischemic and autoimmune disorders.

Our PluriX™ Bioreactor System uses a three-dimensional system of stromal cell cultures and substrates to create an artificial physiological environment where placental stem cells (obtaine after birth) can naturally grow and reproduce outside of the human body. Our three-dimensional process enables the large scale production of reproducible high quality cell products.

We believe that the resultant PLX (PLacental eXpanded) cell efficacy may be related to the secretion of cytokines or other potent immune modulators. Furthermore, PLX cells are immune privileged and have immunomodulatory properties, thus avoiding the recipient from immunological reactions that often accompany transplantations.

Product Candidates

- ***PLX-PAD***

We are developing PLX-PAD cells as an allogeneic therapeutic product to treat CLI which results from PAD. PLX-PAD cells are stored "ready to use" and shipped to hospitals and clinics for use as an intra-muscular treatment for the affected limb of a patient suffering from CLI. In 2008, we completed a series of pre-clinical studies showing efficacy and safety. These studies indicated a statistically significant increase in new vessel formation (angiogenesis) and blood flow in the affected limb treated with PLX-PAD cells.

Following receipt of Food and Drug Administration (FDA) and European authority approvals, we commenced enrollment of patients for our phase I clinical trials of PLX-PAD in June 2009 in Germany and in September 2009 in the US. These Phase I trials are the first time that Pluristem's PLX-PAD cells were administered to humans.

The Phase I study was designed to evaluate the safety of PLX-PAD in patients with CLI. These open-label dose-escalation studies are being performed in parallel in Germany and U.S. The design of the studies is similar, but not identical. The clinical follow-up period for both studies is three months after treatment; however, in Germany, the patients are observed for 24 months versus 12 months in the US. Several dosing groups were evaluated, adding to a better understanding of the interaction between cell number and cell distribution.

The trial in Germany is performed at the Franziskus-Krankenhaus Institute of Berlin. A total of 15 patients were enrolled in this study. The last patient was dosed in this trial in April 2010, representing the complete patient enrollment in that country.

The trial in the US is performed at three sites: Duke University Hospital, Stanford University Hospital and the Center for Therapeutic Angiogenesis (supported by the Univ. of Alabama). A total of up to 12 adults with the disease will be included in this clinical trial in the US.

On September 14, 2010 we announced results from our Phase I clinical trials utilizing our PLX-PAD. The 3 month clinical follow-up data include 21 patients, representing 77% of the patients required to complete the Phase I trials. The results suggest that PLX-PAD is potentially safe and well tolerated.

Both trials have currently met their primary safety endpoints. Further, the administration of PLX-PAD cells did not induce an immune response in any of the patients dosed, demonstrating that injection of PLX-PAD cells is well tolerated. In addition, the Phase I trials were designed to evaluate certain efficacy parameters, and the interim results suggest that the use of our PLX-PAD product was effective according to such parameters. Such efficacy parameters do not include all parameters required under applicable regulations to determine that our PLX-PAD product is effective, which will be the subject of the next stages of the clinical trials process that we plan to conduct.

Critical Limb Ischemia

Peripheral artery occlusive disease (PAOD), also known as peripheral vascular disease (PVD) or, more commonly, PAD is a term used to describe diseases caused by the obstruction of peripheral arteries resulting from atherosclerosis or other inflammatory processes that can lead to ischemia. CLI is the severe subset and natural endpoint of PAD.

PAD and CLI are aggravated by conditions such as hypercholesterolemia, smoking and diabetes with the incidence doubling in patients with these risk factors. One system for staging peripheral artery disease severity is the Rutherford categories 1 through 6, with critical limb ischemia defined by category 4 (ischemic rest pain), category 5 (minor tissue loss), and category 6 (ulceration or gangrene). The severity of the manifestations is often a reflection of the degree of obstruction in the arterial perfusion of the extremity.

Analysis of data from the 2009 update on heart disease and stroke statistics published in the journal *Circulation* (*Circulation.* 2009;119:e21-e181. Published online before print December 15, 2008) indicates that approximately 8 million people over the age of 40 in the United States are with afflicted with PAD. PAD increases significantly with age, rising to as high as approximately 20% of the population of those over the age of 70, which has resulted in a growing market for therapies intended to treat this disorder. According to The Sage Group Report of April 17, 2007 an estimated 2 million people in the U.S. have CLI. Reflecting the ageing population, this number is projected to grow to almost 2.8 million by 2020. However, if the prevalence of diabetes continues to increase, there could be over 3.5 million cases of CLI by 2020.

- ***Other product candidates***

Additionally we have reported favorable results administering PLX cells in several indications, the table below summaries the status of these studies:

Product	For the treatment of	Status
PLX-ORTHO	Orthopedic indications	Pre-clinical
PLX-NEURO	Neuropathic and inflammatory pain	Pre-clinical
PLX-IBD	Inflammatory bowel disease	Pre- Clinical
PLX-STROKE	Ischemic stroke	Pre- Clinical
PLX-BMT	Bone marrow transplantation	Pre- Clinical
PLX-MS	Multiple sclerosis	Proof of concept

Intellectual Property

Our success will depend in part on our ability to protect our technology and products with patents. Our technology is patented in the U.S., Australia, Russia, Mexico, China, Hong Kon India, New Zealand, Europe and South Africa. The earliest of these patents will expire in 2020. In addition, we have patents pending in Canada, Japan and other countries.

The patents included in our portfolio address the composition, processes and therapeutic use of adherent stromal cells. We are committed to protecting our intellectual property position and to aggressively pursue our patent portfolio.

Through our experience with ASC-based product development, we have developed expertise and know-how in this field. We have built the ability to manufacture clinical grade ASCs in-house. To protect this non-patentable know-how, our policies require confidentiality agreements with our employees, consultants, contractors, manufacturers and advisors. These agreements generally provide for protection of confidential information, restrictions on the use of materials and assignment of inventions conceived during the course of performance for us. These agreements might not effectively prevent disclosure of our confidential information.

We fully own our intellectual property and we have no obligations to pay royalties to any third party, except for royalties to the Office of Chief Scientist (the "OCS") (see note 6D in our audited consolidated financial statements for fiscal 2010 included elsewhere in this Form 10-K).

Research and Development

We spent on research and development $4,301,000 and $3,141,000 in fiscal year 2010 and 2009, respectively.

Foundational Research. Our initial technology, the PluriX™ Bioreactor system, was developed by our former Chief Technology Officer, Dr. Shai Meretzki of the Technion - Israel Institute Technology's Rappaport Faculty of Medicine. Dr. Meretzki also worked in close collaboration with Professor Dov Zipori and Dr. Avinoam Kadouri of the Weizmann Institute of Science. Professor Zipori specializes in cultures and stromal cells and Dr. Kadouri specializes in the planning and creation of bioreactors. This technology was further developed by our research and development team.

Ongoing Research and Development Plan.

In July 2007, we entered into a five year collaborative research agreement with the Center for Regenerative Therapies at Charite University Hospital of Berlin (BCRT). Pluristem and BCRT are collaborating on a variety of indications utilizing adherent stromal cells derived from the placenta that have been expanded in the Company's proprietary bioreactor. The initial successful project collaboration was for developing and characterizing the mechanism of action of the PLX-PAD cells in allogeneic therapeutic product to treat CLI, which results from peripheral artery disease PAD. According to the agreement, we will be the exclusive owner of the technology and any products produced as a result of the collaboration. We plan to conduct several additional pre-clinical trials in collaboration with the BCRT. Our research and development facilities are in Haifa, Israel. The facility has been approved as a Good Manufacturing Practices (GMP) standard site for the purpose of manufacturing PLX cells by an inspector from the European Medicines Agency (EMA). In addition, the FDA approved the design of the clean room. The research and development facilities include 13,800 square feet in total.

We receive the placentas used for our research activities from hospitals in Israel. Any medical waste related to the use of placentas is treated in compliance with environmental laws and standards.

Government Regulation

The development, manufacture, commercialization and reimbursement of our cell therapy product candidates are subject to the laws and regulations of governmental authorities in the U.S. and the European Union as well as other countries in which our products will be marketed in the future. Specifically, in the U.S., the FDA and in Europe the EMA, among other activities, regulate new product approvals to establish the safety and efficacy of these products. Furthermore, various governmental statutes and regulations also govern or influence testing, manufacturing, safety, labeling, storage and record keeping related to such products and their marketing. Governments in other countries have similar requirements for testing and marketing.

The process of obtaining these approvals and the subsequent compliance with appropriate statutes and regulations require the expenditure of substantial time and money. This process takes a number of years and the expenditure of significant resources. There can be no assurance that our product candidates will ultimately receive regulatory approval.

Regulatory Process in the United States

Our product candidates are subject to regulation as biological products under the Public Health Service Act and the Food, Drug and Cosmetic Act. The FDA generally requires the following steps for pre-market approval or licensure of a new biological product:

- Pre-clinical laboratory and animal tests conducted in compliance with the Good Laboratory Practice, or GLP, requirements to assess a drug's biological activity and to identify potential safety problems, and to characterize and document the product's chemistry, manufacturing controls, formulation, and stability.
- Submission to the FDA of an Investigational New Drug, or IND application, which must become effective before clinical testing in humans can begin;
- Obtaining approval of Institutional Review Boards, or IRBs, of research institutions or other clinical sites to introduce the biologic drug candidate into humans in clinical trials;
- Conducting adequate and well-controlled human clinical trials to establish the safety and efficacy of the product for its intended indication conducted in compliance with Good Clinical Practice, or GCP, requirements;
- Compliance with current Good Manufacturing Practices, or cGMP regulations and standards;
- Submission to the FDA of a Biologics License Application, or BLA, for marketing that includes adequate results of pre-clinical testing and clinical trials;
- FDA reviews the marketing application in order to determine, among other things, whether the product is safe, effective and potent for its intended uses; and
- Obtaining FDA approval of the BLA, including inspection and approval of the product manufacturing facility as compliant with cGMP requirements, prior to any commercial sale or shipment of the pharmaceutical agent. The FDA may also require post-marketing testing and surveillance of approved products, or place other conditions on the approvals.

Regulatory Process in Europe

The European Union (EU) has approved a regulation specific to cell and tissue products and our PLX-PAD cell therapy product candidate is regulated under this Advanced Therapy Medicinal Product (ATMP) regulation.

For products that are regulated as an ATMP, the EU Directive requires:

- Compliance with current Good Manufacturing Practices, or cGMP regulations and standards, pre-clinical laboratory and animal testing;
- Filing a Clinical Trial Application (CTA) with the various member states or a centralized procedure; Voluntary Harmonisation Procedure (VHP), a procedure which makes it possible to obtain a coordinated assessment of an application for a clinical trial that is to take place in several European countries. Obtaining approval of Ethic Committees of research institutions or other clinical sites to introduce the biologic drug candidate into humans in clinical trials;
- Adequate and well-controlled clinical trials to establish the safety and efficacy of the product for its intended use; and
- Submission to EMA for a Marketing Authorization (MA); Review and approval of the MAA (Marketing Authorization Application).

Clinical trials:

Typically, both in the U.S. and the European Union, clinical testing involves a three-phase process although the phases may overlap. In Phase I, clinical trials are conducted with a small number of healthy volunteers or patients and are designed to provide information about product safety and to evaluate the pattern of drug distribution and metabolism within the body. In Phase II, clinical trials are conducted with groups of patients afflicted with a specific disease in order to determine preliminary efficacy, optimal dosages and expanded evidence of safety. In some cases, an initial trial is conducted in diseased patients to assess both preliminary efficacy and preliminary safety and patterns of drug metabolism and distribution, in which case it is referred to as a Phase I/II trial. Phase III clinical trials are generally large-scale, multi-center, comparative trials conducted with patients afflicted with a target disease in order to provide statistically valid proof of efficacy, as well as safety and potency. In some circumstances, the FDA or EMA may require Phase IV or post-marketing trials if it feels that additional information needs to be collected about the drug after it is on the market.

During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data and clinical trial investigators. An agency may, at its discretion, re-evaluate, alter, suspend, or terminate the testing based upon the data which have been accumulated to that point and its assessment of the risk/benefit ratio to the patient. Monitoring all aspects of the study to minimize risks is a continuing process. All adverse events must be reported to the FDA or EMA.

Employees

We presently employ a total of 44 full-time employees and 4 part-time employees, of whom 38 full-time employees and 3 part-time employees are engaged in research.

Competition

The cellular therapeutics industry, of which we are a part, is subject to technological changes that can be rapid and intense. We have faced, and will continue to face, intense competition from biotechnology, pharmaceutical and biopharmaceutical companies, academic and research institutions and governmental agencies engaged in cellular therapeutic and drug discovery activities or funding, both in the United States and internationally. Some of these competitors are pursuing the development of cellular therapeutics, drugs and other therapies that target the same diseases and conditions that we target in our clinical and pre-clinical programs.

We are aware of many companies working in this area, including: Osiris Therapeutics, Aastrom Biosciences, Athersys, Aldagen, Cytori Therapeutics, Gamida Cell, Geron, Mesoblast and Celgene. We expect to compete based upon, among other things, our intellectual property portfolio, our manufacturing efficiencies and the efficacy of our products. Our ability to compete successfully will depend on our continued ability to attract and retain experienced and skilled executive, scientific and clinical development personnel to identify and develop viable cellular therapeutic candidates and exploit these products commercially.

Item 1A. Risk Factors.

The following risk factors, among others, could affect our actual results of operations and could cause our actual results to differ materially from those expressed in forward-looking statements made by us. These forward-looking statements are based on current expectations and except as required by law we assume no obligation to update this information. You should carefully consider the risks described below and elsewhere in this annual report before making an investment decision. Our business, financial condition or results of operatio could be materially adversely affected by any of these risks. Our common stock is considered speculative and the trading price of our common stock could decline due to any of these risks, and you may lose all or part of your investment. The following risk factors are not the only risk factors facing our Company. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business.

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

We have a limited operating history in our current business of developing and commercializing stem cell production technology and must be considered in the development stage. We ha not generated any revenues since our inception and we will, in all likelihood, continue to incur operating expenses without significant revenues until we successfully develop our stem cell production technology and commercialize our cell therapy products. Our primary source of funds has been the sale of our common stock and government grants. We cannot give assurances 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 or that we will be able to continue as a going concern as is noted in the notes to our consolidated financial statements for th year ended June 30, 2010.

Our independent registered public accounting firm's report states that there is a substantial doubt that we will be able to continue as a going concern.

Our independent registered public accounting firm, Kost, Forer, Gabbay & Kassierer a Member of Ernst & Young Global, state in their audit report attached to our audited consolidated financial statements for the fiscal years that ended June 30, 2010 and 2009 that since we are an exploration stage company, we have no established source of revenue, and are dependent on our ability to raise capital from shareholders and other sources to sustain operations, there is a substantial doubt that we will be able to continue as a going concern. There can be no assurance that acceptable financing to fund our ongoing operations can be obtained on suitable terms, if at all. If we are unable to obtain the financing necessary to support our operations, we may be unable to continue as a going concern. In that event, we may be forced to cease operations and our stockholders could lose their entire investment in our company.

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

We are engaged in the business of developing cell therapy products. 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 Company's business will be dependent upon successful commercialization of our potential cell therapy products, which will require significant additional research and development as well as substantial clinical trials.

If we are not able to successfully develop and commercialize our cell therapy product candidates and obtain the necessary regulatory approvals, we may not generate sufficient revenues to continue our business operations.

Our early stage cell therapy product candidates may fail to perform as we expect. Moreover even if our cell therapy product candidates will successfully perform as expected, in later stages of development may fail to show the desired safety and efficacy traits despite having progressed successfully through pre-clinical or initial clinical testing. We will need to devote significant additional research and development, financial resources and personnel to develop commercially viable products and obtain the necessary regulatory approvals.

If our cell therapy product candidates do not prove to be safe and efficacious in clinical trials, we will not obtain the required regulatory approvals. If we fail to obtain such approvals, we may not generate sufficient revenues to continue our business operations.

Even if we obtain regulatory approval of a product, that approval may be subject to limitations on the indicated uses for which it may be marketed. Even after granting regulatory approval, the FDA and regulatory agencies in other countries continue to review and inspect marketed products, manufacturers and manufacturing facilities, which may create additional regulatory burdens. 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, regulatory agencies may establish additional regulations that could prevent or delay regulatory approval of our products.

We cannot market and sell our cell therapy product candidates in the United States or Europe or in other countries if we fail to obtain the necessary regulatory approvals or licensure.

We cannot sell our cell therapy product candidates until regulatory agencies grant marketing approval, or licensure. The process of obtaining regulatory approval is lengthy, expensive and uncertain. It is likely to take several years to obtain the required regulatory approvals for our cell therapy product candidates, or we may never gain the necessary approvals. Any difficulties that we encounter in obtaining regulatory approval may have a substantial adverse impact on our operations and cause our stock price to decline significantly.

To obtain marketing approvals in the United States and Europe for cell therapy product candidates we must, among other requirements, complete carefully controlled and well-designed clinical trials sufficient to demonstrate to the FDA and the EMA that the cell therapy product candidates is safe and effective for each disease for which we seek approval. So far, we are conducting Phase I clinical trials for our PLX-PAD product, which is our only product that is the subject to clinical trials. Several factors could prevent completion or cause significant delay of these trials, including an inability to enroll the required number of patients or failure to demonstrate adequately that cell therapy product candidates are safe, effective and potent for use in humans. Negative or inconclusive results from or adverse medical events during a clinical trial could cause the clinical trial to be repeated or a program to be terminated, even if other studies or trials relating to the program are successful. The FDA or the EMA can place a clinical trial on hold if, among other reasons, it finds that patients enrolled in the trial are or would be exposed to an unreasonable and significant risk of illness or injury. If safety concerns develop, we, the FDA, or the EMA could stop our trials before completion.

If we encounter problems or delays in the research and development of our potential cell therapy products, we may not be able to raise sufficient capital to finance our operation durir the period required to resolve such problems or delays.

Our cell therapy products are currently in the development stage and we anticipate that we will continue to incur operating expenses without significant revenues until we have successful 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 cell therapy products may not prove to be safe and efficacious in clinical trials. If any of these events occur, we may not have adequate resources to continue operations for the period required to resolve the issue delaying 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.

If we are not able to conduct our clinical trials properly and on schedule, marketing approval by FDA, EMA and other regulatory authorities may be delayed or denied.

The completion of our clinical trials may be delayed or terminated for many reasons, including, but not limited to, if:

- the FDA or the EMA does not grant permission to proceed and places the trial on clinical hold;
- subjects do not enroll in our trials at the rate we expect;
- subjects experience an unacceptable rate or severity of adverse side effects;
- third-party clinical investigators do not perform our clinical trials on our anticipated schedule or consistent with the clinical trial protocol, Good Clinical Practice and regulatory requirements, or other third parties do not perform data collection and analysis in a timely or accurate manner;
- inspections of clinical trial sites by the FDA, EMA, or Institutional Review Boards (IRBs) of research institutions participating in our clinical trials find regulatory violations that require us to undertake corrective action, suspend or terminate one or more sites, or prohibit us from using some or all of the data in support of our marketing applications; or
- one or more IRBs suspends or terminates the trial at an investigational site, precludes enrollment of additional subjects, or withdraws its approval of the trial.

Our development costs will increase if we have material delays in our clinical trials, or if we are required to modify, suspend, terminate or repeat a clinical trial. If we are unable to conduct our clinical trials properly and on schedule, marketing approval may be delayed or denied by the FDA or the EMA.

We may not be able to secure and maintain research institutions to conduct our clinical trials.

We rely on research institutions to conduct our clinical trials. Specifically, the limited number of centers experienced with cell therapy products candidates heightens our dependence on such research institutions. Our reliance upon research institutions, including hospitals and clinics, provides us with less control over the timing and cost of clinical trials and the ability to recruit subjects. If we are unable to reach agreement with suitable research institutions on acceptable terms, or if any resulting agreement is terminated, we may be unable to quickly replace the research institution with another qualified institution on acceptable terms. We may not be able to secure and maintain suitable research institutions to conduct our clinical trials.

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

Our ability to continue to develop and commercialize our potential cell therapy products is dependent upon our ability to raise significant additional financing when needed. If we are unab to obtain such financing, we will not be able to fully develop our technology and commercialize our cell therapy products. Our future capital requirements will depend upon many factors, including:

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

- our ability to establish additional collaborative relationships; and
- the effect of commercialization activities and facility expansions if and as required.

We have limited financial resources and, to date, negative cash flow from operations. Although we anticipate that our existing capital resources will be adequate to satisfy our working capital and capital expenditure requirements until at least the first quarter of calendar year 2011, we will need to raise additional funds in the near future in order to satisfy our working capit and capital expenditure requirements. Therefore, we are dependent on our ability to sell our common stock for funds, receive grants or to otherwise raise capital. There can be no assuranc that we will be able to obtain financing on that basis in light of the market demand for our securities, the state of financial markets generally, and other relevant factors. Any sale of our common stock in the future will result in dilution to existing stockholders. Furthermore, there is no assurance that we will not incur debt in the future, that we will have sufficient funds to repay our future indebtedness, or that we will not default on our future debts, jeopardizing our business viability. Finally, we may not be able to borrow or raise additional capital in the future to meet our needs or to otherwise provide the capital necessary to conduct the development and commercialization of our potential cell therapy products, which could result in the loss of some or all of one's investment in our common stock.

We cannot guarantee continuation of government programs and tax benefits.

We have received certain Israeli government approval under certain programs and may in the future utilize certain tax benefits in Israel by virtue of these programs. To remain eligible for such tax benefits, we must continue to meet certain conditions. If we fail to comply with these conditions in the future, the benefits we receive could be canceled and we may pay certain taxes. We cannot guarantee that these programs and tax benefits will be continued in the future, at their current levels or at all. If these programs and tax benefits are ended, our business, financial condition and results of operations could be negatively affected.

Because we received grants from the Israeli Office of the Chief Scientist, we are subject to ongoing restrictions.

We received royalty-bearing grants from the Office of the Chief Scientist of the Israeli Ministry of Industry, Trade and Labor, or the Chief Scientist, for research and development programs that meet specified criteria. The terms of the Chief Scientist's grants limit our ability to transfer know-how developed under an approved research and development program outside of Israel, regardless of whether the royalties were fully paid. Any non-Israeli citizen, resident or entity that, among other things, becomes a holder of 5% or more of our share capital or voting rights, is entitled to appoint one or more of our directors or our chief executive officer, serves as a director of our company or as our chief executive officer is generally required to notify the same to the Chief Scientist and to undertake to observe the law governing the grant programs of the Chief Scientist, the principal restrictions of which are the transferability limits described above.

We are exposed to fluctuations in currency exchange rates.

A significant portion of our business is conducted outside the United States. Therefore, we are exposed to currency exchange fluctuations in other currencies such as the Euro and the New Israeli Shekel (NIS). Moreover, a portion of our expenses in Israel and Europe are paid in NIS and Euros, respectively, which subjects us to the risks of foreign currency fluctuations. Our primary expenses paid in NIS are employee salaries, fees for consultants and subcontractors and lease payments on our Israeli facilities.

The dollar cost of our operations in Israel will increase to the extent increases in the rate of inflation in Israel are not offset by a devaluation of the NIS in relation to the dollar, which would harm our results of operations.

Since a considerable portion of our expenses such as employees' salaries are linked to an extent to the rate of inflation in Israel, the dollar cost of our operations is influenced by the extent to which any increase in the rate of inflation in Israel is or is not offset by the devaluation of the NIS in relation to the dollar. As a result, we are exposed to the risk that the NIS, after adjustment for inflation in Israel, will appreciate in relation to the dollar. In that event, the dollar cost of our operations in Israel will increase and our dollar-measured results of operations will be adversely affected. During the past few years inflation-adjusted NIS appreciated against the dollar, which raised the dollar cost of our Israeli operations. We cannot predict whether the NIS will appreciate against the dollar or vice versa in the future. Any increase in the rate of inflation in Israel, unless the increase is offset on a timely basis by a devaluation of the NIS in relation to the dollar, will increase labor and other costs, which will increase the dollar cost of our operations in Israel and harm our results of operations.

If we fail to obtain and maintain required regulatory approvals for our potential cell therapy products, our ability to commercialize our potential cell therapy products will be limited severely.

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

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

We have limited experience in conducting and managing human trials. If we fail in the conducting of such trials, our business will be materially harmed.

Even though we have recruited employees who are experienced in managing and conducting clinical trials, we have limited experience in this area. We will need to expand our experience and rely on consulting in order to obtain regulatory approvals for our therapeutic product candidates. The failure to successfully conduct clinical trials could materially harm our business.

The trend towards consolidation in the pharmaceutical and biotechnology industries may adversely affect us.

There is a trend towards consolidation in the pharmaceutical and biotechnology industries. This consolidation trend may result in the remaining companies having greater financial resources and discovery technological capabilities, thus intensifying competition in these industries. This trend may also result in fewer potential collaborators or licensees for our therapeutic product candidates. Also, if a consolidating company is already doing business with our competitors, we may lose existing licensees or collaborators as a result of such consolidation.

This trend may adversely affect our ability to enter into agreements for the development and commercialization of our product candidates, and as a result may harm our business.

Our product development programs are based on novel technologies and are inherently risky.

We are subject to the risks of failure inherent in the development of products based on new technologies. The novel nature of our therapeutics creates significant challenges in regards to product development and optimization, manufacturing, government regulation, third-party reimbursement and market acceptance. For example, the FDA or the EMA has relatively limited experience with stem cell therapies. None has been approved by them for commercial sale, and the pathway to regulatory approval for our cell therapy product candidates may accordingly be more complex and lengthy. As a result, the development and commercialization pathway for our therapies may be subject to increased uncertainty, as compared to the pathway for new conventional drugs.

There are no FDA or EMA approved treatments for some of the disease indications we are pursuing. This could complicate and delay FDA or EMA approval of our biologic drug candidates.

There are no drugs or therapies currently approved with for treatment of PAD using allogeneic cell therapy products. As a result, the clinical efficacy endpoints, or the criteria to measure the intended results of treatment may be difficult to determine. In addition, patients battling PAD and who, therefore, are candidates for treatment with PLX-PAD, typically suffer from complications and disorders that may bring to amputation and other complications prior to the completion of the study. This resulting reduction in the number of patients available for evaluation at the end of the study may make it more difficult for us to demonstrate efficacy, as necessary to obtain FDA or EMA approval to market our products.

Our cell therapy drug candidates represent new classes of therapy that the marketplace may not understand or accept.

Even if we successfully develop and obtain regulatory approval for our biologic drug candidates, the market may not understand or accept them. We are developing cell therapy product candidates that represent novel treatments and will compete with a number of more conventional products and therapies manufactured and marketed by others, including major pharmaceutical companies. The degree of market acceptance of any of our developed and potential products will depend on a number of factors, including:

- the clinical safety and effectiveness of our cell therapy drug candidates and their perceived advantage over alternative treatment methods;
- adverse events involving our cell therapy product candidates or the products or product candidates of others that are stem cell based; and
- the cost of our products and the reimbursement policies of government and third-party payors.

If the health care community does not accept our potential products for any of the foregoing reasons, or for any other reason, it could affect our sales, having a material adverse effect on our business, financial condition and results of operations.

We are dependent upon third-party suppliers for raw materials needed for the manufacture; if any of these third parties fail or are unable to perform in a timely manner, our ability to manufacture and deliver will be compromised.

In order to produce our cell therapy product candidates, we require certain raw of materials in addition to the placenta used in our manufacturing process. These items must be manufactured and supplied to us in sufficient quantities and in compliance with GMP. To meet these requirements, we have entered into supply agreements with firms that manufacture these raw materials to GMP standards. Our requirements for these items are expected to increase if and when we transition to the manufacture of commercial quantities of our biologic drug candidates.

In addition, as we proceed with our clinical trial efforts, we must be able to continuously demonstrate to the FDA and the EMA, that we can manufacture our cell therapy product candidates with consistent characteristics. Accordingly, we are materially dependent on these suppliers for supply of GMP-grade components of consistent quality. Our ability to complete ongoing clinical trials may be negatively affected in the event that we are forced to seek and validate a replacement source for any of these critical components.

If our processing and storage facility or our clinical manufacturing facilities are damaged or destroyed, our business and prospects would be negatively affected.

If our manufacturing and storage facility or the equipment in the facility were to be significantly damaged or destroyed, we could suffer a loss of some or all of the stored units of our cell therapy drug candidates and it would force us to delay our clinical trial processes. We have a clinical manufacturing facility located in Haifa, Israel. If this facility or the equipment in it is significantly damaged or destroyed, we may not be able to quickly or inexpensively replace our manufacturing capacity.

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

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

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

The cellular therapeutics industry, of which we are a part, is very competitive and is subject to technological changes that can be rapid and intense. We have faced, and will continue to face, intense competition from biotechnology, pharmaceutical and biopharmaceutical companies, academic and research institutions and governmental agencies engaged in cellular therapeutic and drug discovery activities or funding, both in the United States and internationally. Some of these competitors are pursuing the development of cellular therapeutics, drugs and other therapies that target the same diseases and conditions that we target in our clinical and pre-clinical programs.

Many of our competitors have significantly greater resources, more product candidates and have developed product candidates and processes that directly compete with our products. Our competitors may have developed, or could develop in the future, new products that compete with our products or even render our products obsolete.

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, in particular, Zami Aberman, our Chief Executive Officer, and Yaky Yanay, our Chief Financial Officer. 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.

The patent approval process is complex and we cannot be sure that our pending patent applications or future patent applications will be approved.

The patent approval process is complex and results are therefore highly uncertain. No assurance can be given that any of our pending patent applications or future patent applications wil be approved, that the scope of any patent protection granted will exclude competitors or provide us with competitive advantages, that any of the patents that have been or may be issued us will be held valid if subsequently challenged, or that other parties will not claim rights to or ownership of our patents or other proprietary rights that we hold. Furthermore, there can be no assurance that others have not developed or will not develop similar products, duplicate any of our technology or products or design around any patents that have been or may be issued to us or any future licensors. Since patent applications in the United States and in Europe are not publicly disclosed until patents are issued, there can be no assurance that others did not first file applications for products covered by our pending patent applications , nor can we be certain that we will not infringe any patents that may be issued to others pursuant to such applications.

Our success depends in large part on our ability to develop and protect our technology and our cell therapy products. If our patents and proprietary rights agreements do not provide sufficient protection for our technology and our cell therapy products, our business and competitive position will suffer.

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

We must further protect and develop our technology and products in order to become a profitable company.

The initial patent underlying our technology will expire in approximately 2020. If we do not complete the development of our technology and products in development by then, or to create additional sufficient layers of patents, other companies may use the technology to develop competing products. If this happens, we would likely lose our competitive position and our business would likely suffer.

Furthermore, the scope of our patents may not be sufficiently broad to offer meaningful protection. In addition, our patents could be successfully challenged, invalidated or circumvented so that our patent rights would not create an effective competitive barrier. We also intend to seek patent protection for any of our potential cell therapy products once we have completed their development.

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.

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

We face an inherent business risk of exposure to product liability claims in the event that the use of our products results in adverse affects. As a result, we may incur significant product liability exposure. We may not be able to maintain adequate levels of insurance at reasonable cost and/or reasonable terms. Excessive insurance costs or uninsured claims would add to o 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 busines 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. Acts of random terrorism periodically occur which could affect our operations or personnel.

In addition, Israeli-based companies and companies doing business with Israel, have been the subject of an economic boycott by members of the Arab League and certain other predominantly Muslim countries since Israel's establishment. Although Israel has entered into various agreements with certain Arab countries and the Palestinian Authority, and various declarations have been signed in connection with efforts to resolve some of the economic and political problems in the Middle East, we cannot predict whether or in what manner these problems will be resolved. Wars and acts of terrorism have resulted in significant damage to the Israeli economy, including reducing the level 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 40 and 49 years old, depending upon the nature of their military service.

Although our internal control over financial reporting was considered effective as of June 30, 2010, there is no assurance that our internal control over financial reporting will continue to be effective in the future, which could result in our financial statements being unreliable, government investigation or loss of investor confidence in our financial reports.

Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, we are required to furnish an annual report by our management assessing the effectiveness of our internal control over financial reporting. This assessment must include disclosure of any material weaknesses in our internal control over financial reporting identified by management. Management's report as of the end of fiscal year 2010 concluded that our internal control over financial reporting was effective. There is, however, no assurance that we will be able to maintain such effective internal control over financial reporting in the future. Ineffective internal control over financial reporting can result in errors or other problems in our financial statements. In addition, our internal control over financial reporting is not required to be, and has not been, audited by our independent registered public accounting firm. In the future, if we are unable to assert that our internal controls are effective, our investors could lose confidence in the accuracy and completeness of our financial reports, which in turn could cause our stock price to decline. Failure to maintain effective internal control over financial reporting could also result in investigation or sanctions by regulatory authorities.

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 judgment and civil liabilities against our officers, directors, experts and agents.

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

Because we do not intend to pay any dividends on our common stock, investors seeking dividend income 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 should not invest in our common stock.

We have a potential conflict with a prior financing agreement that may expose us to potential litigation.

In our subscription agreement for our May 2007 equity financing, or the Prior Financing Agreement, there is a provision that requires us for a period of four years (subject to acceleration under certain circumstances) not to sell any of our common stock for less than $.0125 per share. The Prior Financing Agreement provides that any sale below that number must be preceded by a consent from each purchaser in the placement. Since that date, we have effected a one-for-200 reverse stock split.

In August 2008, we entered into securities purchase agreements pursuant to which we sold securities at a price higher than the pre-split price of $0.125 and below the post-split price of $2.50. We decided to proceed with this offering notwithstanding this provision for the following reasons:

- The agreement did not contain any provisions for the adjustment of the specified minimum price in the event of stock splits and the like. If such agreement were to have contained such a provision, the floor price would be $2.50, which is more than the offering price of this offering.
- The majority of purchasers in the private placement have sold the stock purchased in the placement, and thus the number of purchasers whose consent is purportedly required has been substantially reduced. The number of shares outstanding as to which this provision currently applies according the information supplied by our transfer agent is 2,021,545 shares.
- An agreement that prevents our Board of Directors from issuing shares that are necessary to finance our business may be unenforceable.
- Even if the agreement were considered enforceable and the share price number were to be adjusted for our reverse stock split, we believe that there would be no damage from this offering to the holders of our shares whose consent is purportedly required.

In the event that a court were to hold that the issuance of shares below $2.50 per share would violate the Prior Financing Agreement, it is unclear what remedy the court might impose. If the court were to impose a remedy that would be the equivalent of an anti-dilution provision (which is not contained in the Prior Financing Agreement), any issuance of shares would be dilutive to our shareholders, including those who purchase shares in the current offering. In addition, since August 2008, we, on several occasions, raised funds at a price per share which is higher than the pre-split price of $0.125 and below the post-split price of $2.50.

In connection with the August, 2008 financing, we approved the issuance of warrants to purchase up to 161,724 shares of our common stock to each of the investors who was a party to the Prior Financing Agreement that held shares purchased pursuant to such agreement, as of August 2008, conditioned on having the investors execute a general release pursuant to which we will be released from liability including, but not limited to, any claims, demands, or causes of action arising out of, relating to, or regarding sales of certain equity securities notwithstanding the above mentioned provision. As of September 1, 2010 we received a general release from some of the investors, and issued them warrants to purchase 105,583 shares of our common stock.

Item 1B. Unresolved Staff Comments.

Not Applicable.

Item 2. Properties.

Our principal executive and research and development offices are located at MATAM Advanced Technology Park, Building No. 20, Haifa, Israel 31905, where we occupy approximately 13,800 square feet. We lease our facilities. Our monthly rental as of September 2010 is 72,000 NIS (approximately $19,000). For the fiscal year ended June 30, 2010, we paid $226,778 for rent. We believe that the space available in our facilities is adequate to meet our current needs, although future growth may require that we occupy additional space.

Item 3. Legal Proceedings.

None.

Item 4. [Removed and Reserved]

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Our shares trade on the NASDAQ Capital Market under the symbol PSTI, and on Europe's Frankfurt Stock Exchange, under the symbol PJT.

The following table reflects the high and low sale prices on the NASDAQ Capital Market obtained from Yahoo! Finance and may not necessarily represent actual transactions.

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

Quarter Ended	High	Low
September 30, 2008	$ 0.89	$ 0.82
December 31, 2008	$ 0.44	$ 0.38
March 31, 2009	$ 1.39	$ 1.28
June 30, 2009	$ 1.41	$ 1.29
September 30, 2009	$ 1.42	$ 1.38
December 31, 2009	$ 1.21	$ 1.00
March 31, 2010	$ 1.15	$ 1.10
June 30, 2010	$ 1.16	$ 1.11

On September 1, 2010, the per share closing price of our common stock, as reported by Yahoo! Finance, was $1.10. As of September 1, 2010, there were 123 holders of record of our commo stock. As of such date, 21,829,350 common shares were issued and outstanding.

American Stock Transfer and Trust Company, LLC is the registrar and transfer agent for our common shares. Their address is 6201 15th Avenue, 2nd Floor, Brooklyn, NY 11219, telephon (718) 921-8261, (800) 937-5449.

Dividend Policy

We have not paid any cash dividends on our common stock and have no present intention of doing so. Our current policy is to retain earnings, if any, for use in our operations and in the development of our business. Our future dividend policy will be determined from time to time by our Board of Directors.

Recent Sales of Unregistered Securities

We have not issued any unregistered securities other than as previously reported.

Item 6. Selected financial data.

Not Applicable.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

We develop and intend to commercialize, cell therapy production technologies and products.

RESULTS OF OPERATIONS – YEAR ENDED JUNE 30, 2010 COMPARED TO YEAR ENDED JUNE 30, 2009.

We have not generated any revenues, and we have negative cash flow from operations of $23,138,000 and have accumulated a deficit of $40,105,000 since our inception in May 2001. This negative cash flow is mostly attributable to research and development and general and administrative expenses. We anticipate that our operating expenses will increase as we intend to conduct expanded development of our products through clinical trials as well as animal pre-clinical trials and experiments. We estimate our operational cash expenses in the next twelve months will be approximately $7,000,000 (before deducting any government grants), generally falling in two major categories: research and development costs and general and administrative expenses.

Research and Development net

Research and development net costs (costs less participation by the OCS), for the year ended June 30, 2010 increased by 37% to $4,301,000 from $3,141,000 for the year ended June 30, 2009. This is due to the increase in our R&D activity in order to support our phase I clinical trials in Germany and in the US, and our preparation for the phase II clinical trials. We recruited 14 new employees (an increase of 50% in our R&D personnel), and built a new research lab in our facilities. The participation of the OCS has increased from $1,651,000 for the year ended June 30, 2009 to $1,822,000 for the year ended June 30, 2010.

For the next twelve months, we estimate that our cash research and development gross costs (before deducting any government grants) will be approximately $5,000,000. We intend to spend our research and development funds on continuing research of our PLX cells, completing our phase I clinical trials for the PAD indication and entering the phase II clinical trials, upgrading the 3-D bioreactor operations, and developing capabilities for new clinical indications of PLX cells.

General and Administrative

General and administrative expenses for the year ended June 30, 2010 decreased by 8% to $3,138,000 from $3,417,000 for the year ended June 30, 2009. The decrease in general and administrative expenses is primarily attributable to the decrease in stock-based compensation to employees.

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

Financial Income, net

Financial expenses decreased from $78,000 for the year ended June 30, 2009 to $14,000 for the year ended June 30, 2010. The decrease in the financial expenses is due to a loss from the sale of marketable securities that occurred during the previous fiscal year and due to exchange rate adjustments.

Net Loss

Net loss for the year ended June 30, 2010 was $7,453,000 as compared to net loss of $6,636,000 for the year ended June 30, 2009. Net loss per share for the year ended June 30, 2010 was $0.44, as compared to $0.63 for the year ended June 30, 2009. The net loss per share decreased as a result of the increase in our weighted average number of shares due to the issuance of additional shares pursuant to equity issuances since July 1, 2009 as discussed further below.

Liquidity and Capital Resources

As of June 30, 2010, total current assets were $3,605,000 and total current liabilities were $1,281,000. On June 30, 2010, we had a working capital surplus of $2,324,000 and an accumulated deficit of $40,105,000. We finance our operations and plan to continue doing so with issuances of securities and grants from the OCS.

Cash and cash equivalents as of June 30, 2010 amounted to $1,583,000. This is a decrease of $756,000 from the $2,339,000 reported as of June 30, 2009. In addition to the cash and cash equivalents, we have a short-term bank deposit in the amount of $913,000 as of June 30, 2010. Cash balances decreased in the year ended June 30, 2010 for the reasons presented below:

Operating activities used cash of $5,408,000 in the year ended June 30, 2010. Cash used by operating activities in the year ended June 30, 2010 primarily consisted of payments of salaries to our employees, and payments of fees to our consultants, subcontractors and professional services providers including costs related to our clinical trials, less research and development grants by the OCS.

Investing activities used cash of $1,296,000 in the year ended June 30, 2010. The investing activities consisted of investment of $898,000 in a short-term bank deposit and the purchase of equipment for our R&D facilities in the amount of $389,000.

Financing activities generated cash in the amount of $5,948,000 during the year ended June 30, 2010, substantially all of which was attributable to the July and October 2009, and April 2010 securities offerings described below.

On July 7, 2009, we announced that the first patient has been enrolled in a Phase I clinical trial of our PLX-PAD product. Upon the occurrence of such event, certain investors had an option to purchase additional shares and warrants (the "Option"). Accordingly, such certain investors purchased, in July 2009, 1,058,708 shares of common stock at a purchase price of $0.75 per share, for an aggregate purchase price of $794,000, and warrants to purchase up to an additional 1,058,708 shares of common stock with an exercise price of $1.50 per share. The warrants are exercisable for a period of 4 years and six months commencing six months following the issuance.

On October 12, 2009, certain institutional investors purchased 2,702,822 shares of our common stock and warrants to purchase 1,081,129 shares of common stock. The price per share of common stock was $1.12, and the exercise price of the warrants was $1.60. The warrants are exercisable for a period of five years commencing six months following the issuance thereof. Roth Capital Partners, LLC acted as placement agent, on a reasonable efforts basis, for the offering. The offering was made pursuant to our shelf registration statement on Form S-3. The gross proceeds we received from this offering were approximately $3,027,000. Total cash costs related to this placement amounted to $242,000.

On April 27, 2010, we closed a private placement pursuant to which we sold to certain investors 2,393,329 shares of unregistered common stock and warrants to purchase 717,999 shares of common stock and 717,999 shares of common stock, at exercise prices per share of $1.25 (the "$1.25 Warrants") and $1.40 (the "$1.40 Warrants"), respectively. The aggregate gross proceeds from the sale of the common stock and the warrants was $2,681,000. The warrants are exercisable six months following the issuance thereof, for a period of two and a half years and five years thereafter for the $1.25 Warrants and the $1.40 Warrants, respectively.

During fiscal year 2010 we received approximately $1,492,000 from the OCS towards our R&D expenses.

While most of our capital resources are denominated by US dollars, about half of our expenses are denominated by NIS. Due to the increased volatility of the US Dollar, we use foreign currency hedging transactions. We continue to actively utilize currency hedging transactions to manage our exposure.

Outlook

We do not expect to generate any revenues from sales of products in the next twelve months. We may generate revenues from sale of licenses to use our technology or products, although we have not sold such licenses in the past. Our products will likely not be ready for sale for at least three years, if at all.

The OCS has supported our activity in the past four years. Our application for a fifth year's grant was submitted in March 2010. Recently, the OCS approved a grant in an amount of $2.5 million for participation in R&D expenses for the period March 2010 to February 2011. (In August 2010 we received $932,000 on account of the approved grant). In addition the European authorities approved a research grant under the European Commission's Seventh Framework Program (FP7) in the amount of approximately $150,000 for a period of 5 years.

We believe that the funds we have, together with the approved R&D grants, will be sufficient for operating until at least the first quarter of calendar year of 2011.

Our independent registered public accounting firm's report relating to our financial statements for the fiscal year ended June 30, 2010 states that there is a substantial doubt that we will be able to continue as a going concern. Management believes that we will need to raise additional funds before we have any cash flow from operations. We are continually looking for sources of funding, including non-diluting sources such as the OCS and European FP7 grants. We have an effective shelf registration statement which we have used in recent public offerings we made and may continue to use in the future to raise additional funds, subject to certain limitations based on our size.

If we are unable to obtain the financing necessary to support our operations, we may need to take measures to reduce our operating costs, or, if such measures will not be sufficient, we may be unable to continue as a going concern. In that event, we may be forced to cease operations and our stockholders could lose their entire investment in the company.

Application of Critical Accounting Policies

Our financial statements and accompanying notes are prepared in accordance with U.S. GAAP. Preparing financial statements requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, and expenses. These estimates and assumptions are affected by management's application of accounting policies. We believe that understanding the basis and nature of the estimates and assumptions involved with the following aspects of our consolidated financial statements is critical to an understanding of our financials.

Stock-based compensation

We account for stock-based compensation in accordance with ASC 718, "Compensation-Stock Compensation" (originally issued as SFAS 123R). ASC 718 requires companies to estimate the fair value of equity-based payment awards on the date of grant using an option-pricing model. The value of the portion of the award that is ultimately expected to vest is recognized as an expense over the requisite service periods in the Company's consolidated income statements.

We recognize compensation expenses for the value of its awards, which have graded vesting based on the accelerated method over the requisite service period of each of the awards.

We estimate the fair value of stock options granted using the Black-Scholes-Merton option-pricing model. The option-pricing model requires a number of assumptions, of which the most significant are, expected stock price volatility, and the expected option term. Expected volatility was calculated based upon actual historical stock price movements over the most recent periods ending on the grant date. The expected life of options granted is calculated using the Simplified Method, as defined in Staff Accounting Bulletin, or SAB No. 107, "Share-Based Payments", or SAB No. 107, as the average between the vesting period and the contractual life of the options. On December 21, 2007 the SEC staff issued SAB No. 110, or SAB 110, which, effective January 1, 2008, amends and replaces SAB No. 107".

We currently use the Simplified Method, as adequate historical experience is not available to provide a reasonable estimate. We adopted SAB 110 effective January 1, 2008 and will continue to apply the Simplified Method until enough historical experience is available to provide a reasonable estimate of the expected term for stock option grants.

We have historically not paid dividends and have no foreseeable plans to distribute dividends. The risk-free interest rate is based on the yield from U.S. Treasury zero-coupon bonds with an equivalent term. The expected pre-vesting forfeiture rate affects the number of exercisable options. Based on our historical experience, the pre-vesting forfeiture rate per grant is 5% for the options and shares granted to employees and 0% for the options and shares granted to directors and officers of our Company.

In accordance with ASC 718, restricted shares or restricted shares units are measured at their fair value as if they were vested and issued on the grant date. All restricted shares and restricted shares units to employees and non-employees granted in 2010 and 2009 were granted for no consideration or for a voluntary reduction in cash compensation; therefore their fair value was equal to the share price at the date of grant.

The fair value of all restricted shares and restricted shares units was determined based on the close trading price of our shares known at the grant date.

We apply ASC 718 and ASC 505 (EITF 96-18), "Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services", with respect to options and warrants issued to non-employees. ASC 718 requires the use of option valuation models to measure the fair value of the options and warrants at the measurement date.

Stock-based compensation is considered critical accounting policy due to the significant expenses of options, restricted stock and restricted stock units which were granted to our employees, directors and consultants. Stock-based compensation expenses that were recorded in fiscal year 2010 amounted to $1,769,000.

Research and Development Expenses, net

We expect our research and development expense to remain our primary expense in the near future as we continue to develop our product candidates. Research and development expense consists of:

- internal costs associated with research and development activities;
- payments made to consultants and subcontractors such as research organizations;
- manufacturing development costs;
- personnel-related expenses, including salaries, benefits, travel, and related costs for the personnel involved in research and development;
- activities relating to the preclinical studies and clinical trials; and
- facilities and other allocated expenses, which include direct and allocated expenses for rent and maintenance of facilities, as well as laboratory and other supplies.

The costs and expenses of our research and development activity are partially funded by grants we have received from the OCS. The grant is deducted from research and development expenses at the time we are entitled to such grant, on the basis of the cost incurrd. There can be no assurance that we will continue to receive grants from the OCS in amounts sufficient for our operations, if at all.

Off Balance Sheet Arrangements

Our company has no off balance sheet arrangements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

Not Applicable.

Item 8. Financial Statements and Supplementary Data.

Our financial statements are stated in thousands United States dollars (US$) and are prepared in accordance with U.S. GAAP.

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

Report of Independent Registered Public Accounting Firm, dated September 20, 2010

Consolidated Balance Sheets

Consolidated Statements of Operations

Consolidated Statements of Changes in Stockholders' Equity (Deficiency)

Consolidated Statements of Cash Flows

Notes to the Consolidated Financial Statements

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

CONSOLIDATED FINANCIAL STATEMENTS

As of June 30, 2010

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)
CONSOLIDATED FINANCIAL STATEMENTS

As of June 30, 2010

U.S. DOLLARS IN THOUSANDS

INDEX

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To The Stockholders Of

PLURISTEM THERAPEUTICS INC.

(A Development Stage Company)

We have audited the accompanying consolidated balance sheets of Pluristem Therapeutics Inc. and its subsidiary (a development stage company) ("the Company") as of June 30, 2010 and the related consolidated statements of operations, changes in stockholders' equity and cash flows for each of the three years in the period ended June 30, 2010 and for the period from May 11, 2001 (inception date) through June 30, 2010. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above, present fairly, in all material respects, the consolidated financial position of the Company as of June 30, 2010, and the consolidated results of operations and cash flows for each of the three years in the period ended June 30, 2010 and for the period from May 11, 2001 (inception date) through June 30, 2010, in conformity with U.S. generally accepted accounting principles.

As discussed in Note 1b to the consolidated financial statements, the Company has not yet generated revenues from its operations and is dependent on external sources for financing its operations. These factors, among others discussed in Note 1b, raise substantial doubt about the Company's ability to continue as a going concern. The consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded assets amounts or the amounts and classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

/s/ Kost Forer Gabbay & Kasierer
A member of Ernst & Young Global

Haifa, Israel
September 20, 2010

CONSOLIDATED BALANCE SHEETS

U.S. Dollars in thousands

	Note	June 30, 2010	June 30, 2009
ASSETS			
CURRENT ASSETS:			
Cash and cash equivalents	3	$ 1,583	$ 2,339
Short term bank deposit		913	-
Prepaid expenses		41	100
Accounts receivable from the Office of the Chief Scientist		706	383
Other accounts receivable		362	113
Total current assets		3,605	2,935
LONG-TERM ASSETS:			
Long-term deposits and restricted deposits		168	171
Severance pay fund		294	154
Property and equipment, net	4	1,555	1,203
Total long-term assets		2,017	1,528
Total assets		$ 5,622	$ 4,463

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

CONSOLIDATED BALANCE SHEETS

U.S. Dollars in thousands (except share and per share data)

	Note	June 30, 2010	June 30, 2009
LIABILITIES AND STOCKHOLDERS' EQUITY			
CURRENT LIABILITIES			
Trade payables		$ 791	$ 487
Accrued expenses		118	81
Other accounts payable	5	372	272
Total current liabilities		1,281	840
LONG-TERM LIABILITIES			
Long-term obligation		-	23
Accrued severance pay		360	206
		360	229
COMMITMENTS AND CONTINGENCIES	6		
STOCKHOLDERS' EQUITY	7		
Share capital:			
Common stock $0.00001par value:			
Authorized: 100,000,000 shares as of June 30, 2010, 30,000,000 shares as of June 30, 2009.			
Issued: 21,458,707 shares as of June 30, 2010, 14,738,693 shares as of June 30, 2009.			
Outstanding: 20,888,781shares as of June 30, 2010, 13,676,886 shares as of June 30, 2009.		-(*)	-(*)
Additional paid-in capital		44,086	36,046
Accumulated deficit during the development stage		(40,105)	(32,652)
		3,981	3,394
		$ 5,622	$ 4,463

(*) Less than $1.

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

CONSOLIDATED STATEMENTS OF OPERATIONS

U.S. Dollars in thousands (except share and per share data)

	Note	Year ended June 30,			Period from May 11, 2001 (Inception) through June 30,
		2010	2009	2008	2010
Research and development expenses		$ 6,123	$ 4,792	$ 5,077	$ 23,280
Less participation by the Office of the Chief Scientist		(1,822)	(1,651)	(684)	(5,072)
Research and development expenses, net		4,301	3,141	4,393	18,208
General and administrative expenses		3,138	3,417	6,036	20,511
Know how write-off		-	-	-	2,474
Operating loss		(7,439)	(6,558)	(10,429)	(41,193)
Financial expenses (income), net	8	14	78	69	(1,088)
Net loss for the period		$ (7,453)	$ (6,636)	$ (10,498)	$ (40,105)
Loss per share:					
Basic and diluted net loss per share		$ (0.44)	$ (0.63)	$ (1.63)	
Weighted average number of shares used in computing basic and diluted net loss per share		17,004,998	10,602,880	6,422,364	

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

U.S. Dollars in thousands (except share and per share data)

	Common Stock		Additional Paid-in Capital	Receipts on Account of Common Stock	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficiency)
	Shares	Amount				
Issuance of common stock on July 9, 2001	175,500	$ (*)	$ 3	$ -	$ -	$ 3
Balance as of June 30, 2001	175,500	(*)	3	-	-	3
Net loss	-	-	-	-	(78)	(78)
Balance as of June 30, 2002	175,500	(*)	3	-	(78)	(75)
Issuance of common stock on October 14, 2002, net of issuance expenses of $17	70,665	(*)	83	-	-	83
Forgiveness of debt	-	-	12	-	-	12
Stock cancelled on March 19, 2003	(136,500)	(*)	(*)	-	-	-
Receipts on account of stock and warrants, net of finders and legal fees of $56	-	-	-	933	-	933
Net loss	-	-	-	-	(463)	(463)
Balance as of June 30, 2003	109,665	$ (*)	$ 98	$ 933	$ (541)	$ 490

(*) Less than $1.

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

U.S. Dollars in thousands (except share and per share data)

	Common Stock		Additional Paid-in Capital	Receipts on Account of Common Stock	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficiency)
	Shares	Amount				
Balance as of July 1, 2003	109,665	$ (*)	$ 98	$ 933	$ (541)	$ 490
Issuance of common stock on July 16, 2003, net of issuance expenses of $70	3,628	(*)	1,236	(933)	-	303
Issuance of common stock on January 20, 2004	15,000	(*)	-	-	-	(*)
Issuance of warrants on January 20, 2004 for finder's fee	-	-	192	-	-	192
Common stock granted to consultants on February 11, 2004	5,000	(*)	800	-	-	800
Stock based compensation related to warrants granted to consultants on December 31, 2003	-	-	358	-	-	358
Exercise of warrants on April 19, 2004	1,500	(*)	225	-	-	225
Net loss for the year	-	-	-	-	(2,011)	(2,011)
Balance as of June 30, 2004	134,793	$ (*)	$ 2,909	$ -	$ (2,552)	$ 357

(*) Less than $1.

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

U.S. Dollars in thousands (except share and per share data)

	Common Stock		Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficiency)
	Shares	Amount			
Balance as of July 1, 2004	134,793	$ (*)	$ 2,909	$ (2,552)	$ 357
Stock-based compensation related to warrants granted to consultants on September 30, 2004	-	-	162	-	162
Issuance of common stock and warrants on November 30, 2004 related to the October 2004 Agreement net of issuance costs of $29	16,250	(*)	296	-	296
Issuance of common stock and warrants on January 26, 2005 related to the October 2004 Agreement net of issuance costs of $5	21,500	(*)	425	-	425
Issuance of common stock and warrants on January 31, 2005 related to the January 31, 2005 Agreement	35,000	(*)	-	-	(*)
Issuance of common stock and options on February 15, 2005 to former director of the Company	250	(*)	14	-	14
Issuance of common stock and warrants on February 16, 2005 related to the January 31, 2005 Agreement	25,000	(*)	-	-	(*)

(*) Less than $1.

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

U.S. Dollars in thousands (except share and per share data)

	Common Stock		Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficiency)
	Shares	Amount			
Issuance of warrants on February 16, 2005 for finder fee related to the January 31, 2005 Agreement	-	-	144	-	144
Issuance of common stock and warrants on March 3, 2005 related to the January 24, 2005 Agreement net of issuance costs of $24	60,000	(*)	1,176	-	1,176
Issuance of common stock on March 3, 2005 for finder fee related to the January 24, 2005 Agreement	9,225	(*)	(*)	-	-
Issuance of common stock and warrants on March 3, 2005 related to the October 2004 Agreement net of issuance costs of $6	3,750	(*)	69	-	69
Issuance of common stock and warrants to the Chief Executive Officer on March 23, 2005	12,000	(*)	696	-	696
Issuance of common stock on March 23, 2005 related to the October 2004 Agreement	1,000	(*)	20	-	20

(*) Less than $1.

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

U.S. Dollars in thousands (except share and per share data)

	Common Stock		Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficiency)
	Shares	Amount			
Classification of a liability in respect of warrants to additional paid in capital, net of issuance costs of $ 178	-	-	542	-	542
Net loss for the year	-	-	-	(2,098)	(2,098)
Balance as of June 30, 2005	318,768	(*)	6,453	(4,650)	1,803
Exercise of warrants on November 28, 2005 to finders related to the January 24, 2005 agreement	400	(*)	-	-	-
Exercise of warrants on January 25 ,2006 to finders related to the January 25, 2005 Agreement	50	(*)	-	-	-
Reclassification of warrants from equity to liabilities due to application of ASC 815-40 (originally issued as EITF 00-19)	-	-	(8)	-	(8)
Net loss for the year	-	-	-	(2,439)	(2,439)
Balance as of June 30, 2006	319,218	$ (*)	$ 6,445	$ (7,089)	$ (644)

(*) Less than $1.

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

U.S. Dollars in thousands (except share and per share data)

	Common Stock		Additional Paid-in Capital	Receipts on Account of Common Stock	Accumulated Other Comprehensive Loss	Deficit Accumulated During the Development Stage	Total Stockholders' Equity
	Shares	Amount					
Balance as of July 1, 2006	319,218	$ (*)	$ 6,445	$ -	$ -	$ (7,089)	$ (644)
Conversion of convertible debenture, net of issuance costs of $440	1,019,815	(*)	1,787	-	-	-	1,787
Classification of a liability in respect of warrants	-	-	360	-	-	-	360
Classification of deferred issuance expenses	-	-	(379)	-	-	-	(379)
Classification of a liability in respect of options granted to non-employees consultants	-	-	116	-	-	-	116
Compensation related to options granted to employees and directors	-	-	2,386	-	-	-	2,386
Compensation related to options granted to non-employee consultants	-	-	938	-	-	-	938
Exercise of warrants related to the April 3, 2006 agreement net of issuance costs of $114	75,692	(*)	1,022	-	-	-	1,022

(*) Less than $1.

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

U.S. Dollars in thousands (except share and per share data)

	Common Stock		Additional Paid-in Capital	Receipts on Account of Common Stock	Accumulated Other Comprehensive Loss	Deficit Accumulated During the Development Stage	Total Stockholders' Equity	Total Comprehensive Loss
	Shares	Amount						
Cashless exercise of warrants related to the April 3, 2006 agreement	46,674	(*)	(*)	-	-	-	-	
Issuance of common stock on May and June 2007 related to the May 14, 2007 agreement, net of issuance costs of $64	3,126,177	(*)	7,751	-	-	-	7,751	
Receipts on account of shares	-	-	-	368	-	-	368	
Cashless exercise of warrants related to the May 14, 2007 issuance	366,534	(*)	(*)	-	-	-	-	
Issuance of warrants to investors related to the May 14, 2007 agreement	-	-	651	-	-	-	651	
Unrealized loss on available for sale securities	-	-	-	-	(30)	-	(30)	$ (30)
Net loss for the year	-	-	-	-	-	(8,429)	(8,429)	(8,429)
Balance as of June 30, 2007	4,954,110	$ (*)	$ 21,077	$ 368	$ (30)	$ (15,518)	$ 5,897	-
Total comprehensive loss								$ (8,459)

(*) Less than $1.

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

U.S. Dollars in thousands (except share and per share data)

	Common Stock		Additional Paid-in Capital	Receipts on Account of Common Stock	Accumulated Other Comprehensive Loss	Deficit Accumulated During the Development Stage	Total Stockholders' Equity	Total Comprehensive Loss
	Shares	Amount						
Balance as of July 1, 2007	4,954,110	$ (*)	$ 21,077	$ 368	$ (30)	$ (15,518)	$ 5,897	
Issuance of common stock related to investors relation agreements	69,500	(*)	275	-	-	-	275	
Issuance of common stock in July 2007 - June 2008 related to the May 14, 2007 Agreement	908,408	(*)	2,246	(368)	-	-	1,878	
Cashless exercise of warrants related to the May 14, 2007 Agreement	1,009,697	(*)	(*)	-	-	-	-	
Compensation related to options granted to employees and directors	-	-	4,204	-	-	-	4,204	
Compensation related to options granted to non– employees consultants	-	-	543	-	-	-	543	
Realized loss on available for sale securities	-	-	-	-	30	-	30	$ 30
Net loss for the year	-	-	-	-	-	(10,498)	(10,498)	(10,498)
Balance as of June 30, 2008	6,941,715	$ (*)	$ 28,345	$ -	$ -	$ (26,016)	$ 2,329	
Total comprehensive loss								$ (10,468)

(*) Less than $1.

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

U.S. Dollars in thousands (except share and per share data)

	Common Stock		Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Equity
	Shares	Amount			
Balance as of July 1, 2008	6,941,715	$ (*)	$ 28,345	$ (26,016)	$ 2,329
Issuance of common stock related to investor relations agreements	171,389	(*)	133	-	133
Issuance of common stock and warrants related to the August 6, 2008 agreement, net of issuance costs of $125	1,391,304	(*)	1,475	-	1,475
Issuance of common stock and warrants related to the September 2008 agreement, net of issuance costs of $62	900,000	(*)	973	-	973
Issuance of common stock and warrants in November 2008 -January 2009, net of issuance costs of $39	1,746,575	(*)	660	-	660
Issuance of common stock and warrants related to the January 20, 2009 agreement, net of issuance costs of $5	216,818	(*)	90	-	90
Issuance of common stock and warrants related to the January 29, 2009 agreement, net of issuance costs of $90	969,826	(*)	1,035	-	1,035
Issuance of common stock and warrants related to the May 5, 2009 agreement, net of issuance costs of $104	888,406	(*)	1,229	-	1,229
Compensation related to options granted to employees and directors	-	-	1,315	-	1,315
Compensation related to options and warrants granted to non–employee consultants	-	-	97	-	97
Compensation related to restricted stock granted to employees and directors	427,228	(*)	642	-	642
Compensation related to restricted stock granted to non–employee consultants	23,625	(*)	52	-	52
Net loss for the period	-	-	-	(6,636)	(6,636)
Balance as of June 30, 2009	13,676,886	$ (*)	$ 36,046	$ (32,652)	$ 3,394

(*) Less than $1.

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

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

U.S. Dollars in thousands (except share and per share data)

	Common Stock		Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Equity
	Shares	Amount			
Balance as of July 1, 2009	13,676,886	$ (*)	$ 36,046	$ (32,652)	$ 3,394
Issuance of common stock and warrants related to November 2008 through January 2009 agreements (on July 2009)	1,058,708	(*)	794	-	794
Issuance of common stock and warrants related to October 2009 agreements, net of issuance costs of $242	2,702,822	(*)	2,785	-	2,785
Issuance of common stock and warrants related to April 2010 agreements, net of issuance costs of $54	2,393,329	(*)	2,627	-	2,627
Issuance of common stock related to investor relations agreements	45,033	(*)	63	-	63
Exercise of options by employee	3,747	(*)	2	-	2
Compensation related to options granted to employees and directors	-	-	211	-	211
Compensation related to options and warrants granted to non–employee consultants	-	-	161	-	161
Compensation related to restricted stock and restricted stock units granted to employees and directors	981,586	(*)	1,357	-	1,357
Compensation related to restricted stock and restricted stock units granted to non–employee consultants	26,670	(*)	40	-	40
Net loss for the period	-	-	-	(7,453)	(7,453)
Balance as of June 30, 2010	20,888,781	$ (*)	$ 44,086	$ (40,105)	$ 3,981

(*) Less than $1.

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

CONSOLIDATED STATEMENTS OF CASH FLOWS
U.S. Dollars in thousands

	Year ended June 30,			Period from May 11, 2001 (inception) Through June 30,
	2010	**2009**	**2008**	**2010**
CASH FLOWS FROM OPERATING ACTIVITIES:				
Net loss	$ (7,453)	$ (6,636)	$ (10,498)	$ (40,105)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation	207	173	129	752
Capital loss	-	-	-	4
Impairment of property and equipment	2	5	47	54
Know-how write-off	-	-	-	2,474
Amortization of deferred issuance costs	-	-	-	604
Stock-based compensation to employees and directors	1,568	1,957	4,204	10,115
Stock-based compensation to non-employees consultants	201	149	561	2,499
Stock compensation to investor relations consultants	63	133	275	1,263
Know-how licensors – imputed interest	-	-	-	55
Salary grant in shares and warrants	-	-	-	711
Decrease (increase) in other accounts receivable	(307)	(247)	336	(792)
Decrease (increase) in prepaid expenses	59	250	(308)	49
Increase (decrease) in trade payables	132	(54)	237	589
Increase (decrease) in other accounts payable and accrued expenses	120	(96)	74	(15)
Increase in interest receivable on short-term deposit	(15)	-	-	(15)
Increase in accrued interest due to related parties	-	-	-	3
Linkage differences and interest on long-term restricted lease deposit	1	-	-	(1)
Change in fair value of liability in respect of warrants	-	-	-	(2,696)
Fair value of warrants granted to investors	-	-	-	651
Amortization of discount and changes in accrued interest on convertible debentures	-	-	-	128
Amortization of discount and changes in accrued interest from marketable securities	-	(3)	(1)	(9)
Loss from sale of investments of available-for-sale marketable securities	-	75	31	106
Impairment and realized loss on available-for-sale marketable securities	-	-	372	372
Accrued severance pay, net	14	32	4	66
Net cash used in operating activities	$ (5,408)	$ (4,262)	$ (4,537)	$ (23,138)

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

CONSOLIDATED STATEMENTS OF CASH FLOWS

U.S. Dollars in thousands

	Year ended June 30,			Period from May 11, 2001 (inception) through June 30,
	2010	**2009**	**2008**	**2010**
CASH FLOWS FROM INVESTING ACTIVITIES:				
Acquisition of Pluristem Ltd. (1)	$ -	$ -	$ -	$ 32
Purchase of property and equipment	(389)	(313)	(840)	(1,994)
Investment in short-term deposits	(2,500)	-	-	(2,500)
Repayment of short-term deposits	1,602	-	-	1,602
Proceeds from sale of property and equipment	-	-	3	32
Investment in long-term deposits	(12)	(8)	(85)	(229)
Repayment of long-term restricted deposit	3	38	6	67
Purchase of available for sale marketable securities	-	-	-	(3,784)
Proceeds from sale of available for sale marketable securities	-	1,113	2,201	3,314
Purchase of know-how	-	-	-	(2,062)
Net cash provided by (used in) investing activities	(1,296)	830	1,285	(5,522)
CASH FLOWS FROM FINANCING ACTIVITIES:				
Issuance of common stock and warrants, net of issuance costs	$ 5,954	$ 5,462	$ 2,246	$ 27,345
Exercise of warrants and options	2	-	-	1,024
Receipts on account of shares	-	-	(368)	-
Issuance of convertible debenture	-	-	-	2,584
Issuance expenses related to convertible debentures	-	-	-	(440)
Repayment of know-how licensors	-	-	-	(300)
Repayment of notes and loan payable to related parties	-	-	-	(70)
Proceeds from notes and loan payable to related parties	-	-	-	78
Receipt of long-term loan	-	-	49	49
Repayment of long-term loan	(8)	(14)	(5)	(27)
Net cash provided by financing activities	5,948	5,448	1,922	30,243
Increase (decrease) in cash and cash equivalents	(756)	2,016	(1,330)	1,583
Cash and cash equivalents at the beginning of the period	2,339	323	1,653	-
Cash and cash equivalents at the end of the period	$ 1,583	$ 2,339	$ 323	$ 1,583

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

CONSOLIDATED STATEMENTS OF CASH FLOWS
U.S. Dollars in thousands

	Year ended June 30,			Period from May 11, 2001 (inception) through June 30,
	2010	**2009**	**2008**	**2010**
(a) Supplemental disclosure of cash flow activities:				
Cash paid during the period for:				
Taxes paid due to non-deductible expenses	$ 7	$ 33	$ 5	$ 54
Interest paid	$ 2	$ 3	$ 3	$ 18
(b) Supplemental disclosure of non-cash activities:				
Classification of liabilities and deferred issuance expenses into equity	$ -	$ -	$ -	$ 97
Conversion of convertible debenture	$ -	$ -	$ -	$ 2,227
Purchase of property and equipment in credit	$ 192	$ 20	$ 101	$ 192
Issuance of shares in consideration of accounts receivable	$ 252	$ -	$ -	$ 252
(1) Acquisition of Pluristem Ltd.				
Fair value of assets acquired and liabilities assumed at the acquisition date:				
Working capital (excluding cash and cash equivalents)				$ (427)
Long-term restricted lease deposit				19
Property and equipment				130
In-process research and development write-off				246
				$ (32)

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 1:-GENERAL

a. Pluristem Therapeutics Inc., a Nevada corporation, was incorporated and commenced operations on May 11, 2001, under the name A. I. Software Inc. which was changed as of June 30, 2003 to Pluristem Life Systems Inc. On November 26, 2007, its name was changed to Pluristem Therapeutics Inc. Pluristem Therapeutics Inc. has a wholly owned subsidiary, Pluristem Ltd. ("the Subsidiary"), which is incorporated under the laws of Israel. Pluristem Therapeutics Inc. and its Subsidiary are referred to as "the Company".

b. The Company is devoting substantially all of its efforts towards conducting research and development of adherent stromal cells production technology and the commercialization of cell therapy products. Accordingly, the Company is considered to be in the development stage, as defined in Accounting Standards Codification ™ ("ASC") 915 (originally issued as Statement of Financial Accounting Standards ("FAS") No. 7, "Accounting and Reporting by Development stage Enterprises"). In the course of such activities, the Company have sustained operating losses and expects such losses to continue in the foreseeable future. The Company has not generated any revenues or product sales and has not achieved profitable operations or positive cash flows from operations. The Company's accumulated losses during the development stage aggregated to $40,105 through June 30, 2010 and the Company incurred net loss of $7,453 and negative cash flow from operating activities in the amount of $5,408 for the year ended June 30, 2010. There is no assurance that profitable operations, if ever achieved, could be sustained on a continuing basis.

The Company plans to continue to finance its operations with sales of equity securities and research and development grants and in the longer term, from revenues from product sales or licensing of its technology. There are no assurances, however, that the Company will be successful in obtaining an adequate level of financing needed for the long-term development and commercialization of its planned products.

These conditions raise substantial doubt about the Company's ability to continue as a going concern. The consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

c. Since December 10, 2007, the Company's shares of common stock have been traded on the NASDAQ Capital Market under the symbol PSTI. The shares were previously traded on the OTC Bulletin Board under the trading symbol "PLRS.OB". On May 7, 2007, the Company's shares also began trading on Europe's Frankfurt Stock Exchange, under the symbol PJT.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 2:-SIGNIFICANT ACCOUNTING POLICIES

The consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles ("U.S. GAAP") applied on consistent basis.

a. Use of estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates, judgments, and assumptions that are reasonable based upon information available at the time they are made. These estimates, judgments and assumptions can affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

b. Functional currency of the Subsidiary

It is anticipated that the majority of the Subsidiary's revenues will be generated outside Israel and will be determined in U.S. Dollars ("dollars"). In addition, most of the financing of the Subsidiary's operations has been made in dollars. The Company's management believes that the dollar is the primary currency of the economic environment in which the Subsidiary operates. Thus, the functional currency of the Subsidiary is the dollar. Accordingly, monetary accounts maintained in currencies other than the dollar are remeasured into dollars in accordance with ASC 830, "Foreign Currency Matters" (originally issued as Statement of Financial Accounting Standards (SFAS) 52, “Foreign Currency Translation”). All transaction gains and losses from the remeasurement of monetary balance sheet items are reflected in the statement of operations as financial income or expenses, as appropriate.

c. Principles of consolidation

The consolidated financial statements include the accounts of Pluristem Therapeutics Inc. and its Subsidiary. Intercompany transactions and balances have been eliminated upon consolidation.

d. Cash and cash equivalents

Cash equivalents are short-term highly liquid investments that are readily convertible to cash with maturities of three months or less at the date acquired.

e. Short-term bank deposit

Bank deposits with original maturities of more than three months but less than one year are presented as part of short-term investments. Deposits are presented at their cost including accrued interest. Interest on deposits is recorded as financial income.

f. Long-term restricted deposit

Long-term restricted deposit with maturities of more than one year used to secure lease agreement and hedge transactions not designated as hedging accounting instruments are presented at cost.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 2:-SIGNIFICANT ACCOUNTING POLICIES (CONT.)

g. Property and Equipment

Property and equipment are stated at cost, net of accumulated depreciation. Depreciation is calculated by the straight-line method over the estimated useful lives of the assets, at the following annual rates:

	%
Laboratory equipment	10-15
Computers and peripheral equipment	33
Office furniture and equipment	6-15
Vehicles	15
Leasehold improvements	over the shorter of the expected useful life or the reasonable assumed term of the lease.

h. Impairment of long-lived assets

The Company's long-lived assets and identifiable intangibles are reviewed for impairment in accordance with ASC 360, "Property, Plant and Equipment" (originally issued as SFAS 144, “Accounting for the Impairment or Disposal of Long-Lived Assets”) whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of the assets to the future undiscounted cash flows expected to be generated by the assets. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets.

i. Accounting for stock-based compensation:

The Company accounts for stock-based compensation in accordance with ASC 718, "Compensation-Stock Compensation" (originally issued as SFAS 123R). ASC 718 requires companies to estimate the fair value of equity-based payment awards on the date of grant using an option-pricing model. The value of the portion of the award that is ultimately expected to vest is recognized as an expense over the requisite service periods in the Company's consolidated income statements.

The Company recognizes compensation expenses for the value of its awards, which have graded vesting based on the accelerated method over the requisite service period of each of the awards.

The Company estimates the fair value of stock options granted using the Black-Scholes-Merton option-pricing model. The option-pricing model requires a number of assumptions, of which the most significant are, expected stock price volatility, and the expected option term. Expected volatility was calculated based upon actual historical stock price movements over the most recent periods ending on the grant date. The expected life of options granted is calculated using the Simplified Method, as defined in Staff Accounting Bulletin No. 107, "Share-Based Payments", as the average between the vesting period and the contractual life of the options. On December 21, 2007 the SEC staff issued Staff Accounting Bulletin No. 110 (“SAB 110”), which, effective January 1, 2008, amends and replaces SAB 107, “Share-Based Payments”.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 2:-SIGNIFICANT ACCOUNTING POLICIES (CONT.)

i. Accounting for stock-based compensation (cont.):

The Company currently uses the Simplified Method as adequate historical experience is not available to provide a reasonable estimate. The Company adopted SAB 110 effective January 1, 2008 and will continue to apply the Simplified Method until enough historical experience is available to provide a reasonable estimate of the expected term for stock option grants.

The Company has historically not paid dividends and has no foreseeable plans to issue dividends. The risk-free interest rate is based on the yield from U.S. Treasury zero-coupon bonds with an equivalent term. The expected pre-vesting forfeiture rate affects the number of exercisable options. Based on Company's historical experience, the pre-vesting forfeiture rate per grant is 5% for the options and shares granted to employees and 0% for the options and shares granted to directors and officers of the Company.

The fair value of the Company's stock options granted to employees and directors for the years ended June 30, 2009 and 2008 was estimated using the following assumptions (during fiscal year 2010 there were no options grants to employees or directors):

	Year ended June 30,	
	2009	2008
Risk free interest rate	1.8 - 3.3%	3.8 - 4.4%
Dividend yields	0%	0%
Volatility	129 -132%	127 -130%
Expected term (in years)	6	6

The assumptions below are relevant to restricted shares and restricted shares units granted in 2010 and 2009:

In accordance with ASC 718, restricted shares or restricted shares units are measured at their fair value as if it was vested and issued on the grant date. All restricted shares and restricted shares units to employees and non-employees granted in 2010 and 2009 were granted for no consideration or for a voluntary reduction in cash compensation; therefore their fair value was equal to the share price at the date of grant.

The fair value of all restricted shares and restricted shares units was determined based on the close trading price of the Company's shares known at the grant date. The weighted average grant date fair value of share granted during year 2010 was $1.

The Company applies ASC 718 and ASC 505 (EITF 96-18), "Accounting for Equity Instruments That Are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services", with respect to options and warrants issued to non-employees. ASC 718 requires the use of option valuation models to measure the fair value of the options and warrants at the measurement date.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 2:-SIGNIFICANT ACCOUNTING POLICIES (CONT.)

j. Research and Development expenses and royalty-bearing grants

Research and development expenses, net of participations are charged to the Statement of Operations as incurred.

Royalty-bearing grants from the government of Israel for funding approved research and development projects are recognized at the time the Company is entitled to such grants, on the basis of the cost incurred and applied as a deduction from research and development costs.

k. Loss per share

Basic net loss per share is computed based on the weighted average number of shares of common stock outstanding during each year. Diluted net loss per share is computed based on the weighted average number of shares of Common stock outstanding during each year, plus dilutive potential shares of common stock and warrants considered outstanding during the year, in accordance with ASC 260, “Earnings Per Share” (originally issued as SFAS 128). All outstanding stock options have been excluded from the calculation of the diluted loss per common share because all such securities are anti-dilutive for each of the periods presented.

l. Income taxes

The Company accounts for income taxes in accordance with ASC 740, "Income Taxes" (originally issued as SFAS 109). This Topic prescribes the use of the liability method, whereby deferred tax assets and liability account balances are determined based on differences between financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The Company provides a valuation allowance, if necessary, to reduce deferred tax assets to their estimated realizable value.

ASC 740 establishes a single model to address accounting for uncertain tax positions. ASC 740 clarified the accounting for income taxes by prescribing the minimum recognition threshold a tax position is required to meet before being recognized in the financial statements. ASC 740 also provides guidance on recognition, measurement, classification, interest and penalties, accounting in interim periods, disclosure and transition. The adoption of the provisions of ASC 740 did not have a material impact on the Company's consolidated financial position and results of operation.

m. Concentration of credit risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash and cash equivalents, short-term deposits, long-term deposits and restricted deposits.

The majority of the Company’s cash and cash equivalents and short-term and long-term deposits are invested in dollar instruments of major banks in Israel and in the US. Generally, these deposits may be redeemed upon demand and therefore bear minimal risk.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 2:-SIGNIFICANT ACCOUNTING POLICIES (CONT.)

n. Severance pay

The Subsidiary's liability for severance pay is calculated pursuant to Israeli severance pay law based on the most recent salary of the employees multiplied by the number of years of employment, as of the balance sheet date. Employees are entitled to one month's salary for each year of employment or a portion thereof. The Company's liability for all of its employees is fully provided by monthly deposits with insurance policies and by an accrual. The value of these policies is recorded as an asset in the Company's balance sheet.

The deposited funds include profits or losses accumulated up to the balance sheet date. The deposited funds may be withdrawn only upon the fulfillment of the obligation pursuant to Israeli severance pay law or labor agreements. The value of the deposited funds is based on the cash surrendered value of these policies, and includes immaterial profits or losses.

Severance expenses for the years ended June 30, 2010, 2009 and 2008 amounted to approximately $134, $120, and $88, respectively.

o. Fair value of financial instruments

The carrying amounts of our financial instruments, including cash and cash equivalents, short-term deposits, other receivables, trade payable and other accounts payable and accrued liabilities, approximate fair value because of their generally short term maturities.

Effective January 1, 2008, the Company adopted ASC 820, “Fair value and disclosure” (originally issued SFAS 157). ASC 820 clarifies that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or a liability. As a basis for considering such assumptions, ASC 820 establishes a three-tier value hierarchy.

The hierarchy is broken down into three levels based on the inputs as follows:

- Level 1 - Valuations based on quoted prices in active markets for identical assets that the Company has the ability to access. Valuation adjustments and block discounts are not applied to Level 1 instruments. Since valuations are based on quoted prices that are readily and regularly available in an active market, valuation of these products does not entail a significant degree of judgment.

- Level 2 - Valuations based on one or more quoted prices in markets that are not active or for which all significant inputs are observable, either directly or indirectly.

- Level 3 - Valuations based on inputs that are unobservable and significant to the overall fair value measurement.

The availability of observable inputs can vary from investment to investment and is affected by a wide variety of factors, including, for example, the type of investment, the liquidity of markets and other characteristics particular to the transaction. To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment and the investments are categorized as Level 3.

Foreign currency derivative contracts are classified within Level 2 as the valuation inputs are based on quoted prices and market observable data of similar instruments.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 2:-SIGNIFICANT ACCOUNTING POLICIES (CONT.)

p. Derivative financial instruments

The Company's Derivatives are not designated as hedging accounting instruments under ASC 815, Derivatives and Hedging (originally issued as SFAS 133 and SFAS161). Those derivatives consist primarily of forward and options contracts the Company uses to hedge the Company's exposures to currencies other than the U.S. dollar. The Company recognized derivative instruments as either assets or liabilities and measures those instruments at fair value. Since the derivative instruments that the Company holds do not meet the definition of hedging instruments under ASC 815, the Company recognizes changes in the fair values in its statement of income in financial income, net, in the same period as the remeasurement gain and loss of the related foreign currency denominated assets and liabilities.

The fair value of the forward and options contracts as of June 30, 2010 and 2009 were recorded as a liability of $6 and an asset of $67, respectively.

q. Impact of recently issued accounting standards

1. Adoption of New Accounting Standards during the period:

In June 2009, the FASB issued what has been codified in ASC 105 "Generally Accepted Accounting Principles" (formerly: SFAS No. 168, the FASB Accounting Standards Codifications and Hierarchy of GAAP—a Replacement of SFAS 162). The Financial Accounting Standards Board (FASB) Accounting Standards Codification™ ("Codification") became the single source of authoritative U.S. GAAP. The Codification did not create any new GAAP standards but incorporated existing accounting and reporting standards into a new topical structure with a new referencing system to identify authoritative accounting standards, replacing the prior references to Statement of Financial Accounting Standards (SFAS), Emerging Issues Task Force (EITF), FASB Staff Position (FSP), etc. Authoritative standards included in the Codification are designated by their Accounting Standards Codification (ASC) topical reference, and new standards will be designated as Accounting Standards Updates (ASU), with a year and assigned sequence number. Beginning with the interim report for the third quarter of calendar year 2009, references to prior standards have been updated to reflect the new referencing system.

The Company has adopted the guidance and therefore all references by the Company to authoritative accounting principles recognized by the FASB reflect the Codification.

In February 2010, the FASB issued ASU 2010-09, which amends the Subsequent Events Topic of the ASC to eliminate the requirement for public companies to disclose the date through which subsequent events have been evaluated. The Company will continue to evaluate subsequent events through the date of the issuance of the financial statements; however, consistent with the guidance, this date will no longer be disclosed. This change did not affect the Company's consolidated financial statements.

Effective July 1, 2009, the Company adopted the updated provisions issued by the FASB for earnings per share. The new guidance provides that unvested share-based payment awards that contain non-forfeitable rights to dividends or dividend equivalents (whether paid or unpaid) are participating securities and shall be included in the computation of earnings per share pursuant to the two-class method. The two-class method determines earnings per share for each class of common stock and participating security according to their respective participation rights in undistributed earnings. The adoption of these requirements did not have a material impact on the Company's consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 2:-SIGNIFICANT ACCOUNTING POLICIES (CONT.)

q. Impact of recently issued accounting standards (cont.)

1. Adoption of New Accounting Standards during the period (cont.)

   In January 2010, the FASB updated the "Fair Value Measurements Disclosures" codified in ASU 2010-06. More specifically, this update will require (a) an entity to disclose separately the amounts of significant transfers in and out of Levels 1 and 2 fair value measurements and to describe the reasons for the transfers; and (b) information about purchases, sales, issuances and settlements to be presented separately (i.e. present the activity on a gross basis rather than net) in the reconciliation for fair value measurements using significant unobservable inputs (Level 3 inputs). This update clarifies existing disclosure requirements for the level of disaggregation used for classes of assets and liabilities measured at fair value, and requires disclosures about the valuation techniques and inputs used to measure fair value for both recurring and nonrecurring fair value measurements using Level 2 and Level 3 inputs. As applicable to the Company, this became effective as of the first interim or annual reporting period beginning after December 15, 2009, except for the gross presentation of the Level 3 roll forward information, which is required for annual reporting periods beginning after December 15, 2010 and for interim reporting periods within those years. The adoption of the new guidance does not have a material impact on its consolidated financial statements.

2. Recently issued accounting Standards

   On July 21, 2010, the FASB issued ASU 2010-20, Disclosures about the Credit Quality of Financing Receivables and the Allowance for Credit Losses. The new disclosure guidance will significantly expand the existing disclosure requirements surrounding finance receivables and the allowance for loan losses. The objectives of the enhanced disclosures are to provide information that will enable readers of financial statements to understand the nature of credit risk in financing receivables, how that risk is analyzed in determining the related allowance for loan losses, and changes to the allowance during the reporting period. The new disclosures are required starting in the first interim or annual reporting period on or after December 31, 2010. The Company does not anticipate the adoption of this ASU to have an impact on its consolidated financial position, results of operations or cash flows.

NOTE 3:- CASH AND CASH EQUIVALENTS

	June 30,	
	2010	**2009**
In U.S. dollars	$ 1,271	$ 2,209
In New Israeli Shekels (NIS)	304	130
Other currencies	8	-
	$ 1,583	$ 2,339

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 4:-PROPERTY AND EQUIPMENT, NET

	June 30,	
	2010	**2009**
Cost:		
Laboratory equipment	$ 1,452	$ 1,102
Computers and peripheral equipment	150	125
Office furniture and equipment	80	50
Leasehold improvements	430	279
Vehicle	63	63
Total Cost	2,175	1,619
Accumulated depreciation:		
Laboratory equipment	383	254
Computers and peripheral equipment	116	89
Office furniture and equipment	24	16
Leasehold improvements	71	40
Vehicle	26	17
Total accumulated depreciation	620	416
Property and equipment, net	$ 1,555	$ 1,203

Depreciation expenses amounted to $207, $173 and $129 for the years ended June 30, 2010, 2009 and 2008, respectively.

NOTE 5:-OTHER ACCOUNTS PAYABLE

	June 30,	
	2010	**2009**
Accrued payroll	$ 102	$ 63
Payroll institutions	91	50
Accrued vacation	150	151
Liability in respect of hedge transactions	5	-
Current maturities of long-term obligation	24	8
	$ 372	$ 272

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 6:-COMMITMENTS AND CONTINGENCIES

a. The Subsidiary leases facilities under operating lease agreements. The leasing period for the leased area is 62 months as of July 1, 2007. The monthly payment is 64 thousand NIS starting from September 1, 2007 and is linked to the Israeli Consumer Price Index ("CPI"). The Subsidiary may extend the leasing period by 60 months, if an advanced notice is given. As of June 30, 2010 the monthly payment on leasing is approximately $19.

In order to secure these agreements, the Subsidiary pledged a deposit with the bank in the amount of $96. In addition, the Subsidiary has issued a bank guarantee in favor of the lessor in the amount of $94.

Lease expenses amounted $227, $218 and $193 for the years ended June 30, 2010, 2009 and 2008, respectively.

As of June 30, 2010 future rental commitments under the existing lease agreement and supplement are as follows:

Year ended June 30, 2011	$ 222
Year ended June 30, 2012	222
Year ended June 30, 2013	37
Total	$ 481

b. The Subsidiary leases 15 cars under operating lease agreements, which expire in years 2010 through 2013. The monthly payment is approximately $11 and is linked to the CPI. In order to secure these agreements, the Subsidiary pledged a deposit in the amount of $35.

Lease expenses amounted to $116, $86 and $61 for the years ended June 30, 2010, 2009 and 2008, respectively.

As of June 30, 2010 future rental commitments under the existing lease agreements are as follows:

Year ended June 30, 2011	$ 107
Year ended June 30, 2012	64
Year ended June 30, 2013	26
Total	$ 197

c. A deposit in the amount of $50 was pledged by the Subsidiary to secure the hedging transactions and a credit line.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 6:-COMMITMENTS AND CONTINGENCIES (CONT.)

d. Under the Law for the Encouragement of Industrial Research and Development, 1984, commonly referred to as the Research Law, research and development programs that meet specified criteria and are approved by a governmental committee of the Office of the Chief Scientist ("OCS") are eligible for grants of up to 50% of the project's expenditures, as determined by the research committee, in exchange for the payment of royalties from the sale of products developed under the program. Regulations under the Research Law generally provide for the payment of royalties to the Chief Scientist of 3% to 5% on sales of products and services derived from a technology developed using these grants until 100% of the dollar-linked grant is repaid. The Company's obligation to pay these royalties is contingent on its actual sale of such products and services. In the absence of such sales, no payment is required. Effective for grants received from the Chief Scientist under programs approved after January 1, 1999, the outstanding balance of the grants will be subject to interest at a rate equal to the 12 month LIBOR applicable to dollar deposits that is published on the first business day of each calendar year. Following the full repayment of the grant, there is no further liability for royalties.

Through June 30, 2010 and 2009, total grants obtained aggregated $4,104 and $2,640, respectively.

e. See note 7 P relating the May 2007 Agreement.

NOTE 7: - SHARE CAPITAL AND STOCK OPTIONS

a. On December 22, 2009, the Company's authorized common stock was increased from 30,000,000 shares with a par value of $0.00001 per share to 100,000,000 shares with a par value of $0.00001 per share. All shares have equal voting rights and are entitled to one vote per share in all matters to be voted upon by stockholders. The shares have no pre-emptive, subscription, conversion or redemption rights and may be issued only as fully paid and non-assessable shares. Holders of the common stock are entitled to equal ratable rights to dividends and distributions with respect to the common stock, as may be declared by the Board of Directors out of funds legally available.

On July 1, 2008, the authorized share capital of the Company was increased by authorizing 10,000,000 shares of preferred stock, par value $0.00001 each, with series, rights, preferences, privileges and restrictions as may be designated from time to time by the Company's Board of Directors. No shares of preferred stock have been currently issued.

b. On July 9, 2001, the Company issued 175,500 shares of common stock in consideration for $2.50, which was received on July 27, 2001.

c. On October 14, 2002, the Company issued 70,665 shares of common stock at a price of approximately $1.40 per common share in consideration for $100 before issuance costs of $17. On March 19, 2003, two directors each returned 68,250 shares of common stock with a par value of $2 per share, for cancellation, for no consideration.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 7: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

d. In July 2003, the Company issued an aggregate of 3,628 units comprised of 3,628 shares of common stock and 7,256 warrants to a group of investors, for total consideration of $1,236 (net of issuance costs of $70), under a private placement. The consideration was paid partly in the year ended June 30, 2003 ($933) and the balance was paid in the year ended June 30, 2004.

In this placement each unit was comprised of one share of common stock and two warrants, the first warrant was exercisable within a year from the date of issuance for one share of common stock at a price of $450 per share. The second warrant is exercisable within five years from the date of issuance for one share of common stock at a price of $540 per share. All the warrants expired unexercised.

e. On January 20, 2004, the Company consummated a private equity placement with a group of investors (the "Investors"). The Company issued 15,000 units in consideration for net proceeds of $1,273 (net of issuance costs of $227). Each unit is comprised of 15,000 shares of common stock and 15,000 warrants. Each warrant is exercisable into one share of common stock at a price of $150 per share, and may be exercised until January 31, 2007. On March 18, 2004, a registration statement on Form SB-2 was declared effective and the above-mentioned common stock was registered for re-sale. If the effectiveness of the Registration Statement is suspended subsequent to the effective date of registration (March 18, 2004), for more than certain permitted periods, as described in the private equity placement agreement, the Company shall pay penalties to the Investors in respect of the liquidated damages.

According to ASC 815-40 (originally issued as Emerging Issued Task Force ("EITF") 00-19, "Accounting for derivative financial instruments indexed to, and potentially settled in, a Company's own stock" ("EITF 00-19")), the Company classified the warrants as liabilities according to their fair value as remeasured at each reporting period until exercised or expired. Changes in the fair value of the warrants were reported in the statements of operations as financial income or expense.

The Company allocated the gross amount received of $1,500 to the par value of the shares issued ($0.03) and to the liability in respect of the warrants issued ($1,499.97). The amount allocated to the liability was less than the fair value of the warrants at grant date. On January 31, 2007 all the warrants expired unexercised.

In addition, the Company issued 1,500 warrants to finders in connection with this private placement, exercisable into 1,500 common shares at a price of $150 per common share until January 31, 2007. The fair value of the warrants issued in the amounts of $192 was recorded as deferred issuance costs and is amortized over a period of three years. On April 19, 2004, the finders exercised the warrants.

f. In October 2004, the Company consummated a private placement offering ("the October 2004 Agreement") pursuant to which it issued 42,500 units. Each unit is comprised of one share of common stock and one warrant. The warrant is exercisable for one common stock at an exercise price of $60 per share, subject to certain adjustments. The units were issued as follows:

In November 2004, the Company issued according to the October 2004 Agreement 16,250 units comprised of 16,250 shares of common stock and 16,250 warrants to a group of investors, for total consideration of $296 (net of cash issuance costs of $29), and additional 600 warrants to finders as finders' fees.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 7: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

f. (cont.)

In January 2005, the Company issued according to the October 2004 Agreement an additional 21,500 units for total consideration of $425 (net of cash issuance costs of $5), and additional 450 warrants were issued to finders as finders' fees.

In March 2005, the Company issued according to the October 2004 Agreement additional 3,750 units for total consideration of $69 (net of cash issuance costs of $6), and additional 175 warrants were issued to finders as finders' fees.

In March 2005, the Company issued according to the October 2004 Agreement 1,000 common shares and 1,000 share purchase warrants to one investor for total consideration of $20 which was paid to the Company in May 2005.

On November 30, 2006, all the warrants expired unexercised.

g. On January 24, 2005, the Company consummated a private placement offering (the "January 24, 2005 Agreement") which was closed on March 3, 2005 and issued 60,000 units in consideration for $1,176 (net of cash issuance costs of $24). Each unit is compromised of one share of common stock and one warrant. The warrant is exercisable for one share of common stock at a price of $60 per share. On November 30, 2006, all the warrants expired unexercised. Under this agreement the Company issued to finders 9,225 shares and 2,375 warrants with exercise price of $500 per share exercisable until November 2007. On November 30, 2007, 1,925 unexercised warrants expired.

h. On January 31, 2005, the Company consummated a private equity placement offering (the "January 31, 2005 Agreement") with a group of investors according to which it issued 60,000 units in consideration for net proceeds of $1,137 (net of issuance costs of $63). Each unit is comprised of one share of common stock and one warrant. Each warrant is exercisable into one share of common stock at a price of $60 per share. The January 31, 2005 Agreement includes a finder's fee of a cash amount equal to 5% of the amount invested ($60) and issuance of warrants for number of shares equal to 5% of the number of shares that were issued (3,000) with an exercise price of $20 per share, subject to certain adjustments, exercisable until November 30, 2006.

According to ASC 815-40, the Company classified the warrants as liabilities according to their fair value as remeasured at each reporting period until exercised or expired. Changes in the fair value of the warrants will be reported in the statements of operations as financial income or expense.

As of the date of the issuance, the Company allocated the gross amount received of $1,200 to the par value of the shares issued ($0.12) and to the liability in respect of the warrants issued ($1,200). Issuance expenses in the amount of $63 and finder's fee in the amount of $144 were recorded as deferred issuance costs. The amount allocated to the liability was less than the fair value of the warrants at grant date. On May 13, 2005, the Registration Statement became effective and the Company was no longer subject to possible penalties. As such, the liability and the deferred issuance costs related to the agreement has been classified to the Stockholders Equity as Additional Paid in Capital. As of May 13, 2005, the fair value of the liability in respect of the warrants issued was $720 and the amount of the deferred issuance costs was $178.

On November 30, 2006, all the warrants expired unexercised.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 7: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

i. On March 23, 2005, the Company issued 12,000 shares of common stock and 12,000 options as a bonus to the then Chief Executive Officer, Dr. Shai Meretzki, in connection with the issuance of a Notice of Allowance by the United States Patent Office for patent application number 09/890,401. Salary expenses of $696 were recognized in respect of this bonus based on the quoted market price of the Company's stock and the fair value of the options granted using the Black–Scholes valuation model. On November 30, 2006, all the warrants expired unexercised.

j. On February 11, 2004, the Company issued an aggregate amount of 5,000 shares of common stock to a consultant and service provider as compensation for carrying out investor relations activities during the year 2004. Total compensation, measured as the grant date fair market value of the stock, amounted to $800 and was recorded as an operating expense in the statement of operations in the year ended June 30, 2004.

k. On November 28, 2005, 400 warrants, which were issued to finders as finder fees related to the January 24, 2005 Agreement, were exercised.

l. On January 25, 2006, 50 warrants, which were issued to finders as finder fees related to the January 24, 2005 Agreement, were exercised.

m. Convertible Debenture

On April 3, 2006, the Company issued Senior Secured Convertible Debentures (the "Debentures"), for gross proceeds of $3,000. In conjunction with this financing, the Company issued 236,976 warrants exercisable for three years at an exercise price of $15.00 per share. The Company paid a finder's fee of 10% in cash and issued 47,394 warrants exercisable for three years, half of which are exercisable at $15.00 and half of which are exercisable at $15.40 per share. The Company also issued 5,000 warrants in connection with the separate finder's fee agreement related to the issuance of the debenture exercisable for three years at an exercise price of $15.00 per share.

a. Interest accrued on the Debentures at the rate of 7% per annum, was payable semi-annually on June 30 and December 31 of each year and on conversion and at the maturity date. Interest was payable, at the option of the Company, either (1) in cash, or (2) in shares of common stock at the then applicable conversion price. If the Company failed to deliver stock certificates upon the conversion of the Debentures at the specified time and in the specified manner, the Company was required to make substantial payments to the holders of the Debentures.

b. The warrants, issued as of April 3, 2006, become first exercisable on the 65th day after issuance. Holders of the warrants were entitled to exercise their warrants on a cashless basis following the first anniversary of issuance if the Registration Statement is not in effect at the time of exercise.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 7: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

m. Convertible Debenture (Cont.):

In accordance with ASC 815-40, the Company allocated the consideration paid for the convertible debenture and the warrants as follows:

The warrants were recorded as a liability based on their fair value in the amount of $951 at grant date. The Company estimated the fair value of the warrants using a Black-Scholes option pricing model, with the following assumptions: volatility of 83%, risk free interest rate of 4.8%, dividend yield of 0%, and an expected life of 36 months. Changes in the fair value are recorded as interest income or expense, as applicable.

The fair value of the conversion feature of the debentures at grant date, in the amount of $1,951 was recorded as a liability.

The balance of the consideration, in the amount of $97, was allocated to the debentures. The discount in the amount of $2,903 was amortized according to the effective rate interest method over the debentures contractual period (24 months).

The fair value of the warrants issued as a finder's fee and the finder's fee in cash amounted to $535 and were recorded as deferred issuance expenses and are amortized over the Debentures' contractual period. The Company estimated the fair value of the warrants using a Black - Scholes option pricing model, with the following assumptions: volatility of 83%, risk free interest rate of 4.8%, dividend yield of 0%, and an expected life of 36 months.

According to ASC 815-40, in order to classify warrants and options (other than employee stock options) as equity and not as liabilities, the Company should have sufficient authorized and unissued shares of common stock to provide for settlement of those instruments that may require share settlement. Under the terms of the Debentures, the Company may be required to issue an unlimited number of shares to satisfy the debenture's contractual requirements. As such, on April 3, 2006, the Company's warrants and options (other than employee stock options) were classified as liabilities and measured at fair value with changes recognized currently in earnings.

As of November 9, 2006, all of the Debentures, were converted into 969,815 shares. As a result, an amount of $1,787 was reclassified into common stock and additional paid-in capital as follows: from conversion of the feature embedded in convertible debenture ($1,951), convertible debenture ($202), accrued interest ($74) net of issuance expenses in the amount of $440. In addition, the warrants and options to consultants in the amount of $476 and deferred issuance expenses in the amount of $379 were reclassified as equity.

Pursuant to an investor relations agreement dated April 28, 2006, the Company paid in cash an amount of $440 on October 19, 2006 and issued 50,000 common shares on November 9, 2006 to certain service providers following reaching certain milestones regarding the conversion of the Debentures as agreed to by the parties.

During the year ended June 30, 2007, 186,529 of the warrants which were issued on April 3, 2006, were exercised. 75,692 warrants were exercised into shares in consideration for $1,022 (net of cash exercise costs of $114), and 110,836 warrants were exercised cashless into 46,674 shares. On April 30, 2009, the rest of the warrants expired unexercised.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 7: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

n. On May 14, 2007, the Company consummated a private equity placement with a group of investors for an equity investment ("May 2007 Agreement"). The Company sought a minimum of $7,000 and up to a maximum of $13,500 for shares of the Company's common stock at a per share price of $2.50, and warrants to purchase shares at an exercise price of $5.00 exercisable until five years after the closing date of the agreement.

In May 2007, under the May 2007 Agreement, the Company issued 3,126,177 shares of the Company's common stock and 3,126,177 warrants to purchase the Company's common stock in consideration for $7,751 (net of cash issuance costs of $64).

During July and August 2007, under the May 2007 Agreement, the Company issued additional 273,828 shares of the Company's common stock and 273,828 warrants to purchase the Company's common stock in consideration for $685. The consideration was paid partly prior to the issuance of the shares in the year ended June 30, 2007 ($368) and was recorded as receipts on account of shares and the balance was paid during July and August 2007.

As part of May 2007 Agreement, the Company signed an escrow agreement according to which the Company granted an option to an investor to invest, under the same conditions defined in the May 2007 Agreement, up to $5,000 which will be paid in monthly installments over 10 months starting six months subsequent to the closing date. According to the agreement, in the event that the investor fails to make any of the payments within five days of the payment due date, the option to invest the remaining amount will be cancelled. As a result of this agreement, the Company issued 634,580 shares of the Company's common stock and 634,580 warrants to purchase the Company's common stock in consideration for $1,561 (net of cash issuance costs of $25). As of March 31, 2008 the option was cancelled.

The total proceeds related to the May 2007 Agreement accumulated as of June 30, 2008 were $9,997 (net of cash issuance costs of $89), and 4,034,585 shares and 4,034,585 warrants were issued.

In connection with the May 2007 Agreement, the Company issued 275,320 warrants to finders as finders' fee. The warrants are exercisable for five years from the date of grant at an exercise price of $2.50 per share.

During 2008 and 2007, 1,361,818 and 500,000 warrants related to the May 2007 Agreement were exercised on a cashless basis for 1,009,697 shares of stock and 366,534 shares of stock, respectively.

o. The Company issued 28,398 warrants to the investors related to the May 2007 Agreement as compensation to investors who delivered the invested amount prior to the closing date of the placement. The warrants are exercisable for five years at an exercise price of $2.50 per share. The Company recorded the fair value of the warrants as financial expenses in the amount of $651 in the year ended June 30, 2007. The fair value of these warrants was determined using the Black-Scholes pricing model, assuming a risk free rate of 4.8%, a volatility factor of 128%, dividend yield of 0% and expected life of five years.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 7: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

p. In the May 2007 Agreement, there is a provision that requires the Company for a period of four years (subject to acceleration under certain circumstances) not to sell any of the Company's common stock for less than $0.0125 per share (pre-split price). The May 2007 Agreement provides that any sale below that price must be preceded by consent from each purchaser in the placement.

Since that date, the Company had effected a one-for-200 reverse stock split. The Company decided to proceed and enter into additional security purchase agreements notwithstanding this provision for the following reasons:

- The agreement does not contain any provisions for the adjustment of the specified minimum price in the event of stock splits and the like. If such agreement were to have contained such a provision, the floor price would be $2.50.
- The majority of purchasers in the private placement have sold the stock purchased in the placement, and thus the number of purchasers whose consent is purportedly required has been substantially reduced. The number of shares outstanding as to which this provision currently applies according the information supplied by transfer agent is 2 million shares.
- An agreement that prevents the Company's Board of Directors from issuing shares that are necessary to finance the Company's business may be unenforceable.

It is unclear what could be the consequences of a court decision that the issuance of shares below $2.50 per share violates the May 2007 Agreement.

In connection therewith, the Company approved the issuance of warrants to purchase up to 161,724 shares of its common stock to each of the investors who was a party to the May 2007 Agreement that held shares purchased pursuant to such agreement, as of August 6, 2008, conditioned on having the investors execute a general release pursuant to which the Company will be released from liability including, but not limited to, any claims, demands, or causes of action arising out of, relating to, or regarding sales of certain equity securities notwithstanding the above mentioned provision. As of June 30, 2010 the Company received a general release from part of the investors, and issued them warrants to purchase 105,583 shares of its common stock.

q. On August 6, 2008, the Company sold 1,391,304 shares of the Company's common stock and warrants to purchase 695,652 shares of common stock at an exercise price of $1.90 to two investors in consideration of $1,600 pursuant to terms of a securities purchase agreement. The placement agent received a placement fee equal to 6% of the gross purchase price of the Units (excluding any consideration that may be paid in the future upon exercise of the warrants) as well as warrants to purchase 83,478 shares of common stock at an exercise price of $1.44 per share. The warrants will be exercisable after six months from the closing date through and including August 5, 2013. Total cash issuance costs related to this placement amounted to $125.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 7: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

r. On September 22, 2008, the Company sold 900,000 shares of the Company's common stock and warrants to purchase 675,000 shares of common stock to an investor in consideration for $1,035 pursuant to terms of a securities purchase agreement. The price per share of common stock was $1.15, and the exercise price of the warrants is $1.90. The warrants will be exercisable for a period of five years. As part of this transaction, the Company paid a transaction fee to the finders equal to 6% of the actual purchase price and warrants exercisable for five years at an exercise price of $1.50 per share to purchase 54,000 of the Company's shares of common stock. Total cash issuance costs related to this placement amounted to $62.

s. From November 2008 through January 2009, the Company entered into a securities purchase agreement with investors, pursuant to which the Company sold 1,746,575 shares of its common stock at a price of $0.40 per share, for an aggregate purchase price of $699, and issued warrants to purchase up to an additional 1,746,575 shares of common stock with an exercise price of $1.00 per share. The warrants will be exercisable after six months from the closing date and will expire after five years. Pursuant to the agreement, the investors have the option, by notice to the Company no later than 10 business days following the release of an official announcement by the Company that it is initiating its first human clinical trials, to purchase an additional 931,507 shares of common stock at a purchase price of $0.75 per share, for an aggregate purchase price of $699, and receive therewith warrants to purchase up to an additional 931,507 shares of common stock with an exercise price of $1.50 per share.

The issuance costs include $39 in cash and warrants exercisable for five years at an exercise price of $1.00 per share to purchase 96,579 of the Company's shares of common stock.

t. On January 20, 2009, the Company sold 216,818 shares of its common stock and warrants to purchase 216,818 shares of common stock to investors in consideration for $95 pursuant to terms of a securities purchase agreement. The price per share of common stock is $0.44, and the exercise price of the warrants is $1.00 per share. The warrants will be exercisable after six months from the closing date and will expire after five years. Pursuant to the agreement, the investors have the option, by notice to the Company no later than 10 business days following the release of an official announcement by the Company that it is initiating its first human clinical trials, to purchase an additional 127,200 shares of common stock at a purchase price of $0.75 per share, for an aggregate purchase price of $95, and receive therewith warrants to purchase up to an additional 127,200 shares of common stock with an exercise price of $1.50 per share (the "January 20 Option"). The January 20 Option is exercisable within six months from the closing date. As part of this transaction, the Company paid a transaction fee to finders in an amount of $5 in cash and issued them warrants exercisable for two years at an exercise price of $1.00 per share to purchase 12,273 shares of the Company's common stock.

u. On January 29, 2009, the Company entered into a subscription agreement with certain investors, pursuant to which the Company sold to such investors 969,826 units, each unit consisting of one share of common stock and a warrant to purchase one of the Company's share of common stock ("Unit"). The purchase price per Unit was $1.16 and the aggregate purchase price for the said Units was approximately $1,125. The warrants are exercisable 181 days following the issuance thereof for a period of five years thereafter at an exercise price of $1.90 per share. The Company paid a transaction fee to finders in an amount of $90 in cash and issued them warrants exercisable after six months for five years at an exercise price of $1.90 per share to purchase 80,983 shares of the Company's common stock.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 7: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

v. On May 5, 2009, the Company entered into securities purchase agreements with two investors pursuant to which the Company sold 888,406 shares of its common stock and warrants to purchase 488,623 shares of common stock in consideration for $1,333. The exercise price of the warrants is $1.96 per share and they will be exercisable for a period of five years commencing six months following the issuance thereof.

The Company paid a transaction fee to finders in an amount of $104 in cash and issued them warrants exercisable after six months for five years at an exercise price of $1.875 per share to purchase 53,304 shares of the Company's common stock.

w. On July 7, 2009, the Company announced that the first patient has been enrolled in a Phase I clinical trial of its PLX-PAD product. Upon the occurrence of such event, certain investors had an option from prior agreements from November 2008 through January 2009 to purchase additional shares and warrants. Accordingly, certain investors purchased in July 2009, 1,058,708 shares of common stock at a purchase price of $0.75 per share, for an aggregate purchase price of $794, and warrants to purchase up to an additional 1,058,708 shares of common stock with an exercise price of $1.50 per share. The warrants are exercisable for a period of 4 years and six months commencing six months following the issuance.

x. On October 12, 2009, certain institutional investors purchased 2,702,822 shares of the Company's common stock and warrants to purchase 1,081,129 shares of common stock. The price per share of common stock was $1.12, and the exercise price of the warrants was $1.60 per share. The warrants will be exercisable for a period of five years commencing six months following the issuance thereof. The gross proceeds received from this offering were approximately $3,027. Total cash costs related to this placement amounted to $242.

y. On April 27, 2010, the Company closed a private placement pursuant to which it sold to certain investors 2,393,329 shares of common stock and warrants to purchase 717,999 shares of common stock and 717,999 shares of common stock, at exercise prices per share of $1.25 (the "$1.25 Warrants") and $1.40 (the "$1.40 Warrants"), respectively. The price per share of common stock was $1.12. The aggregate gross proceeds from the sale of the common stock and the warrants were $2,681. The warrants are exercisable six months following the issuance thereof, for a period of two and a half years and five years thereafter for the $1.25 Warrants and the $1.40 Warrants, respectively.

The Company paid a transaction fee to finders in an amount of $54 in cash and issued them warrants exercisable at an exercise price of $1.12 per share to purchase 146,144 shares of the Company's common stock.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 7: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

z. The following table summarizes the issuance of shares of common stock to the Company's investor relations consultants as compensation for their services since July 1, 2007:

Period of service	Number of shares issued	Fair market value of the shares issued at the issuance date	Expenses in the statements of operations for the Year ended June 30, 2008	Year ended June 30, 2009	Year ended June 30, 2010
July – December 2007	10,000	$ 149	$ 149	$ -	$ -
February – July 2008	7,500	18	18	-	-
March - September 2008	3,500	8	6	2	-
April – June 2008	50,000	102	102	-	-
July 2008 – June 2009	16,129	10	-	10	-
July –September 2008	40,000	46	-	46	-
October 2008	750	1	-	1	-
October 2008	20,000	12	-	12	-
December 2008 – November 2009	50,000	24	-	14	10
February – July 2009	9,510	12	-	12	-
February – April 2009	30,000	32	-	32	-
April 2009	3,500	4	-	4	-
August 2009 – June 2010	45,033	53	-	-	53
Total	**285,922**	**$ 471**	**$ 275**	**$ 133**	**$ 63**

The issuance of shares to the consultants was in some cases in addition to cash compensation the consultants were entitled to.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 7: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

aa. Options, warrants, restricted stock and restricted stock units to employees, directors and consultants:

The Company has approved two incentive option plans from 2003 and from 2005 (the "2003 Plan" and the "2005 Plan", and collectively, the "Plans"). Under these Plans, options, restricted stock and restricted stock units (the "Awards") may be granted to the Company's officers, directors, employees and consultants.

Each option granted under the 2005 Plan, as it was amended and restated on January 21, 2009 is exercisable through the expiration date of the 2005 Plan, which is December 31, 2018, unless stated otherwise. The Awards vest over two years from the date of grant, as follows: 25% vests six months after the date of grant, and the remaining Awards vest monthly, in equal instalments over 18 months unless other vesting schedules are specified. Any Awards that are cancelled or forfeited before expiration become available for future grants.

As of June 30, 2010, the number of shares of common stock authorized for issuance under the 2005 Plan amounted to 5,854,988. 781,663 shares are still available for future grant under the 2005 Plan as of June 30, 2010. Under the 2003 Plan 20,500 options are authorized for issuance, and 12,870 options are still available for future grant.

a. Options to employees and directors:

The Company accounted for its options to employees and directors under the fair value method in accordance with ASC 718 (originally issued as SFAS 123(R) "Share-Based Payment"). A summary of the Company's share option activity for options granted to employees and directors under the Plans is as follows:

	Year ended June 30, 2010			
	Number	Weighted Average Exercise Price	Weighted Average Remaining Contractual Terms (in years)	Aggregate Intrinsic Value Price
Options outstanding at beginning of period	2,366,106	$ 3.72		
Options exercised	(3,747)	0.62		
Options forfeited	(10,440)	3.15		
Options outstanding at end of the period	2,351,919	$ 3.73	6.87	$ 314
Options exercisable at the end of the period	2,218,948	$ 3.91	6.79	$ 248
Options vested and expected to vest	2,350,082	$ 3.73	6.87	$ 311

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 7: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

aa. Options, warrants, restricted stock and restricted stock units to employees, directors and consultants (cont.):

a. Options to employees and directors (cont.):

Intrinsic value of exercisable options (the difference between the Company's closing stock price on the last trading day in the period and the exercise price, multiplied by the number of in-the-money options) represents the amount that would have been received by the employees and directors option holders had all option holders exercised their options on June 30, 2010. This amount changes based on the fair market value of the Company's common stock.

Compensation expenses related to options granted to employees and directors were recorded as follows:

	Year ended June 30,		Period from inception through June 30,
	2010	2009	2010
Research and development expenses	$ 73	$ 371	$ 2,580
General and administrative expenses	138	944	5,536
	$ 211	$ 1,315	$ 8,116

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 7: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

aa. Options, warrants, restricted stock and restricted stock units to employees, directors and consultants (cont.):

b. Options and warrants to non-employees:

On July 17, 2009, the Company granted 90,000 options exercisable at a price of $0.00001 per share to Company consultants under the 2005 Plan. The fair value of these options at the grant date was $116.

A summary of the Company's activity related to options and warrants to consultants is as follows:

	Year ended June 30, 2010			
	Number	Weighted Average Exercise Price	Weighted Average Remaining Contractual Terms (in years)	Aggregate Intrinsic Value Price
Options and warrants outstanding at beginning of period	336,000	$ 5.48		
Options and warrants granted	90,000	$ (*)		
Options and warrants forfeited	(36,250)	$ 7.93		
Options and warrants outstanding at end of the period	389,750	$ 3.97	6.00	$ 109
Options and warrants exercisable at the end of the period	338,925	$ 4.56	5.54	$ 52
Options and warrants vested and expected to vest	389,750	$ 3.97	6.00	$ 109

(*) Par value of $0.00001 per share.

Compensation expenses related to options and warrants granted to consultants were recorded as follows:

	Year ended June 30,		Period from inception through June 30,
	2010	2009	2010
Research and development expenses	$ 90	$ 7	$ 1,606
General and administrative expenses	71	90	801
	$ 161	$ 97	$ 2,407

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 7: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

aa. Options, warrants, restricted stock and restricted stock units to employees, directors and consultants (cont.):

c. Restricted stock and restricted stock units to employees and directors:

On December 22, 2009, the Company granted 1,060,000 restricted stock units to the Company's employees and directors under the 2005 Plan. The purchase price is $0.00001 per share. The fair value of these shares at the grant date was $1,049.

On May 10, 2010, the Company granted 270,508 shares of restricted stock to the Company's employees and directors under the 2005 Plan. The shares were issued in exchange for a voluntary reduction of one year in the cash compensation such directors and employees were entitled to. The fair value of these shares at the grant date was $292.

The following table summarizes the activities for unvested restricted stock units and restricted stock granted to employees and directors for the year ended June 30, 2010:

	Number
Unvested at the beginning of period	1,012,171
Granted	1,330,508
Forfeited	(4,428)
Vested	(981,586)
Unvested at the end of the period	1,356,665
Expected to vest after June 30, 2010	1,321,089

Compensation expenses related to restricted stock and restricted stock units granted to employees and directors were recorded as follows:

	Year ended June 30,		Period from inception through June 30,
	2010	2009	2010
Research and development expenses	$ 582	$ 250	$ 832
General and administrative expenses	775	392	1,167
	$ 1,357	$ 642	$ 1,999

On August 12, 2010, the Company's Compensation Committee approved a grant of total 270,000 restricted shares to two of our officers as a bonus. The shares will become fully vested upon announcing successful Phase I clinical results that support filing application to the EMA or FDA for Phase II clinical trials.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 7: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

aa. Options, warrants, restricted stock and restricted stock units to employees, directors and consultants (cont.):

d. Restricted stock and restricted stock units to consultants:

On May 10, 2010, the Company granted 9,931 shares of restricted stock to the Company's consultant under the 2005 Plan. The shares were issued in exchange for a voluntary reduction of one year in the cash compensation such consultant was entitled to. The fair value of these shares at the grant date was $11.

The following table summarizes the activities for unvested restricted stock units and restricted stock granted to consultants for the year ended June 30, 2010:

	Number
Unvested at the beginning of period	49,636
Granted	89,931
Forfeited	(39,636)
Vested	(26,670)
Unvested at the end of the period	73,261
Expected to vest after June 30, 2010	73,261

Compensation expenses related to restricted stock and restricted stock units granted to consultants were recorded as follows:

	Year ended June 30,		Period from inception through June 30,
	2010	2009	2010
Research and development expenses	$ 40	$ 52	$ 92
	$ 40	$ 52	$ 92

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 7: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

bb. Summary of warrants and options:

A summary of all the warrants and options outstanding as of June 30, 2010 is presented in this table:

Warrants / Options	Exercise Price per Share	Options and Warrants for Common Stock	Options and Warrants Exercisable	Weighted Average Remaining Contractual Terms(in years)
Warrants:	$ 1.00	2,072,245	2,072,245	3.40
	$ 1.12	146,144	146,144	2.20
	$ 1.25 – 1.28	817,999	100,000	2.50
	$ 1.40 - $ 1.50	1,914,185	1,196,186	4.30
	$ 1.60	1,081,129	1,081,129	4.78
	$ 1.80 - $ 2.00	3,140,112	3,140,112	3.46
	$ 2.50	106,898	106,898	1.53
	$ 4.40	3,750	3,750	0.30
	$ 5.00	2,394,585	2,394,585	1.99
Total warrants		**11,677,047**	**10,241,049**	
Options:	$ 0.00	90,000	41,255	9.04
	$ 0.62	583,445	459,424	8.29
	$ 1.04	92,294	81,264	7.86
	$ 2.97	20,000	20,000	7.86
	$ 3.50	1,021,491	1,021,491	6.03
	$ 3.72 - $ 3.80	36,116	36,116	5.78
	$ 4.00	42,500	42,500	6.30
	$ 4.38 - $ 4.40	480,607	480,607	6.95
	$ 6.80	36,250	36,250	7.37
	$ 8.20	48,547	48,547	6.15
	$ 20.00	146,669	146,669	6.70
Total options		**2,597,919**	**2,414,123**	
Total warrants and options		**14,274,966**	**12,655,172**	

This summary does not include 569,926 shares of restricted stock and 860,000 RSUs that are not vested as of June 30, 2010.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 8:-FINANCIAL EXPENSES (INCOME), NET

	Year ended June 30,			Period from May 11, 2001 (Inception) through June 30,
	2010	2009	2008	2010
Foreign currency translation differences	$ (68)	$ 69	$ (150)	$ (108)
Interest on short-term bank credit and bank's expenses	13	5	13	64
Interest on long-term loan	2	3	3	8
Interest accrued on know-how licenses	-	-	-	69
Interest income on deposits	(18)	(14)	(25)	(168)
Deferred issuance expenses amortization	-	-	-	604
Discount amortization	-	-	-	105
Interest expenses of debenture	-	-	-	74
Change in fair value of warrants	-	-	-	(2,696)
Loss related to marketable securities	-	66	214	247
Interest expenses related to warrants issued to investors	-	-	-	651
Expenses (income) of derivatives	85	(51)	14	62
	$ 14	$ 78	$ 69	$ (1,088)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 9:-TAXES ON INCOME

A. Tax laws applicable to the companies:

1. Pluristem Therapeutics Inc. is taxed under U.S. tax laws.

2. The Subsidiary is taxed under the Israeli income Tax Ordinance and was taxed also under the Income Tax (Inflationary Adjustments) Law, 1985 ("the law").

   Results of the Subsidiary for tax purposes were measured and reflected in real terms in accordance with the changes in the CPI. As explained in Note 2, the financial statements are presented in U.S. dollars. The difference between the rate of change in Israeli CPI and the rate of change in the NIS/U.S. dollar exchange rate causes a difference between taxable income or loss and the income or loss before taxes reflected in the financial statements. In accordance with ASC 740 (originally issued as SFAS 109), the Company has not provided deferred income taxes on this difference between the reporting currency and the tax bases of assets and liabilities.

   On February 26, 2008, the Israeli Parliament (the Knesset) enacted the Income Tax Law (Inflationary Adjustments) (Amendment No. 20) (Restriction of Effective Period), 2008, which the Company refers to as the Inflationary Adjustments Amendment. In accordance with the Inflationary Adjustments Amendment, the effective period of the Inflationary Adjustments Law will cease at the end of the 2007 tax year and as of the 2008 tax year the provisions of the law shall no longer apply, other than the transitional provisions intended at preventing distortions in the tax calculations. In accordance with the Inflationary Adjustments Amendment, commencing the 2008 tax year, income for tax purposes will no longer be adjusted to a real (net of inflation) measurement basis. Furthermore, the depreciation of inflation immune assets and carried forward tax losses will no longer be linked to the Israeli consumer price index.

B. Tax assessments:

The Company has not received final tax assessments since its incorporation.

C. Tax rates applicable to the Company:

1. Pluristem Therapeutics Inc.:

   The tax rates applicable to Pluristem Therapeutics Inc. whose place of incorporation is Nevada are corporate (progressive) tax at the rate of up to 35%, excluding State tax and Local tax if any, which rates depend on the state and city in which the Company will conduct its business.

2. The Subsidiary –

   On July 2009, the Knesset passed The Law for Economic Efficiency (Amended Legislation for Implementing the Economic Plan for 2009 and 2010), 2009, which prescribes, among others, an additional gradual reduction in the rates of the Israeli corporate tax and real capital gains tax starting 2011 to the following tax rates: 2011 - 24%, 2012 – 23%, 2013 – 22%, 2014 – 21%, 2015 – 20%, 2016 – 18% and thereafter.

   The above amendment did not have an effect on the Subsidiary's financial position and results of operations.

   Israeli companies are generally subject to capital gains tax at the rate of the Israeli corporate tax (2010-25%).

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 9:-TAXES ON INCOME (CONT.)

C. Tax rates applicable to the Company (Cont.)::

2. The Subsidiary (cont.) –

Tax Benefits Under the Law for the Encouragement of Capital Investments, 1959 (the " Encouragement Law")

On July 7, 2010, the Subsidiary has received a Pre-Ruling (the "Ruling") from the Israeli Tax Authority. According to the Ruling, the Subsidiary has been granted the status of "Benefited Enterprise" according to the Amendment to the Encouragement Law (the "Program"). The subsidiary chose the year 2007 as the election year of the Program, and chose to benefit from "alternative benefits track". Accordingly, the Subsidiary is entitled to tax benefits for a period of seven consecutive years, starting in the year in which the Subsidiary first generates taxable income. The Subsidiary which is located at National Priority Zone "B", entitled to an exemption from corporate tax in the first six years and to a reduced tax rate of 25% during the remaining benefited period (one year).

The beginning of the benefit period is determined as from the year in which the Benefited Company first generates taxable income, subject to limitation of 12 years from the election year.

Dividend distributed from retained tax-exempt profits will be subject to corporate and withholding taxes in Israel. If the retained tax-exempt profits are distributed, such retained profit distribution will be subject to corporate tax at a reduced tax rate of 25%, and to withholding tax rate of 15%.

The entitlement to the above benefits is conditional upon the Subsidiary's fulfilling the conditions stipulated by the Encouragement Law, the regulations published there under and by the Ruling.

D. Carryforward losses for tax purposes

As of June 30, 2010, Pluristem Therapeutics Inc. had U.S. federal net operating loss carryforward for income tax purposes in the amount of approximately $10,447. Net operating loss carryforward arising in taxable years beginning after August 6, 1997 can be carried forward and offset against taxable income for 20 years and expiring between 2022 and 2028.

Utilization of U.S. net operating losses may be subject to substantial annual limitations due to the "change in ownership" provisions of the Internal Revenue Code of 1986 and similar state provisions. The annual limitation may result in the expiration of net operating losses before utilization.

The Subsidiary in Israel has accumulated losses for tax purposes as of June 30, 2010, in the amount of approximately $12,803, which may be carried forward and offset against taxable business income and business capital gain in the future for an indefinite period.

U.S. Dollars in thousands (except per share amounts)

NOTE 9:-TAXES ON INCOME (CONT.)

Deferred income taxes:

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax assets are as follows:

	June 30,	
	2010	2009
Deferred tax assets:		
U.S. net operating loss carryforward	$ 3,656	$ 3,292
Israeli net operating loss carryforward	3,201	2,071
Allowances and reserves	54	51
Total deferred tax assets before valuation allowance	6,911	5,414
Valuation allowance	(6,911)	(5,414)
Net deferred tax asset	$ -	$ -

As of June 30, 2010, the Company has provided valuation allowances in respect of deferred tax assets resulting from tax loss carryforward and other temporary differences, since they have a history of operating losses and current uncertainty concerning its ability to realize these deferred tax assets in the future. Management currently believes that it is more likely than not that the deferred tax regarding the loss carryforward and other temporary differences will not be realized in the foreseeable future.

Reconciliation of the theoretical tax expense (benefit) to the actual tax expense (benefit):

In 2008, 2009 and 2010, the main reconciling item of the statutory tax rate of the Company (27% to 35% in 2008, 26% to 35% in 2009 and 25% to 35% in 2010) to the effective tax rate (0%) is tax loss carryforwards and other deferred tax assets for which a full valuation allowance was provided.

Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We conducted an evaluation under the supervision of the Chief Executive Officer and Chief Financial Officer (its principal executive officer and principal financial officer, respectively), regarding the effectiveness of the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, or the Exchange Act) as of June 30, 2010. Based on the aforementioned evaluation, management has concluded that our disclosure controls and procedures were effective as of June 30, 2010.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting has been designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles generally accepted in the United States of America.

Our internal control over financial reporting includes policies and procedures that pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect transactions and dispositions of our assets; provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States of America, and that receipts and expenditures are being made only in accordance with authorization of our management and directors; and provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management assessed the effectiveness of our internal control over financial reporting at June 30, 2010. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control—Integrated Framework.* Based on that assessment under those criteria, management has determined that, at June 30, 2010, our internal control over financial reporting was effective.

This annual report does not include an attestation report of our registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the Company's registered public accounting firm pursuant to the exemption provided to issuers that are not "large accelerated filers" nor "accelerated filers" under the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Changes in Internal Control Over Financial Reporting

There have been no changes in our internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the fourth quarter of fiscal year 2010 that have materially affected, or are reasonably likely to materially affect, internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

As of June 30, 2010, our directors and executive officers, their ages, positions held, and duration of such, are as follows:

Name	Position Held With Company	Age	Date First Elected or Appointed
Zami Aberman	Chief Executive Officer, President, Director and Chairman of the Board of Directors	56	September 26, 2005 November 21, 2005 April 3, 2006
Yaky Yanay	Chief Financial Officer, Secretary	39	November 1, 2006
Nachum Rosman	Director	64	October 9, 2007
Doron Shorrer	Director	57	October 2, 2003
Hava Meretzki	Director	41	October 2, 2003
Isaac Braun	Director	57	July 6, 2005
Israel Ben-Yoram	Director	49	January 26, 2005
Mark Germain	Director	60	May 17, 2007
Shai Pines	Director	56	December 8, 2008

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 they were employed.

Zami Aberman

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. He has held positions of Chief Executive Officer and Chairman in Israel, the USA, Europe, Japan and Korea. He has operated within high-tech global companies in the fields of automatic optical inspection, network security, video over IP, software, chip design and robotics. Mr. Aberman serves 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, he 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.

Yaky Yanay

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 System Ltd. (EVSNF.OB), a company engaged in automatic optical inspection. Mr. Yanay serves as a director of Elbit Vision System Ltd. Mr. Yanay holds a bachelor's degree with honors in business administration and accounting from the college of management studies in Rishon Le Zion, Israel and is a Certified Public Accountant in Israel.

Nachum Rosman

Mr. Rosman became a director of our 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 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.

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.

Doron Shorrer

Mr. Shorrer became a director of the Company in October 2003. Mr. Shorrer also serves as a director with other companies: AIG Israel Insurance Company Ltd., Omer Insurance Mutual Fund, Massad Bank, Provident Fund of employees of the Israel Electric Company LTD, Gold Bond Logistic Group and B. Yair - a construction company, the last two companies that are trading at the Tel-Aviv Stock Exchange. Between 2002 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. 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 became a director of our company in October 2003. Ms. Meretzki is an attorney and since 2009 has been 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. In addition, Ms. Meretzki was nominated to be a member of the committee that nominates legal advisers for Israeli governmental companies.

Ms. Meretzki received a Bachelors Degree in Law from the Hebrew University in 1991 and was admitted to the Israel Bar Association in 1993.

Isaac Braun

Mr. Braun became a director of our 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 financing and business development.

Israel Ben-Yoram

Mr. Ben-Yoram became a director of our 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 were traded in 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 LLB and an MBA from Tel Aviv University and an LLM from Bar Ilan University. In addition, Mr. Ben-Yoram is qualified in arbitration and in mediation.

Mark Germain

Mr. Germain became a director of our 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 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., Omnimmune Corp. and Collexis Holdings, Inc. He is also a co-founder and director of a number of private companies in the biotechnology field.

Shai Pines

Mr. Pines became a director of our 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. During the last decade Mr. Pines was a member of the Executive Committee of Micha Tel-Aviv - the Multidisciplinary Center for Children with Hearing Loss. As of 2009 Mr. Pines is a member of the Audit Committee of Micha Tel-Aviv.

There are no family relationships between any of the directors or officers named above.

Audit Committee and Audit Committee Financial Expert

The members of our Audit Committee are Doron Shorrer, Nachum Rosman and Israel Ben-Yoram. Doron Shorrer is the Chairman of the Audit Committee, and our Board of Directors has determined that Israel Ben-Yoram is an "Audit Committee financial expert" 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 was approved by our Board on August 29, 2007. The charter is posted on our website at www.pluristem.com. The information on our website is not incorporated by reference into this Annual Report. The primary responsibilities of our Audit Committee include:

- Appointing, compensating and retaining our registered independent public accounting firm;
- Overseeing the work performed by any outside 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.

Other Committees of the Board

Compensation Committee

The members of our Compensation Committee are Doron Shorrer, 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 was approved by our Board on August 29, 2007. The charter is posted on our website at www.pluristem.com. The primary responsibilities of our Compensation Committee include:

- Reviewing, negotiating and approving, or recommending for approval by our Board of 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.

Our Compensation Committee held three 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.

Code of Ethics

Effective August 29, 2007, our Board of Directors adopted a Code of Business Conduct and Ethics that applies to, among other persons, members of our Board of Directors, our officers including our Chief Executive Officer (being our principal executive officer) and our Chief Financial Officer (being our principal financial and accounting officer), contractors, consultants and advisors.

Our Code of Business Conduct and Ethics is filed with the SEC as an exhibit to our annual report on Form 10-KSB filed on September 23, 2005. We will provide a copy of the Code of Business Conduct and Ethics to any person without charge, upon request. Requests can be sent to: Pluristem Therapeutics Inc., MATAM Advanced Technology Park, Building No. 20, Haifa 31905, Israel.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act 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 year ended June 30, 2010, all filing requirements applicable to its officers, directors and ten percent beneficial owners were complied with.

Item 11. Executive Compensation.

The following table shows the particulars of compensation paid to the following persons, where applicable, for the years ended June 30, 2010 and 2009, chief executive officer and chief financial officer. We do not currently have any other executive officers, nor did we during the years ended June 30, 2010 and 2009.

SUMMARY COMPENSATION TABLE

Name and Principal Position	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 elsewhere in this 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 then 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.

On August 12, 2010, our Compensation Committee approved a grant of 200,000 restricted shares to Mr. Aberman as a bonus. The shares will become fully vested upon announcing successful Phase I clinical results that support filing application to the EMA or FDA for Phase II clinical trials.

(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.

On August 12, 2010, our Compensation Committee approved a grant of 70,000 restricted shares to Mr. Yanay as a bonus. The shares will become fully vested upon announcing successful Phase I clinical results that support filing application to the EMA or FDA for Phase II clinical trials.

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) options issued to Mr. Aberman fully vest upon a change of control, and in the event of termination of the Consulting Agreement, he will be entitled to 50% acceleration of all of his unvested options and 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. In addition, Mr. Yanay is entitled to acceleration of the vesting of his stock options and restricted stock in the following circumstances: (1) if we terminate his employment Mr. Yanay will be entitled to acceleration of 100% of any unvested options and restricted stock and (2) if Mr. Yanay resigns, he 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:

	Number of Securities Underlying Unexercised					
	Option Awards				Stock Awards	
Name	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) 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
	-	-	-	-	81,915(5)	$ 94,202
					105,000(7)	$ 120,750
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 Last Fiscal Year and 2010 Fiscal Year End Option/Values

During the fiscal year ended June 30, 2010, no stock options were exercised by our executive officers.

Long-Term Incentive Plans-Awards in Last Fiscal Year

We have no long-term incentive plans, other than the stock option plans described below under Item 12.

Compensation of Directors

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 Germain	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 elsewhere in this 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 $8,400; meeting participation fees of $750 per in-person meeting; and for meeting participation by telephone, $350 per meeting. On February 7, 2007, the Board raised the annual director fee to $10,000. On May 17, 2007, the Board decided that the dollar rate would be not less then 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 in the preceding two paragraphs, 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 indicated in this 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.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholders Matters.

The following table sets forth certain information, to the best knowledge and belief of the Company, as of September 1, 2010 (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; (3) each of our executive officers; and (4) all of our directors and our executive officers as a group.

Name and Address of Beneficial Owner	Beneficial Number of Shares[1]	Percentage
Directors and Named Executive Officers		
Zami Aberman Chief Executive Officer, Chairman of the Board, President and Director	1,069,740[2]	4.8%
Shai Pines Director	46,954	*
Hava Meretzki Director	147,646[3]	*
Doron Shorrer Director	169,210[4]	*
Israel Ben-Yoram Director	149,230[5]	*
Isaac Braun Director	146,377[6]	*
Nachum Rosman Director	116,204[7]	*
Mark Germain Director	391,954[8]	1.8%
Yaky Yanay Chief Financial Officer and Secretary	445,404[9]	2.0%
Directors and Executive Officers as a group (9 persons)	2,682,719[10]	11.50%
5% Shareholders		
Bangor Holdings Ltd.	4,064,287[11]	19.4%
Merina Overseas Ltd.	1,533,334[12]	6.8%

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* = less than 1%

(1) Based on 21,829,350 shares of common stock issued and outstanding as of September 1, 2010. Except as otherwise indicated, we believe that the beneficial owners of the common stock listed above, based on information furnished by such owners, have sole investment and voting power with respect to such shares, subject to community property laws where applicable. Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Shares of common stock subject to options, warrants or right 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 21,600 warrants and options to acquire 180,000 shares.

(10) Includes 21,600 warrants and options to acquire 1,468,897 shares.

(11) The information is based solely on a Schedule13G filed with the SEC on July 14, 2010. Schedule 13G provides that Mr. Uri Heller has shared voting and dispositive power with respect to such shares.

(12) This information is based on a report from American Stock Transfer and Trust Company, LLC, the Company’s transfer agent dated September 1, 2010 and includes 766,667 warrants according to the company's books.

Equity Compensation Plan Information

On November 25, 2003, our Board of Directors adopted our 2003 Stock Option Plan. Under the 2003 Stock Option Plan, options may be granted to our officers, directors, employees and consultants or the officers, directors, employees and consultants of our subsidiary. Pursuant to the Plan, we reserved for issuance 20,500 shares of our common stock. As of June 30, 2010, there were 12,870 shares of our common stock still available for future grant under the plan.

On November 21, 2005, our Board of Directors adopted our 2005 Stock Option Plan. Under the 2005 Stock Option Plan, options may be granted to our officers, directors, employees and consultants or the officers, directors, employees and consultants of our subsidiary. Pursuant to the 2005 Stock Option Plan, we reserved for issuance 75,000 shares of our common stock. On January 24, 2007 our Board of Directors amended the 2005 Stock Option Plan to reserve for issuance 1,400,000 shares of our common stock. On August 29, 2007, we reserved an additional 500,000 of common stock for the 2005 option plan, and on August 28, 2008 an additional 90,000 shares of common stock.

At our annual meeting of our stockholders held on January 21, 2009, our stockholders approved the adoption of the Amended and Restated 2005 Stock Option Plan of the Company, or the 2005 Plan, amending the 2005 Stock Option Plan in order to: (i) increase the number of shares of common stock authorized for issuance thereunder from 1,990,000 to be equal to 16% of the number of shares of common stock issued and outstanding on a fully diluted basis immediately prior to the grant of securities; (ii) allow the issuance of shares of common stock and units for such shares of common stock; and (iii) set the termination date of the 2005 Plan to be December 31, 2018.

The following table summarizes certain information regarding our equity compensation plans as of June 30, 2010:

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans
Equity compensation plan approved by security holders (1)	2,594,039	$ 3.88	781,663
Equity compensation plan not approved by security holders (2)	147,630	$ 1.71	12,870
Total	2,741,669	$ 3.76	794,533

(1) Includes awards granted under the 2005 Plan.

(2) Includes awards granted under the 2003 Stock Option Plan and awards not granted under either the 2003 Stock Option Plan or the 2005 Plan.

Item 13. Certain Relationships and Related Transactions and Director Independence.

No director, executive officer, principal shareholder holding at least 5% of our common shares, or any family member thereof, had any material interest, direct or indirect, in any transaction, or proposed transaction, during the fiscal years ended June 30, 2009 and 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.

Item 14. Principal Accounting Fees and Services

The fees for services provided by Kost Forer Gabbay & Kasierer, a member of Ernst & Young Global, to the Company in the last two fiscal years were as follows:

	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	$ 83,879	$ 72,385

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 of relating to the preparation and filing of an application with the Israeli Office of Chief Scientist and ongoing advice in executing the approved applications.

SEC rules require that before Kost Forer Gabbay & Kasierer, a member of Ernst & Young Global, is engaged by us to render any auditing or permitted non-audit related service, the engagement be:

1. Pre-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 Kost Forer Gabbay & Kasierer, a member of Ernst & Young Global, and believes that the provision of services for activities unrelated to the audit is compatible with maintaining Kost Forer Gabbay & Kasierer's independence.

PART IV

Item 15. Exhibits.

3.1	Composite Copy of the Company's Articles of Incorporation as amended on December 22, 2009 (incorporated by reference to Exhibit 3.1 of our quarterly report on Form 10-Q filed February 11, 2009).
3.2	Amended By-laws (incorporated by reference to Exhibit 3.1 of our current report on Form 8-K filed January 22, 2007).
4.1	Form of Common Stock Purchase Warrant (incorporated by reference from Exhibit 4.1 of our current report on Form 8-K filed on October 6, 2009).
4.2	Form of Common Stock Purchase Warrant dated April 26, 2010. (incorporated by reference to Exhibit 4.1 of our current report on Form 8-K filed on April 28, 2010).
10.1	Consulting Agreement dated September 26, 2005 between Pluristem Ltd. and Rose High Tech Ltd. (incorporated by reference to Exhibit 10.25 of our quarterly report on Form 10-QSB filed February 9, 2006).+
10.2	Form of Securities Purchase Agreement dated October 6, 2009 (incorporated by reference to Exhibit 10.1 of our current report on Form 8-K filed on October 6, 2009).
10.3	Assignment Agreement dated May 15, 2007 between Pluristem Therapeutics Inc. and each of Technion Research and Development Foundation Ltd., Shai Meretzki, Dr. Shoshana Merchav (incorporated by reference to Exhibit 10.1 of our current report on Form 8-K filed on May 24, 2007).
10.4	Assignment Agreement dated May 15, 2007 between Pluristem Therapeutics Inc. and Yeda Research and Development Ltd. in (incorporated by reference to Exhibit 10.2 of our current report on Form 8-K filed on May 24, 2007).
10.5	Placement Agency Agreement, dated October 6, 2009, between Pluristem Therapeutics Inc. and Roth Capital Partners, LLC. (incorporated by reference to Exhibit 1.1 of our current report on Form 8-K filed on October 6, 2009).
10.6	Form of Regulation D Securities Purchase Agreement for Common Stock and Warrants. (incorporated by reference from Exhibit 10.1 of our current report on Form 8-K filed on April 28, 2010).
10.7	Form of Regulation S Securities Purchase Agreement for Common Stock and Warrants. (incorporated by reference to Exhibit 10.2 of our current report on Form 8-K filed on April 28, 2010).
10.8	Summary of Directors' Ongoing Compensation (incorporated by reference to Exhibit 10.1 of our quarterly report on Form 10-Q filed on November 12, 2009).
10.9	2003 Stock Option Plan (incorporated by reference to Exhibit 4.1 of our registration statement on Form S-8 filed on December 29, 2003) (Registration no. 333-111591).
10.10	The Amended and Restated 2005 Stock Option Plan (incorporated by reference to Exhibit 10.1 of our current report on Form 8-K filed on January 23, 2009).

10.11 Form of Stock Option Agreement under the Amended and Restated 2005 Stock Option Plan. (incorporated by reference to Exhibit 10.4 of our annual report on Form 10-K filed September 23, 2009). +

10.12 Form of Restricted Stock Agreement under the Amended and Restated 2005 Stock Option Plan. (incorporated by reference to Exhibit 10.16 of our annual report on Form 10-K filed September 23, 2009). +

10.13 Form of Restricted Stock Agreement (Israeli directors and officers) under the Amended and Restated 2005 Stock Option Plan. (incorporated by reference to Exhibit 10.17 of our annual report on Form 10-K filed September 23, 2009). +

14.1 Code of Business Conduct and Ethics and Compliance Program adopted by the Board of Directors (incorporated by reference to Exhibit 14.1 of our annual report on Form 10-KSB filed on September 23, 2005).

21.1 List of Subsidiaries of the Company (incorporated by reference to Exhibit 21.1 of our annual report on Form 10-K filed on September 29, 2008).

23.1* Consent of Kost Forer Gabbay & Kasierer, A member of Ernst & Young Global.

31.1* Certification pursuant to Rule 13a-14(a)/15d-14(a) of Zami Aberman.

31.2* Certification pursuant to Rule 13a-14(a)/15d-14(a) of Yaky Yanay.

32.1** Certification pursuant to 18 U.S.C. Section 1350 of Zami Aberman.

32.2** Certification pursuant to 18 U.S.C. Section 1350 of Yaky Yanay.

*Filed herewith.

** Furnished herewith

+ Management contract or compensation plan.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Pluristem Therapeutics Inc.

By: /s/ Zami Aberman
(Zami Aberman, Chief Executive Officer,
Principal Executive Officer)
Date: September 20, 2010

By: /s/ Yaky Yanay
Yaky Yanay, Chief Financial Officer
(Principal Financial and Accounting Officer)
Dated: September 20, 2010

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

By: /s/ Zami Aberman
Zami Aberman, Chief Executive Officer
(Principal Executive Officer)
Chairman of the Board and Director
Dated: September 20, 2010

By: /s/Yaky Yanay
Yaky Yanay, Chief Financial Officer
(Principal Financial and Accounting Officer)
Dated: September 20, 2010

By: /s/ Doron Shorrer
Doron Shorrer, Director
Dated: September 20, 2010

By: /s/ Hava Meretzki
Hava Meretzki, Director
Dated: September 20, 2010

By: /s/ Isaac Braun
Isaac Braun, Director
Dated: September 20, 2010

By: /s/ Israel Ben-Yoram
Israel Ben-Yoram, Director
Dated: September 20, 2010

By: /s/ Nachum Rosman
Nachum Rosman, Director
Dated: September 20, 2010

By: /s/ Mark Germain
Mark Germain, Director
Dated: September 20, 2010

By: /s/ Shai Pines
Shai Pines, Director
Dated: September 20, 2010

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement on Form S-3 (Registration No. 333-151761) and in the Registration Statements on Form S-8 (Registration No. 333-111591 and 333-162577) of Pluristem Therapeutics Inc. of our report dated September 20, 2010, with respect to the consolidated financial statements of Pluristem Therapeutics, Inc. included in this Annual Report (Form 10-K) for the year ended June 30, 2010.

/s/ Kost Forer Gabbay & Kasierer
Kost Forer Gabbay & Kasierer
A member of Ernst & Young Global

Haifa, Israel
September 20, 2010

Exhibit 31.1

CERTIFICATIONS

I, Zami Aberman, certify that:

1. I have reviewed this annual report on Form 10-K for the year ended June 30, 2010, of Pluristem Therapeutics Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: September 20, 2010

/s/ Zami Aberman
Zami Aberman
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATIONS

I, Yaky Yanay, certify that:

1. I have reviewed this annual report on Form 10-K for the year ended June 30, 2010, of Pluristem Therapeutics Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: September 20, 2010

/s/ Yaky Yanay
Yaky Yanay
Chief Financial Officer and Secretary
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Pluristem Therapeutics Inc. (the "Company") on Form 10-K for the period ended June 30, 2010, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, as the Chief Executive Officer of the Company, hereby certifies pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Dated: September 20, 2010

/s/ Zami Aberman
Zami Aberman
Chief Executive Officer

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Pluristem Therapeutics Inc. (the "Company") on Form 10-K for the period ended June 30, 2010, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, as the Chief Financial Officer of the Company, hereby certifies pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Dated: September 20, 2010

/s/ Yaky Yanay
Yaky Yanay
Chief Financial Officer

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Filed Pursuant to Rule 424(b)(5)

Registration No. 333-151761

PROSPECTUS SUPPLEMENT NO. 4
(to prospectus dated July 1, 2008, as previously supplemented by Prospectus Supplement No. 1 filed on August 6, 2008, Prospectus Supplement No. 2 filed on September 24, 2008 and Prospectus Supplement No. 3 filed on May 6, 2009)

2,702,822 shares of common stock
Warrants to purchase up to 1,081,129 shares of common stock

Price per share: $1.12
Exercise price of warrants: $1.60 per share of common stock

Pluristem Therapeutics Inc. is offering for sale 2,702,822 shares of its common stock and warrants to purchase up to 1,081,129 shares of common stock pursuant to this prospectus supplement and related prospectus attached hereto. We use the term, this Prospectus, to mean this prospectus supplement and the accompanying prospectus, including the information incorporated by reference herein. This Prospectus also covers the shares of common stock issuable upon exercise of the warrants. Warrants may be purchased only together with shares of common stock but may be subsequently transferred separately. A warrant to purchase 0.40 share of common stock will be issued together with each share of common stock purchased. The shares and the warrants are sometimes collectively referred to as units.

The last reported sale price on the Nasdaq Capital Market of our common stock on October 5, 2009 was $1.32 per share, and the closing bid price was $1.32 per share.

Common stock trading symbols: Nasdaq Capital Market: PSTI. Frankfurt Stock Exchange: PJT.

This investment involves a high degree of risk. See "Risk Factors" beginning on page S-4, as well as the section called "Risk Factors" beginning on page 9 of our Annual Report on Form 10-K for our 2009 fiscal year filed with the Securities and Exchange Commission and incorporated by reference into the accompanying prospectus.

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

	Per Share	Per Warrant Exercise Share	Total
Public offering price for shares	$ 1.12	-	$ 3,027,161
Placement agency fees	7%	-	186,901
Public offering price (exercise price) for warrant exercise shares		$ 1.60	$ 1,729,806
Total proceeds, before expenses, to Pluristem Therapeutics Inc. from both shares and warrant exercise shares	$ 1.12	$ 1.60	$ 4,756,967

Delivery of the units will be made on or about October 12, 2009.

Roth Capital Partners, LLC has been retained to act as placement agent in the offering of units. The placement agent is not purchasing or selling any of our securities pursuant to this prospectus supplement or the accompanying prospectus, nor are we requiring any minimum purchase or sale of any specific number of securities. Because there is no minimum offering amount required as a condition to closing in the offering of units, the placement agency fees and net proceeds to us, if any, in this offering may be less than the offering amounts set forth above.

Roth Capital Partners, LLC

The date of this prospectus supplement is October 6, 2009.

TABLE OF CONTENTS

PROSPECTUS SUPPLEMENT

PROSPECTUS

You should rely only on the information contained in or incorporated by reference into this prospectus supplement and the accompanying prospectus. We have not authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. The information in this prospectus supplement and the accompanying prospectus is accurate only as of the date it is presented. Our business, financial condition, results of operations and prospects may have changed since these dates.

ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus dated July 1, 2008 (as supplemented and amended to date) are part of a "shelf" registration statement on Form S-3 filed with the Securities and Exchange Commission, and declared effective by the Securities and Exchange Commission on July 1, 2008. By using a "shelf" registration statement, we may sell shares of common stock and warrants to purchase common stock as described in the accompanying prospectus from time to time in one or more offerings up to a total of $15,000,000.

These documents contain important information you should consider when making your investment decision. The accompanying prospectus provides you with a general description of the securities we may offer. This prospectus supplement contains information about the securities offered by this prospectus supplement. This prospectus supplement may add, update or change information in the accompanying prospectus. You should rely only on the information contained in this prospectus supplement, the accompanying prospectus or incorporated by reference into this prospectus supplement and the accompanying prospectus. We have not authorized anyone to provide you with any other information.

This prospectus supplement does not constitute an offer to sell, or a solicitation of an offer to buy, the securities offered hereby in any jurisdiction where, or to any person to whom, it is unlawful to make such offer or solicitation.

The information contained in this prospectus supplement is accurate only as of the date of this prospectus supplement and the accompanying prospectus, regardless of the time of delivery of this prospectus or of any sale of securities.

THE OFFERING

Common stock and warrants offered by us pursuant to this prospectus	2,702,822 shares of common stock, plus warrants to purchase up to additional 1,081,129 shares of common stock. This prospectus also covers the shares of common stock issuable upon exercise of the warrants offered hereby.
Common stock outstanding as of September 23, 2009	15,796,181 shares of common stock.
Warrants outstanding as of September 23, 2009	Warrants to purchase up to 8,924,936 shares of common stock at a weighted average purchase price of $2.48 per share. (1)
Common stock to be outstanding after this offering (pro forma as of September 23, 2009, excluding outstanding warrants to purchase 8,924,936 shares with a weighted average exercise price of $2.48 per share)	18,499,003 shares of common stock, or 19,580,132 shares of common stock if the warrants sold in this offering are fully exercised. (1)
Common stock to be outstanding after this offering (pro forma as of September 23, 2009 including outstanding warrants to purchase 8,924,936 shares with a weighted average exercise price of $2.48 per share)	27,423,939 shares of common stock, or 28,505,068 shares of common stock, if the warrants sold in this offering are fully exercised. (1)
Terms of warrants offered by us pursuant to this prospectus	Five year term initially exercisable 6 months after date of issuance, $1.60 per share exercise price
Use of proceeds	We intend to use the net proceeds from this offering to fund the preparation of our Phase-II clinical trials in the USA or Germany and for general working capital and administrative expenses. See "Use of Proceeds" on page S-4.
Nasdaq Capital Market common stock symbol	PSTI
Risk factors	This investment involves a high degree of risk. See "Risk Factors" on page S-4 of this prospectus supplement and in our last Annual Report on Form 10-K filed with the SEC.

(1) Excludes options outstanding on September 23, 2009, to purchase a total of 2,723,231 shares of common stock at a weighted-average exercise price of $3.85 per share.

RISK FACTORS

Investment in our common stock and/or warrants involves a high degree of risk. Before making an investment decision, you should carefully consider the risks and uncertainties described below, together with all of the other information appearing in the accompanying prospectus or incorporated by reference therein, in light of your particular investment objectives and financial circumstances before you invest in our securities. In particular, we urge you to read the material under “Risk Factors” beginning on page 9 of our Annual Report on Form 10-K for our 2009 fiscal year, as filed with the Securities and Exchange Commission. If any of these risks actually occurs, our business, financial condition, results of operations and future growth prospects would be materially adversely affected. The trading price of our securities could decline due to any of these risks, and you may lose all or part of your investment. This prospectus supplement and the accompanying prospectus and the information incorporated by reference into this prospectus supplement and the accompanying prospectus also contain forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks so mentioned. Please note the following additional risk factor.

We have a potential conflict with a prior financing agreement that may expose us to potential litigation

In our subscription agreement for our May 2007 equity financing, or the Prior Financing Agreement, there is a provision that requires us for a period of four years (subject to acceleration under certain circumstances) not to sell any of our common stock for less than $.0125 per share. The Prior Financing Agreement provides that any sale below that number must be preceded by a consent from each purchaser in the placement. Since that date, we have effected a one-for-200 reverse stock split.

In August, 2008, we entered into securities purchase agreements pursuant to which we sold securities at a price higher than the pre-split price of $0.125 and below the post-split price of $2.50. We decided to proceed with this offering notwithstanding this provision for the following reasons:

- The agreement did not contain any provisions for the adjustment of the specified minimum price in the event of stock splits and the like. If such agreement were to have contained such a provision, the floor price would be $2.50, which is more than the offering price of this offering.

- The majority of purchasers in the private placement have sold the stock purchased in the placement, and thus the number of purchasers whose consent is purportedly required has been substantially reduced. The number of shares outstanding as to which this provision currently applies according the information supplied by our transfer agent is 1,848,545 shares.

- An agreement that prevents our Board of Directors from issuing shares that are necessary to finance our business may be unenforceable.

- Even if the agreement were considered enforceable and the share price number were to be adjusted for our reverse stock split, we believe that there would be no damage from this offering to the holders of our shares whose consent is purportedly required.

In the event that a court were to hold that the issuance of shares below $2.50 per share would violate the Prior Financing Agreement, it is unclear what remedy the court might impose. If the court were to impose a remedy that would be the equivalent of an anti-dilution provision (which is not contained in the Prior Financing Agreement), any issuance of shares would be dilutive to our shareholders, including those who purchase shares in the current offering. In addition, since August 2008, we, on several occasions, raised funds at a price per share which is higher than the pre-split price of $0.125 and below the post-split price of $2.50.

In connection with financing that took place in August 2008, we approved the issuance of warrants to purchase up to 147,884 shares of our common stock to each of the investors who was a party to the Prior Financing Agreement that held shares purchased pursuant to such agreement, as of August, 2008, conditioned on having the investors execute a general release pursuant to which we will be released from liability including, but not limited to, any claims, demands, or causes of action arising out of, relating to, or regarding sales of certain equity securities notwithstanding the above mentioned provision. As of September 23, 2009 we received a general release from some of the investors, and issued them warrants to purchase 70,368 shares of our common stock.

USE OF PROCEEDS

The proceeds we expect to receive from the offering of units will be $3,027,161, before deducting the placement agency fee and estimated offering expenses payable by us and excluding any proceeds from the potential exercise of warrants offered hereby.

We intend to use the net proceeds from this offering to fund the preparation of our Phase-II clinical trials in the USA or Germany and for general working capital and administrative expenses. The amounts and timing of the expenditures may vary significantly depending on numerous factors, such as the progress of our preparation for the Phase II clinical trials and other research and development efforts, technological advances and the competitive environment for our products. We undertook not to use such proceeds from this offering for: (a) the satisfaction of any portion of our debt (other than payment of trade payables in the ordinary course of our business and prior practices), (b) the redemption of any Common Stock or Common Stock Equivalents or (c) the settlement of any outstanding litigation. Although we have no specific agreements, commitments or understandings with respect to any acquisition, we evaluate acquisition opportunities and engage in related discussions with other companies from time to time. Pending the use of the net proceeds, we intend to invest the net proceeds in short-term, interest-bearing, investment-grade securities.

Our management will have broad discretion in the application of the net proceeds and investors will be relying upon the judgment of our management regarding the application of these proceeds. We reserve the right to change the use of these proceeds. Depending upon the timing of receipt of any warrant exercise shares proceeds, we would use such proceeds for such corporate purposes as our management and Board of Directors may approve at the time. Such purposes may be different from the anticipated purposes as of the date of this prospectus supplement.

DILUTION

If you purchase our common stock in this offering (either as a component of units or upon warrant exercise), your interest will be diluted to the extent of the difference between the public offering price per share and the net tangible book value per share of our common stock after this offering. We calculate net tangible book value per share by dividing the net tangible book value, tangible assets less total liabilities, by the number of outstanding shares of our common stock.

Our net tangible book value at June 30, 2009, was $3.4 million, or $0.23 per share, based on 14,738,693 shares of our common

stock outstanding as of that date. After giving effect to the sale of 2,702,822 shares of common stock by us at a public offering price of $1.12 per share, less the placement agency fees, our net tangible book value as of June 30, 2009 would have been approximately $6.24 million, or $0.36 per share. This represents an immediate increase in the net tangible book value of approximately $0.13 per share to existing stockholders and an immediate dilution of $0.76 per share to investors in this offering. The following table illustrates this per share dilution:

Public offering price per share			$	1.12
Net tangible book value per share as of June 30, 2009	$	0.23		
Increase in net tangible book value per share after this offering	$	0.13		
Net tangible book value per share after this offering			$	0.36
Dilution per share to new investors			$	0.76

The foregoing per share dilution does not give effect to the potential exercise of the warrants offered hereby. Assuming the sale of all units offered hereby and also the exercise of all warrants within such units, the per share dilution would be as follows:

Our net tangible book value at June 30, 2009, was $3.4 million or $0.23 per share, based on 14,738,693 shares of our common stock outstanding as of that date (1). After giving effect to the sale of 3,783,951shares of common stock (inclusive of 1,081,129 warrant shares) by us at a blended public offering price of $1.26 per share, less the placement agency fees, our net tangible book value as of June 30, 2009, would have been approximately $7.97 million, or $0.43 per share. This represents an immediate increase in the net tangible book value of approximately $0.20 per share to existing stockholders and an immediate dilution of $0.83 per share to investors in this offering. The following table illustrates this per share dilution:

Public offering price per share			$	1.26
Net tangible book value per share as of June 30, 2009	$	0.23		
Increase in net tangible book value per share after this offering	$	0.20		
Net tangible book value per share after this offering			$	0.43
Dilution per share to new investors			$	0.83

In July 2009 certain warrants and options were exercised, the impact of such exercise was not taken into account in the calculation of the dilution above. The exercise of such options and warrants was in connection with a securities purchase agreement reported December 3, 2008. Accordingly, investors have exercised 1,058,708 shares of common stock at a purchase price of $0.75 per share, for an aggregate purchase price of $794,030, and warrants to purchase up to an additional 1,058,708 shares of common stock with an exercise price of $1.50 per share.

PLAN OF DISTRIBUTION

We have entered into a placement agency agreement, dated as of October 6, 2009, with Roth Capital Partners, LLC. Subject to the terms and conditions contained in the placement agency agreement, Roth Capital Partners, LLC has agreed to act as the placement agent in connection with the sale of shares of common stock and warrants to purchase shares of common stock. The placement agent is not purchasing or selling any securities offered by this prospectus supplement and the accompanying prospectus, nor is it required to arrange the purchase or sale of any specific number or dollar amount of the securities, but it has agreed to use its reasonable efforts to arrange for the sale of all of the securities in this offering. There is no required minimum number of securities that must be sold as a condition to completion of the offering.

The placement agency agreement provides that the obligations of the placement agent are subject to certain conditions precedent, including, among other things, the absence of any material adverse change in our business and the receipt of certain customary opinions, letters and closing certificates.

We have entered into purchase agreements directly with purchasers in connection with this offering, and we will only sell to purchasers who have entered into purchase agreements. We currently anticipate that the closing of the sale of the units offered hereby will take place on or before October 12, 2009.

Upon closing, we will deliver to each purchaser delivering funds the number of shares purchased by such purchaser through the facilities of The Depository Trust Company and will deliver a physical warrant certificate to each purchaser within three business days immediately following the closing.

We have agreed to pay the placement agent an aggregate fee equal to 7.0% of the gross proceeds from the sale of units in this offering minus $25,000. We are not obligated to pay the placement agent any additional fee when and if the warrants are exercised. In addition, we have agreed to pay the fees, disbursements and other charges of counsel to the placement agent in an amount equal to not more than 1% of the gross proceeds from the sale of units in this offering.

Pursuant to a requirement by FINRA, the maximum commission or discount to be received by any FINRA member or independent broker/dealer may not be greater than 8.0% of the gross proceeds received by us for the sale of any securities being registered pursuant to SEC Rule 415. Assuming that all of the securities offered hereby are sold, the placement agent's fee will be approximately $186,901.24. Because there is no minimum offering amount required as a condition to closing in this offering, however, the actual total offering fees, if any, are not presently determinable and may be substantially less than such amount.

We have agreed to indemnify the placement agent and certain other persons against certain liabilities, including civil liabilities under the Securities Act of 1933, as amended, and the Securities Exchange Act of 1934, as amended, and to contribute to payments that the placement agent may be required to make in respect of those liabilities.

The placement agent has informed us that it will not engage in over-allotment, stabilizing transactions or syndicate covering transactions in connection with this offering.

We have agreed to certain lock-up provisions with regard to future sales of our common stock and other securities convertible into or exercisable or exchangeable for common stock for a period of thirty (30) days after the offering as set forth in the placement agency agreement.

The transfer agent for our common stock is American Stock Transfer & Trust Company, Brooklyn, New York.

Our common stock is traded on the Nasdaq Capital Market and the Frankfurt Stock Exchange under the symbols “PSTI” and “PJT”, respectively.

The placement agent may distribute this prospectus supplement and the accompanying prospectus electronically.

The placement agency agreement has been included as an exhibit to a Current Report on Form 8-K that was filed with the SEC on October 6, 2009 and has been incorporated by reference into the registration statements of which this prospectus supplement forms a part.

From time to time in the ordinary course of its business, the placement agent or its affiliates may in the future engage in investment banking, commercial banking and/or other services with us and our affiliates for which it may in the future receive customary fees and expenses.

DESCRIPTION OF WARRANTS

The warrants to be issued in this offering represent the right to purchase up to 1,081,129 shares of common stock at an initial exercise price of $1.60 per share. Each warrant may be exercised at any time and from time to time on or after April 12, 2010 and through and including April 12, 2015.

Exercise

Holders of the warrants may exercise their warrants to purchase shares of our common stock on or before the expiration date by delivering (i) an exercise notice, appropriately completed and duly signed, and (ii) if such holder is not utilizing the cashless exercise provisions, payment of the exercise price for the number of shares with respect to which the warrant is being exercised. Warrants may be exercised in whole or in part, but only for full shares of common stock, and any portion of a warrant not exercised prior to the expiration date shall be and become void and of no value. We provide certain rescission, compensation and buy-in rights to a holder if we fail to deliver the shares of common stock underlying the warrants by the third trading day after delivery to us of the exercise notice. With respect to the rescission rights, the holder has the right to rescind the exercise. The buy-in rights apply if after such third trading day the holder purchases (in an open market transaction or otherwise) shares of our common stock to deliver in satisfaction of a sale by the holder of the warrant shares that the holder anticipated receiving from us upon exercise of the warrant. In this event, we will:

- pay cash to the holder in an amount equal to the excess (if any) of the buy-in price over the product of (A) such number of shares of common stock, times (B) the price at which the sell order giving rise to holder’s purchase obligation was executed; and
- at the election of holder, either (A) reinstate the portion of the warrant as to such number of shares of common stock, or (B) deliver to holder a certificate or certificates representing such number of shares of common stock.

In addition, the warrant holders are entitled to a “cashless exercise” option if, at any time of exercise, there is no effective registration statement registering, or no current prospectus available for, the issuance or resale of the shares of common stock underlying the warrants. This option entitles the warrant holder to elect to receive fewer shares of common stock without paying the cash exercise price. The number of shares to be issued would be determined by a formula based on the total number of shares with

respect to which the warrant is being exercised, the volume weighted average of the prices per share of our common stock on the trading date immediately prior to the date of exercise and the applicable exercise price of the warrants.

The shares of common stock issuable on exercise of the warrants will be, when issued in accordance with the warrants, duly and validly authorized, issued and fully paid and non-assessable. We will authorize and reserve at least that number of shares of common stock equal to the number of shares of common stock issuable upon exercise of all outstanding warrants.

Delivery of Certificates

Upon the holder's exercise of a warrant, we will promptly, but in no event later than three trading days after the exercise date, issue and deliver, or cause to be issued and delivered, a certificate for the shares of common stock issuable upon exercise of the warrant. In addition, we will, if the holder provides the necessary information to us, issue and deliver the shares electronically through The Depository Trust Corporation through its Deposit Withdrawal Agent Commission System or another established clearing corporation performing similar functions.

Certain Adjustments

The exercise price and the number of shares of common stock purchasable upon the exercise of the warrants are subject to adjustment upon the occurrence of the following events:

Stock Dividends and Splits

If, at any time while the warrant is outstanding, we (i) pay a stock dividend or otherwise make a distribution on shares of common stock or any other equity or equity equivalent securities payable in shares of common stock, (ii) subdivide outstanding shares of common stock into a larger number of shares, (iii) combine outstanding shares of common stock into a smaller number of shares, or (iv) issue by reclassification of common stock any shares of capital stock, then in each such case the exercise price shall be multiplied by a fraction of which the numerator shall be the number of shares of common stock outstanding immediately before such event and of which the denominator shall be the number of shares of common stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate exercise price of the warrant shall remain unchanged.

Subsequent Rights Offerings

If, at any time while the warrant is outstanding, we issue rights, options or warrants to all holders of our common stock entitling them to purchase our common stock at a price per share less than the volume weighted average price on the date of the issuance of such rights, options or warrants, then the exercise price shall be multiplied by a fraction, of which the denominator shall be the number of shares of common stock outstanding on the date of issuance of such rights or warrants plus the number of additional shares of common stock offered for subscription or purchase, and of which the numerator shall be the number of shares of common stock outstanding on the date of issuance of such rights or warrants plus the number of shares which the aggregate offering price of the total number of shares so offered would purchase at such volume weighted average price.

Pro Rata Distributions

If, at any time while the warrant is outstanding, we distribute evidences of our indebtedness or assets or rights or warrants to purchase any security other than our common stock to all holders of our common stock (the "Distribution"), then the exercise price will adjust pursuant to a volume weighted average price based ratio that takes into account the then per share fair market value of the portion of the Distribution applicable to one outstanding share of the Common Stock.

Fundamental Transaction

If, at any time while the warrant is outstanding, we (i) consolidate or merge with or into another corporation, (ii) sell all or substantially all of our assets or (iii) are subject to or complete a tender or exchange offer pursuant to which holders of our common stock are permitted to tender or exchange their shares for other securities, cash or property, (iv) effect any reclassification of our common stock or any compulsory share exchange pursuant to which our common stock is converted into or exchanged for other securities, cash or property, each, a Fundamental Transaction, then the holders shall have the right thereafter to receive, upon exercise of the warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of warrant shares then issuable upon exercise of the warrant, which we refer to in this prospective supplement as Alternate Consideration. Any successor to us, surviving entity or the corporation purchasing or otherwise acquiring such assets shall assume the obligation to deliver to the holder such Alternate Consideration as the holder may be entitled to purchase, and the other obligations under the warrant.

In the event of certain Fundamental Transactions, the holders of the warrants will be entitled to receive, in lieu of our common

stock and at the holders' option, cash in an amount equal to the value of the remaining unexercised portion of the warrant on the date of the transaction determined using a Black-Scholes option pricing model with an expected volatility equal to the 100 day historical price volatility obtained from Bloomberg L.P. as of the trading day immediately prior to the public announcement of the transaction.

Notice of Corporate Action

We will provide notice to holders of the warrants to provide such holders with an opportunity to exercise their warrants and hold common stock in order to participate in or vote on the following corporate events if we (i) declare a dividend on the common stock, (ii) declare a special nonrecurring cash dividend on or a redemption of the common stock, (iii) authorize the granting to all holders of the common stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (iv) require the approval of any stockholders in connection with any reclassification of the common stock, any consolidation or merger to which we are a party, any sale or transfer of all or substantially all of our assets, any compulsory share exchange whereby the common stock is converted into other securities, cash or property, or (v) authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company.

Limitations on Exercise

The number of warrant shares that may be acquired by the holder upon any exercise of the warrant shall be limited to the extent necessary to insure that, following such exercise (or other issuance), the total number of shares of common stock then beneficially owned by such holder and its affiliates and any other persons whose beneficial ownership of common stock would be aggregated with the holder's for purposes of Section 13(d) of the Exchange Act, does not exceed 4.99% of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise), which we refer to as the Beneficial Ownership Limitation. The holder may elect to change the Beneficial Ownership Limitation from 4.99% to 9.9% of the total number of issued and outstanding shares of common stock (including for such purpose the shares of common stock issuable upon such exercise) upon 61 days' prior written notice.

Waivers and Amendments

The warrants may be modified or amended and the provisions therein may be waived with the written consent of the Company and holders holding warrants at least equal to 67% of the warrant shares issuable upon exercise of all then outstanding warrants.

Additional Provisions

The above summary of certain terms and provisions of the warrants is qualified in its entirety by reference to the detailed provisions of the warrants, the form of which will be filed as an exhibit to a current report on Form 8-K that will be incorporated herein by reference. We are not required to issue fractional shares upon the exercise of the warrants. No holders of the warrants will possess any rights as a stockholder under those warrants until the holder exercises those warrants. The warrants may be transferred independent of the common stock they were issued with, on a form of assignment, subject to all applicable laws.

LEGAL MATTERS

The validity of the securities offered by this prospectus supplement has been passed upon for us by Zysman, Aharoni, Gayer & Co./Sullivan & Worcester LLP, Boston, Massachusetts. Lowenstein Sandler PC, Roseland, New Jersey is acting as counsel for the placement agent in connection with the offering.

$15,000,000

PLURISTEM THERAPEUTICS INC.

Common Stock
Warrants

We may from time to time sell common stock and warrants to purchase common stock in one or more offerings for an aggregate

initial offering price of $15,000,000. We refer to the common stock and the warrants to purchase common stock collectively as the securities. This prospectus describes the general manner in which our securities may be offered using this prospectus. We will specify in an accompanying prospectus supplement the terms of the securities to be offered and sold. We may sell these securities to or through underwriters or dealers, directly to purchasers or through agents. We will set forth the names of any underwriters, dealers or agents in an accompanying prospectus supplement.

Our common stock is traded on the NASDAQ Capital Market under the symbol “PSTI”

Investing in our securities involves risks. See “Risk Factors” on page 3 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

This prospectus is dated July 1, 2008.

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You should rely only on the information contained in this prospectus and the documents incorporated by reference in this prospectus or to which we have referred you. We have not authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus does not constitute an offer to sell, or a solicitation of an offer to purchase, the securities offered by this prospectus in any jurisdiction to or from any person to whom or from whom it is unlawful to make such offer or solicitation of an offer in such jurisdiction. You should not assume that the information contained in this prospectus or any document incorporated by reference is accurate as of any date other than the date on the front cover of the applicable document. Neither the delivery of this prospectus nor any distribution of securities pursuant to this prospectus shall, under any circumstances, create any implication that there has been no change in the information set forth or incorporated by reference into this prospectus or in our affairs since the date of this prospectus. Our business, financial condition, results of operations and prospects may have changed since that date.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission using a “shelf” registration process. Under this shelf registration process, we may, from time to time, sell any combination of the securities described in this prospectus in one or more offerings up to a total dollar amount of $15,000,000. This prospectus describes the securities we may offer and the general manner in which our securities may be offered by this prospectus. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. We may also add, update or change in the prospectus supplement any of the information contained in this prospectus. To the extent there is a conflict between the information contained in this prospectus and the prospectus supplement, you should rely on the information in the prospectus supplement, provided that if any statement in one of these documents is inconsistent with a statement in another document having a later date – for example, a document incorporated by reference in this prospectus or any prospectus supplement – the statement in the document having the later date modifies or supersedes the earlier statement.

OUR COMPANY

We are engaged in the business of the development of mesenchymal and stem cell production technology and the commercialization of cell therapy products.

From May 2003 until March 2006, our business was focused on the development of stem cell production technology. Originally, our plan was to develop that technology to the point where we could license it to medical scientists and practitioners for their use in

producing cell therapy products for sale in the marketplace. On March 6, 2006, we announced that our company was taking a new direction. Instead of looking to license our stem cell production technology, we decided to focus on developing the technology with the goal of producing cell therapy products ourselves for sale in the marketplace. On July 5, 2006 and October 16, 2006, we announced that our subsidiary, Pluristem Ltd., achieved a breakthrough in our preclinical study of bone marrow transplantation: The preclinical study showed that by adding PLX-I (PLacenta eXpanded cells) to Umbilical cord blood (UCB) stem cells during bone marrow transplantation (BMT), hematopoietic stem cell engraftment in mice showed up to a 500% increase in engraftment after irradiation and chemotherapy. On January 8, 2008, we announced that we achieved favorable results in demonstrating a revascularization effect after using our propriety PLX-PAD cells for the treatment of limb ischemia associated with peripheral artery disease (PAD). On April 7, 2008, we announced that the results from Fraunhofer Institute's additional pre-clinical study utilizing our proprietary PLacental eXpanded (PLX) cells in treating ischemic stroke showed statistical significance utilizing functional as well as anatomical endpoints.

On November 23, 2007, we changed our name to Pluristem Therapeutics Inc. On November 26, 2007, we effected a one for two hundred reverse stock split. Accordingly, all references to number of shares, common stock and per share data have been adjusted to reflect the stock split on a retroactive basis.

On December 10, 2007, our shares of common stock began trading on the NASDAQ Capital Market under the symbol "PSTI." The shares were previously traded on the OTC Bulletin Board under the trading symbol "PLRS.OB". On May 7, 2007, our shares also began trading on Europe's Frankfurt Stock Exchange, under the symbol "PJT."

Effective on June 4, 2008, our authorized number of shares of our common stock was increased from 7,000,000 shares to 30,000,000 shares.

Our executive offices are located at MATAM Advanced Technology Park, Building No. 20, Haifa, Israel, our telephone number is 011 972 74 710 7171 and our website address is www.pluristem.com . The information on our website is not incorporated by reference in this prospectus and should not be considered to be part of this prospectus. Our website address is included in this prospectus as an inactive technical reference only. Our name and logo and the names of our products are our trademarks or registered trademarks. Unless the context otherwise requires, references in this prospectus to "Pluristem,""we," "us," and "our" refer to Pluristem Therapeutics Inc. and it subsidiaries as required by the context.

RISK FACTORS

An investment in our securities involves significant risks. You should carefully consider the risk factors contained in any prospectus supplement and in our filings with the Securities and Exchange Commission, as well as all of the information contained in this prospectus, any prospectus supplement and the documents incorporated by reference in this prospectus, before you decide to invest in our securities. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our operations.

SPECIAL NOTE REGARDING FORWARD-LOOKING INFORMATION

This prospectus, any prospectus supplement and the documents we incorporate by reference in this prospectus contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and other Federal securities laws. All statements, other than statements of historical fact, that we include in this prospectus, any prospectus supplement and in the documents we incorporate by reference in this prospectus, may be deemed forward-looking statements for purposes of the Securities Act of 1933, or the Securities Act, and the Securities Exchange Act of 1934, or the Exchange Act. We use the words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "project," "will," "would" and similar expressions to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We cannot guarantee that we actually will achieve the plans, intentions or expectations disclosed in our forward-looking statements and, accordingly, you should not place undue reliance on our forward-looking statements. There are a number of important factors that could cause actual results or events to differ materially from the forward-looking statements that we make, including the factors included in the documents we incorporate by reference in this prospectus. You should read these factors and the other cautionary statements made in the documents we incorporate by reference as being applicable to all related forward-looking statements wherever they appear in this prospectus, any prospectus supplement and any document incorporated by reference. We caution you that, except as otherwise required by law, we do not undertake any obligation to update forward-looking statements we make.

USE OF PROCEEDS

Unless we otherwise indicate in the applicable prospectus supplement, we currently intend to use the net proceeds from the sale of the securities for research and product development activities, and for working capital and other general corporate purposes.

We may set forth additional information on the use of net proceeds from the sale of securities we offer under this prospectus in a prospectus supplement relating to the specific offering. Pending the application of the net proceeds, we intend to invest the net proceeds in investment-grade, interest-bearing securities.

THE SECURITIES WE MAY OFFER

The descriptions of the securities contained in this prospectus, together with the applicable prospectus supplement, summarize the material terms and provisions of the various types of securities that we may offer. We will describe in the applicable prospectus supplement relating to any securities the particular terms of the securities offered by that prospectus supplement. If we so indicate in the applicable prospectus supplement, the terms of the securities may differ from the terms we have summarized below. We may also include in the prospectus supplement information, where applicable, about material United States federal income tax consequences relating to the securities, and the securities exchange or market, if any, on which the securities will be listed.

We may sell from time to time, in one or more offerings, one or more of the following securities:

- common stock; and
- warrants to purchase common stock.

The total initial offering price of all securities that we may issue in these offerings will not exceed $15,000,000.

DESCRIPTION OF COMMON STOCK

For a description of the material terms and provisions of our common stock and any other class of our securities which qualifies or limits our common stock, please see the applicable prospectus supplement, as well as the description of our capital stock in our Registration Statement on Form 8-A, as amended, which is incorporated by reference in this prospectus.

DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplement, summarizes the material terms and provisions of the warrants that we may offer under this prospectus and the related warrant agreements and warrant certificates. While the terms summarized below will apply generally to any warrants that we may offer, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement. If we so indicate in a prospectus supplement, the terms of any warrants offered under that prospectus supplement may differ from the terms we describe below. Specific warrant agreements will contain additional important terms and provisions and will be incorporated by reference as an exhibit to the registration statement.

General

We may issue warrants for the purchase of common stock in one or more series. We may issue warrants independently or together with common stock, and the warrants may be attached to or separate from the common stock.

We will evidence each series of warrants by warrant certificates that we will issue under a separate agreement or by warrant agreements that we will enter into directly with the purchasers of the warrants. If we evidence warrants by warrant certificates, we will enter into a warrant agreement with a warrant agent. We will indicate the name and address of the warrant agent, if any, in the applicable prospectus supplement relating to a particular series of warrants.

We will describe in the applicable prospectus supplement the terms of the series of warrants, including:

- the offering price and aggregate number of warrants offered;
- the currency for which the warrants may be purchased or exercised;
- if applicable, the terms of the common stock with which the warrants are issued and the number of warrants issued with such common stock;
- if applicable, the date on and after which the warrants and the related common stock will be separately transferable;
- the number of shares of common stock purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;

- the manner in which the warrants may be exercised, which may include by cashless exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreement and the warrants;
- the terms of any rights to redeem or call the warrants;

- any provisions for changes to or adjustments in the exercise price or number of shares of common stock issuable upon exercise of the warrants;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreement and warrants may be modified;
- the material United States federal income tax consequences of holding or exercising the warrants;
- the terms of the common stock issuable upon exercise of the warrants; and
- any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the common stock purchasable upon such exercise, including the right to receive dividends, if any, or payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

Exercise of Warrants

Each warrant will entitle the holder to purchase the number of shares of common stock that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to 5:00 P.M., Eastern U.S. time, on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Holders of the warrants may exercise the warrants by delivering to the warrant agent or us the warrant certificate or warrant agreement representing the warrants to be exercised together with specified information, and by paying the required amount to the warrant agent or us in immediately available funds, as provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate or in the warrant agreement and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent or us in connection with such exercise. Certain of the warrants may entitle the holders thereof to “cashless exercise” under certain circumstances. This option entitles the warrant holder to elect to receive fewer shares of common stock without paying the cash exercise price. The number of shares to be issued would be determined by a formula based on the total number of shares to which the warrant holder is entitled, the market price of the common stock on the date of exercise or the days prior to the exercise and the applicable exercise price of the warrants.

Upon receipt of the required payment, if need to, and the warrant certificate or the warrant agreement, as applicable, properly completed and duly executed at the corporate trust office of the warrant agent, if any, at our offices or at any other office indicated in the applicable prospectus supplement, we will issue and deliver the common stock purchasable upon such exercise. If fewer than all of the warrants represented by the warrant certificate or warrant agreement are exercised, then we will issue a new warrant certificate or warrant agreement for the remaining amount of warrants.

Enforceability of Rights by Holders of Warrants

If we appoint a warrant agent, any warrant agent will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, its warrants.

PLAN OF DISTRIBUTION

We may sell the securities being offered hereby in one or more of the following ways from time to time:

- through agents to the public or to investors;
- to one or more underwriters for resale to the public or to investors;
- in "at the market offerings," within the meaning of Rule 415(a)(4) of the Securities Act, to or through a market maker or into an existing trading market, on an exchange or otherwise;
- directly to investors in privately negotiated transactions;
- directly to a purchaser pursuant to what is known as an "equity line of credit" as described below; or
- through a combination of these methods of sale.

The securities that we distribute by any of these methods may be sold, in one or more transactions, at:

- a fixed price or prices, which may be changed;
- market prices prevailing at the time of sale;
- prices related to prevailing market prices; or
- negotiated prices.

The accompanying prospectus supplement will describe the terms of the offering of our securities, including:

- the name or names of any agents or underwriters;
- any securities exchange or market on which the common stock may be listed;
- the purchase price and commission, if any, to be paid in connection with the sale of the securities being offered and the proceeds we will receive from the sale;
- any over-allotment options pursuant to which underwriters may purchase additional securities from us;
- any underwriting discounts or agency fees and other items constituting underwriters' or agents' compensation;
- any public offering price; and
- any discounts or concessions allowed or reallowed or paid to dealers.

If underwriters are used in the sale, they will acquire the securities for their own account and may resell the securities from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of the sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all the securities offered by the prospectus supplement. We may change from time to time the public offering price and any discounts or concessions allowed or reallowed or paid to dealers.

We may also sell securities pursuant to an “equity line of credit”. In such event, we will enter into a common stock purchase agreement with the purchaser to be named therein, which will be described in a Current Report on Form 8-K that we will file with the SEC. In that Form 8-K, we will describe the total amount of money that we may require the purchaser to invest under the purchase agreement and the other terms of purchase, and any rights that the purchaser is granted to purchase securities from us. In addition to our issuance of shares of common stock to the equity line purchaser pursuant to the purchase agreement, this prospectus (and the applicable prospectus supplement or post-effective amendment) also covers the resale of those shares from time to time by the equity line purchaser to the public. The equity line purchaser will be considered an “underwriter” within the meaning of Section 2(a)(11) of the Securities Act. Its resales may be effected through a number of methods, including without limitation, ordinary brokerage transactions and transactions in which the broker solicits purchasers and block trades in which the broker or dealer so engaged will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction. The equity line purchaser will be bound by various anti-manipulation rules of the SEC and may not, for example, engage in any stabilization activity in connection with its resales of our securities and may not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities other than as permitted under the Exchange Act.

We may sell our securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of our common stock, and we will describe any commissions we will pay the agent in the prospectus supplement. Unless the prospectus supplement states otherwise, our agent will act on a best-efforts basis for the period of its appointment.

We may provide underwriters and agents with indemnification against civil liabilities related to this offering, including liabilities under the Securities Act, or contribution with respect to payments that the underwriters or agents may make with respect to these liabilities. Underwriters and agents may engage in transactions with, or perform services for, us in the ordinary course of business. We will describe such relationships in the prospectus supplement naming the underwriter or agent and the nature of any such relationship.

Rules of the Securities and Exchange Commission may limit the ability of any underwriters to bid for or purchase securities before the distribution of the shares of common stock is completed. However, underwriters may engage in the following activities in accordance with the rules:

- *Stabilizing transactions* – Underwriters may make bids or purchases for the purpose of pegging, fixing or maintaining the price of the shares, so long as stabilizing bids do not exceed a specified maximum.

- *Over-allotments and syndicate covering transactions* – Underwriters may sell more shares of our common stock than the number of shares that they have committed to purchase in any underwritten offering. This over-allotment creates a short position for the underwriters. This short position may involve either “covered”short sales or “naked” short sales. Covered short sales are short sales made in an amount not greater than the underwriters’ over-allotment option to purchase additional shares in any underwritten offering. The underwriters may close out any covered short position either by exercising their over-allotment option or by purchasing shares in the open market. To determine how they will close the covered short position, the underwriters will consider, among other things, the price of shares available

for purchase in the open market, as compared to the price at which they may purchase shares through the over-allotment option. Naked short sales are short sales in excess of the over-allotment option. The underwriters must close out any naked position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that, in the open market after pricing, there may be downward pressure on the price of the shares that could adversely affect investors who purchase shares in the offering.

- *Penalty bids* – If underwriters purchase shares in the open market in a stabilizing transaction or syndicate covering transaction, they may reclaim a selling concession from other underwriters and selling group members who sold those shares as part of the offering.

Similar to other purchase transactions, an underwriter's purchases to cover the syndicate short sales or to stabilize the market price of our common stock may have the effect of raising or maintaining the market price of our common stock or preventing or mitigating a decline in the market price of our common stock. As a result, the price of the shares of our common stock may be higher than the price that might otherwise exist in the open market. The imposition of a penalty bid might also have an effect on the price of shares if it discourages resales of the shares.

If commenced, the underwriters may discontinue any of these activities at any time.

Our common stock is traded on the NASDAQ Capital Market. One or more underwriters may make a market in our common stock, but the underwriters will not be obligated to do so and may discontinue market making at any time without notice. We cannot give any assurance as to liquidity of the trading market for our common stock.

Any underwriters who are qualified market makers on the NASDAQ Capital Market may engage in passive market making transactions in the common stock in accordance with Rule 103 of Regulation M, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the common stock. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded.

In compliance with guidelines of the Financial Industry Regulatory Authority, or FINRA, the maximum commission or discount to be received by any FINRA member or independent broker dealer may not exceed 8% of the aggregate amount of the securities offered pursuant to this prospectus and any applicable prospectus supplement.

VALIDITY OF SECURITIES

The validity of the securities offered hereby will be passed upon for us by Zysman, Aharoni, Gayer & Co. /Sullivan & Worcester, LLP, Boston, Massachusetts.

EXPERTS

The financial statements of Pluristem Therapeutics Inc. appearing in its Annual Report (Form 10-KSB) for the year ended June 30, 2007 have been audited by Kost Forer Gabbay & Kasierer A member of Ernst & Young Global, independent registered public accounting firm, as set forth in their report thereon, included therein, and incorporated herein by reference. Such financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements and other documents with the Securities and Exchange Commission. You may read and copy any document we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference room.

The SEC also maintains a website, the address of which is www.sec.gov. That site also contains our annual, quarterly and current reports, proxy statements, information statements and other information.

We have filed this prospectus with the SEC as part of a registration statement on Form S-3 under the Securities Act. This prospectus does not contain all of the information set forth in the registration statement because some parts of the registration statement are omitted in accordance with the rules and regulations of the SEC. You can obtain a copy of the registration statement from the SEC at the address listed above or from the SEC's website.

We also maintain a website at www.pluristem.com, through which you can access our SEC filings. The information set forth on our website is not part of this prospectus.

INCORPORATION OF DOCUMENTS BY REFERENCE

We are "incorporating by reference" certain documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information in the documents incorporated by reference is considered to be part of this prospectus. Statements contained in documents that we file with the SEC and that are incorporated by reference in this prospectus will automatically update and supersede information contained in this prospectus, including information in previously filed documents or reports that have been incorporated by reference in this prospectus, to the extent the new information differs from or is inconsistent with the old information.

We have filed or may file the following documents with the SEC. These documents are incorporated herein by reference as of their respective dates of filing:

- Our Annual Report on Form 10-KSB for the year ended June 30, 2007;
- Our Quarterly Report on Form 10-QSB for the quarter ended March 31, 2008;
- Our Quarterly Report on Form 10-QSB for the quarter ended December 31, 2007;
- Our Quarterly Report on Form 10-QSB for the quarter ended September 30, 2007;
- Our Current Report on Form 8-K, as filed with the SEC on April 10, 2008;
- Our Current Report on Form 8-K, as filed with the SEC on December 7, 2007;
- Our Current Report on Form 8-K, as filed with the SEC on November 26, 2007;
- Our Current Report on Form 8-K, as filed with the SEC on November 9, 2007;
- Our Current Report on Form 8-K, as filed with the SEC on November 6, 2007;
- Our Current Report on Form 8-K, as filed with the SEC on October 12, 2007;
- Our Current Report on Form 8-K, as filed with the SEC on September 5, 2007 ;
- The description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC, as amended; and
- All documents filed by us pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act (1) after the date of the filing of this registration statement and prior to its effectiveness and (2) until all of the common stock to which this prospectus relates has been sold or the offering is otherwise terminated, except in each case for information contained in any such filing where we indicate that such information is being furnished and is not to be considered "filed" under the Exchange Act, will be deemed to be incorporated by reference in this prospectus and the accompanying prospectus supplement and to be a part hereof from the date of filing of such documents.

We will provide a copy of the documents we incorporate by reference, at no cost, to any person who receives this prospectus. To request a copy of any or all of these documents, you should write or telephone us at MATAM Advanced Technology Park, Building No. 20, Haifa, 31905, Israel, Attention: Yaky Yanay, (+972) 74 710 7171.

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 8-K

CURRENT REPORT PURSUANT TO
SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

Date of report (Date of earliest event reported): **October 12, 2010 (October 11, 2010)**

PLURISTEM THERAPEUTICS INC.
(Exact Name of Registrant as Specified in Charter)

Nevada	**001-31392**	**98-0351734**
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)

MATAM Advanced Technology Park, Building No. 20, Haifa, Israel	**31905**
(Address of Principal Executive Offices)	(Zip Code)

Registrant's telephone number, including area code: **011 972 74 710 7171**

N/A
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- ☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- ☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- ☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2 (b))
- ☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4 (c))

Item 1.01. Entry into a Material Definitive Agreement.

On October 11, 2010 and on October 12, 2010, Pluristem Therapeutics Inc. (the "Registrant") entered into securities purchase agreements (the "Agreements") with certain investors, pursuant to which the Registrant agreed to sell to such investors 4,375,000 shares ("Shares") of the Registrant's Common stock (the "Common Stock") at a price of $1.20 per share and warrants to purchase 2,625,000 shares of Common Stock (collectively, the "Warrants"), at an exercise price per share of $1.80. No separate consideration was paid for the Warrants. The aggregate gross proceeds from the sale of the Shares and the Warrants is approximately $5,250,000. The closing is expected to take place no later than October 18, 2010. The Warrants have a term of four (4) years and are exercisable starting six (6) months following the issuance thereof.

In connection with the Agreements, the Registrant agreed to file a resale registration statement with the Securities and Exchange Commission covering the Shares and the shares of Common Stock issuable upon the exercise of the Warrants within 60 days from closing.

Leader Underwriters (1993) Ltd which acted as lead placement agent in Israel, and Rodman & Renshaw, LLC, which acted as U.S. placement agent, will receive cash compensation and warrants to purchase shares of Common Stock, on the same terms as the Warrants.

A copy of the form of Warrants is attached as Exhibit 4.1 to this Current Report on Form 8-K and is incorporated herein by reference. The description of the Warrants is a summary only and is qualified in its entirety by reference to Exhibit 4.1. Copies of the forms of the Agreements are attached as Exhibits 10.1 and 10.2 to this Current Report on Form 8-K and are incorporated herein by reference. The description of the Agreements is a summary only and is qualified in its entirety by reference to Exhibits 10.1 and 10.2.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits:

4.1 Form of Common Stock Purchase Warrant dated October 18, 2010 issued by the Registrant.

10.1 Form of Regulation D Securities Purchase Agreement dated October 11, 2010 for Common Stock and Warrants of the Registrant.

10.2 Form of Regulation S Securities Purchase Agreement dated October 12, 2010 for Common Stock and Warrants of the Registrant.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

PLURISTEM THERAPEUTICS INC.

Date: October 12, 2010

By:/s/ Yaky Yanay
Yaky Yanay
Chief Financial Officer

The Securities and Exchange Commission has not necessarily reviewed the information in this filing and has not determined if it is accurate and complete.
The reader should not assume that the information is accurate and complete.

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM D

Notice of Exempt Offering of Securities

OMB APPROVAL	
OMB Number:	3235-0076
Expires:	June 30, 2012
Estimated average burden hours per response:	4.00

1. Issuer's Identity

CIK (Filer ID Number)
0001158780

Name of Issuer
PLURISTEM THERAPEUTICS INC

Jurisdiction of Incorporation/Organization
NEVADA

Year of Incorporation/Organization
[X] Over Five Years Ago
[ ] Within Last Five Years (Specify Year)
[ ] Yet to Be Formed

Previous Names [ ] None
- PLURISTEM LIFE SYSTEMS INC
- AI SOFTWARE INC
- A.I. Software, Inc.
- Pluristem Life Systems, Inc.

Entity Type
[X] Corporation
[ ] Limited Partnership
[ ] Limited Liability Company
[ ] General Partnership
[ ] Business Trust
[ ] Other (Specify)

2. Principal Place of Business and Contact Information

Name of Issuer
PLURISTEM THERAPEUTICS INC

Street Address 1	Street Address 2		
MATAM ADVANCED TECHNOLOGY PARK	BUILDING NO. 20		
City	**State/Province/Country**	**ZIP/PostalCode**	**Phone Number of Issuer**
HAIFA	ISRAEL	31905	011-972-74-7107171

3. Related Persons

Last Name	First Name	Middle Name
Aberman	Zami	
Street Address 1	**Street Address 2**	
C/O PLURISTEM THERAPEUTICS INC.	MATAM ADVANCED TECHNOLOGY PARK	
City	**State/Province/Country**	**ZIP/PostalCode**
HAIFA	ISRAEL	31905

Relationship: [X] Executive Officer [X] Director [ ] Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Ben-Yoram	Israel	
Street Address 1	Street Address 2	
PLURISTEM THERAPEUTICS INC.	MATAM ADVANCED TECHNOLOGY PARK	
City	State/Province/Country	ZIP/PostalCode
HAIFA	ISRAEL	31905

Relationship: [ ] Executive Officer [X] Director [ ] Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Braun	Isaac	
Street Address 1	Street Address 2	
PLURISTEM THERAPEUTICS INC.	MATAM ADVANCED TECHNOLOGY PARK	
City	State/Province/Country	ZIP/PostalCode
HAIFA	ISRAEL	31905

Relationship: [ ] Executive Officer [X] Director [ ] Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Rosman	Nachum	
Street Address 1	Street Address 2	
PLURISTEM THERAPEUTICS INC.	MATAM ADVANCED TECHNOLOGY PARK	
City	State/Province/Country	ZIP/PostalCode
HAIFA	ISRAEL	31905

Relationship: [ ] Executive Officer [X] Director [ ] Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Germain	Mark	
Street Address 1	Street Address 2	
PLURISTEM THERAPEUTICS INC.	MATAM ADVANCED TECHNOLOGY PARK	
City	State/Province/Country	ZIP/PostalCode
HAIFA	ISRAEL	31905

Relationship: [ ] Executive Officer [X] Director [ ] Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Yanay	Yaky	
Street Address 1	Street Address 2	
C/O PLURISTEM THERAPEUTICS INC.	MATAM ADVANCED TECHNOLOGY PARK	
City	State/Province/Country	ZIP/PostalCode
HAIFA	ISRAEL	31905

Relationship: [X] Executive Officer [ ] Director [ ] Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Pines	Shai	
Street Address 1	Street Address 2	
C/O PLURISTEM THERAPEUTICS INC.	MATAM ADVANCED TECHNOLOGY PARK	
City	State/Province/Country	ZIP/PostalCode
HAIFA	ISRAEL	31905

Relationship: [ ] Executive Officer [X] Director [ ] Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Meretzki	Hava	
Street Address 1	Street Address 2	
C/O PLURISTEM THERAPEUTICS INC.	MATAM ADVANCED TECHNOLOGY PARK	
City	State/Province/Country	ZIP/PostalCode
HAIFA	ISRAEL	31905

Relationship: [ ] Executive Officer [X] Director [ ] Promoter

Clarification of Response (if Necessary):

Last Name	First Name	Middle Name
Shorrer	Doron	
Street Address 1	Street Address 2	
C/O PLURISTEM THERAPEUTICS INC.	MATAM ADVANCED TECHNOLOGY PARK	
City	State/Province/Country	ZIP/PostalCode
HAIFA	ISRAEL	31905

Relationship: [ ] Executive Officer [X] Director [ ] Promoter

Clarification of Response (if Necessary):

---

4. Industry Group

[ ] Agriculture

Banking & Financial Services

- [ ] Commercial Banking
- [ ] Insurance
- [ ] Investing
- [ ] Investment Banking
- [ ] Pooled Investment Fund

Is the issuer registered as an investment company under the Investment Company Act of 1940?

Health Care

- [X] Biotechnology
- [ ] Health Insurance
- [ ] Hospitals & Physicians
- [ ] Pharmaceuticals
- [ ] Other Health Care

[ ] Manufacturing

Real Estate

[ ] Retailing

[ ] Restaurants

Technology

- [ ] Computers
- [ ] Telecommunications
- [ ] Other Technology

Travel

- [ ] Airlines & Airports

- [ ] Yes
- [ ] No

- [ ] Other Banking & Financial Services
- [ ] Business Services

Energy

- [ ] Coal Mining
- [ ] Electric Utilities
- [ ] Energy Conservation
- [ ] Environmental Services
- [ ] Oil & Gas
- [ ] Other Energy

- [ ] Commercial
- [ ] Construction
- [ ] REITS & Finance
- [ ] Residential
- [ ] Other Real Estate

- [ ] Lodging & Conventions
- [ ] Tourism & Travel Services
- [ ] Other Travel
- [ ] Other

5. Issuer Size

Revenue Range	OR	Aggregate Net Asset Value Range
[X] No Revenues		[ ] No Aggregate Net Asset Value
[ ] $1 - $1,000,000		[ ] $1 - $5,000,000
[ ] $1,000,001 - $5,000,000		[ ] $5,000,001 - $25,000,000
[ ] $5,000,001 - $25,000,000		[ ] $25,000,001 - $50,000,000
[ ] $25,000,001 - $100,000,000		[ ] $50,000,001 - $100,000,000
[ ] Over $100,000,000		[ ] Over $100,000,000
[ ] Decline to Disclose		[ ] Decline to Disclose
[ ] Not Applicable		[ ] Not Applicable

6. Federal Exemption(s) and Exclusion(s) Claimed (select all that apply)

- [ ] Rule 504(b)(1) (not (i), (ii) or (iii))
- [ ] Rule 504 (b)(1)(i)
- [ ] Rule 504 (b)(1)(ii)
- [ ] Rule 504 (b)(1)(iii)
- [ ] Rule 505
- [X] Rule 506
- [ ] Securities Act Section 4(6)
- [ ] Investment Company Act Section 3(c)
  - [ ] Section 3(c)(1)
  - [ ] Section 3(c)(2)
  - [ ] Section 3(c)(3)
  - [ ] Section 3(c)(4)
  - [ ] Section 3(c)(5)
  - [ ] Section 3(c)(6)
  - [ ] Section 3(c)(7)
  - [ ] Section 3(c)(9)
  - [ ] Section 3(c)(10)
  - [ ] Section 3(c)(11)
  - [ ] Section 3(c)(12)
  - [ ] Section 3(c)(13)
  - [ ] Section 3(c)(14)

7. Type of Filing

[X] New Notice Date of First Sale 2010-10-12 [ ] First Sale Yet to Occur
[ ] Amendment

8. Duration of Offering

Does the Issuer intend this offering to last more than one year? [ ] Yes [X] No

9. Type(s) of Securities Offered (select all that apply)

[X] Equity	[ ] Pooled Investment Fund Interests
[ ] Debt	[ ] Tenant-in-Common Securities
[X] Option, Warrant or Other Right to Acquire Another Security	[ ] Mineral Property Securities
[ ] Security to be Acquired Upon Exercise of Option, Warrant or Other Right to Acquire Security	[ ] Other (describe)

10. Business Combination Transaction

Is this offering being made in connection with a business combination transaction, such as a merger, acquisition or exchange offer? [ ] Yes [X] No

Clarification of Response (if Necessary):

Item 11 Note: No minimum investment.

11. Minimum Investment

Minimum investment accepted from any outside investor $0 USD

12. Sales Compensation

Recipient	Recipient CRD Number [ ] None
Rodman & Renshaw, LLC	16415
(Associated) Broker or Dealer [X] None	(Associated) Broker or Dealer CRD Number [X] None
None	None
Street Address 1	Street Address 2
1251Avenue of the Americas	20thFloor
City	State/Province/Country ZIP/Postal Code
New York	NEW YORK 10020

State(s) of Solicitation (select all that apply)
Check "All States" or check individual States [ ] All States [ ] Foreign/non-US

CALIFORNIA
GEORGIA
ILLINOIS
MASSACHUSETTS
NEW YORK

13. Offering and Sales Amounts

Total Offering Amount	$1,220,003 USD	or ☐ Indefinite
Total Amount Sold	$1,220,003 USD	
Total Remaining to be Sold	$0 USD	or ☐ Indefinite

Clarification of Response (if Necessary):

14. Investors

☐ Select if securities in the offering have been or may be sold to persons who do not qualify as accredited investors, and enter the number of such non-accredited investors who already have invested in the offering.

Regardless of whether securities in the offering have been or may be sold to persons who do not qualify as accredited investors, enter the total number of investors who already have invested in the offering: 9

15. Sales Commissions & Finder's Fees Expenses

Provide separately the amounts of sales commissions and finders fees expenses, if any. If the amount of an expenditure is not known, provide an estimate and check the box next to the amount.

Sales Commissions	$55,000 USD	☐ Estimate
Finders' Fees	$0 USD	☐ Estimate

Clarification of Response (if Necessary):

In addition, Rodman & Renshaw, LLC received(i)45,833 warrants to purchase sharesof the company at $1.80 per share; and (ii) reimbursement of expenses of up to $2,000.

16. Use of Proceeds

Provide the amount of the gross proceeds of the offering that has been or is proposed to be used for payments to any of the persons required to be named as executive officers, directors or promoters in response to Item 3 above. If the amount is unknown, provide an estimate and check the box next to the amount.

$0 USD ☐ Estimate

Clarification of Response (if Necessary):

Signature and Submission

Please verify the information you have entered and review the Terms of Submission below before signing and clicking SUBMIT below to file this notice.

Terms of Submission

In submitting this notice, each issuer named above is:

- Notifying the SEC and/or each State in which this notice is filed of the offering of securities described and undertaking to furnish them, upon written request, in the accordance with applicable law, the information furnished to offerees.*
- Irrevocably appointing each of the Secretary of the SEC and, the Securities Administrator or other legally designated officer of the State in which the issuer maintains its principal place of business and any State in which this notice is filed, as its agents for service of process, and agreeing that these persons may accept service on its behalf, of any notice, process or pleading, and further agreeing that such service may be made by registered or certified mail, in any Federal or state action, administrative proceeding, or arbitration brought against it in any place subject to the jurisdiction of the United States, if the action, proceeding or arbitration (a) arises out of any activity in connection with the offering of securities that is the subject of this notice, and (b) is founded,

directly or indirectly, upon the provisions of: (i) the Securities Act of 1933, the Securities Exchange Act of 1934, the Trust Indenture Act of 1939, the Investment Company Act of 1940, or the Investment Advisers Act of 1940, or any rule or regulation under any of these statutes, or (ii) the laws of the State in which the issuer maintains its principal place of business or any State in which this notice is filed.

- Certifying that, if the issuer is claiming a Rule 505 exemption, the issuer is not disqualified from relying on Rule 505 for one of the reasons stated in Rule 505(b)(2)(iii).

Each Issuer identified above has read this notice, knows the contents to be true, and has duly caused this notice to be signed on its behalf by the undersigned duly authorized person.

For signature, type in the signer's name or other letters or characters adopted or authorized as the signer's signature.

Issuer	Signature	Name of Signer	Title	Date
PLURISTEM THERAPEUTICS INC	/s/ Yaky Yanay	Yaky Yanay	Chief Financial Officer	2010-10-13

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.

* This undertaking does not affect any limits Section 102(a) of the National Securities Markets Improvement Act of 1996 ("NSMIA") [Pub. L. No. 104-290, 110 Stat. 3416 (Oct. 11, 1996)] imposes on the ability of States to require information. As a result, if the securities that are the subject of this Form D are "covered securities" for purposes of NSMIA, whether in all instances or due to the nature of the offering that is the subject of this Form D, States cannot routinely require offering materials under this undertaking or otherwise and can require offering materials only to the extent NSMIA permits them to do so under NSMIA's preservation of their anti-fraud authority.

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 8-K

CURRENT REPORT PURSUANT TO
SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

Date of report (Date of earliest event reported): **October 18, 2010 (October 18, 2010)**

PLURISTEM THERAPEUTICS INC.
(Exact Name of Registrant as Specified in Charter)

Nevada	**001-31392**	**98-0351734**
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)

MATAM Advanced Technology Park, Building No. 20, Haifa, Israel	**31905**
(Address of Principal Executive Offices)	(Zip Code)

Registrant's telephone number, including area code: **011 972 74 710 7171**

N/A
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- ☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- ☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- ☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2 (b))
- ☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4 (c))

Item 3.02. Unregistered Sales of Equity Securities.

Reference is made to the registrant's Current Report on Form 8-K filed on October 12, 2010 (the "8-K"). On October 18, 2010, the registrant closed the private placement reported in the 8-K, pursuant to which the registrant sold 4,375,000 shares ("Shares") of the registrant's Common stock (the "Common Stock") at a price of $1.20 per share and warrants to purchase 2,625,000 shares of Common Stock (the "Warrants"), at an exercise price per share of $1.80. No separate consideration was paid for the Warrants. The Warrants have a term of four (4) years and are exercisable starting six (6) months following the issuance thereof. The aggregate gross proceeds from the sale of the Shares and the Warrants are approximately $5,250,000.

The registrant issued to Israel and U.S. placement agents warrants to purchase a total of 148,050 shares of the registrant's Common Stock on the same terms as the Warrants (the "Placement Agent Warrants") as part of their compensation.

The sales of the Common Stock, the Warrants and the Placement Agent Warrants were made pursuant to exemptions from registration under Regulation D and Regulation S of the Securities Act of 1933, as amended.

The securities offered and sold in the private placement have not been registered under the Securities Act of 1933, as amended, or any state securities laws, and may not be offered or sold in the United States absent registration, or an applicable exemption from registration under the Securities Act of 1933, as amended and applicable state securities laws. This Current Report on Form 8-K does not constitute an offer to sell, or a solicitation of an offer to buy, any security and shall not constitute any offer, solicitation or sale in any jurisdiction in which such offering would be unlawful.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits:

4.1 Form of Common Stock Purchase Warrant dated October 18, 2010 issued by the registrant. (incorporated by reference to Exhibit 4.1 to the registrant's Current Report on Form 8-K, dated October 12, 2010)

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

PLURISTEM THERAPEUTICS INC.

By: /s/ Yaky Yanay
_____
Yaky Yanay
Chief Financial Officer

Date: October 18, 2010

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

Form 10-Q

(Mark One)

☒ QUARTERLY REPORT UNDER SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended **September 30, 2010**

☐ TRANSITION REPORT UNDER SECTION 13 OR 15(d) OF THE EXCHANGE ACT

For the transition period from _____ to _____

Commission file number **001-31392**

PLURISTEM THERAPEUTICS INC.

(Exact name of registrant as specified in its charter)

Nevada	**98-0351734**
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)

MATAM Advanced Technology Park, Building No. 20, Haifa, Israel 31905
(Address of principal executive offices)

+972-74-710-7171
(Registrant's telephone number)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the past 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registration was required to submit and post such files).

Yes ☐ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☐	Accelerated filer ☐
Non-accelerated filer ☐	Smaller reporting company ☒
(Do not check if a smaller reporting company)	

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes No ☒

State the number of shares outstanding of each of the issuer's classes of common stock as of the latest practicable date: 26,321,149 common shares issued as of November 1, 2010.

PART I - FINANCIAL INFORMATION

Item 1. Financial Statements.

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

CONSOLIDATED FINANCIAL STATEMENTS

As of September 30, 2010

(unaudited)

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)
CONSOLIDATED FINANCIAL STATEMENTS

As of September 30, 2010

U.S. DOLLARS IN THOUSANDS

(Unaudited)

INDEX

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

CONSOLIDATED BALANCE SHEETS

U.S. Dollars in thousands

	September 30, 2010 Unaudited	June 30, 2010 Audited
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 1,127	$ 1,583
Short term bank deposit	517	913
Prepaid expenses	80	41
Accounts receivable from the Office of the Chief Scientist	318	706
Other accounts receivable	71	362
Total current assets	2,113	3,605
LONG-TERM ASSETS:		
Long-term deposits and restricted deposits	169	168
Severance pay fund	327	294
Property and equipment, net	1,756	1,555
Total long-term assets	2,252	2,017
Total assets	$ 4,365	$ 5,622

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

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

CONSOLIDATED BALANCE SHEETS
U.S. Dollars in thousands

	September 30, 2010 Unaudited	June 30, 2010 Audited
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES		
Trade payables	$ 673	$ 791
Accrued expenses	157	118
Other accounts payable	400	372
Total current liabilities	1,230	1,281
LONG-TERM LIABILITIES		
Accrued severance pay	403	360
	403	360
STOCKHOLDERS' EQUITY		
Share capital:		
Common stock $0.00001 par value:		
Authorized: 100,000,000 shares		
Issued: 21,890,358 shares as of September 30, 2010, 21,458,707 shares as of June 30, 2010.		
Outstanding: 21,169,899 shares as of September 30, 2010, 20,888,781 shares as of June 30, 2010.	-(*)	-(*)
Additional paid-in capital	44,526	44,086
Accumulated deficit during the development stage	(41,794)	(40,105)
	2,732	3,981
	$ 4,365	$ 5,622

(*) Less than $1.

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

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

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

	Three months ended September 30,		Period from May 11, 2001 (Inception) through September 30,
	2010	**2009**	**2010**
Research and development expenses	$ 1,501	$ 1,356	$ 24,781
Less participation by the Office of the Chief Scientist	(503)	(489)	(5,575)
Research and development expenses, net	998	867	19,206
General and administrative expenses	756	770	21,267
Know how write-off	-	-	2,474
Operating loss	(1,754)	(1,637)	(42,947)
Financial income, net	65	20	1,153
Net loss for the period	$ (1,689)	$ (1,617)	$ (41,794)
Loss per share:			
Basic and diluted net loss per share	$ (0.08)	$ (0.11)	
Weighted average number of shares used in computing basic and diluted net loss per share	21,012,208	14,522,818	

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

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)
U.S. Dollars in thousands (except share and per share data)

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Receipts on Account of Common Stock	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficiency)
Issuance of common stock on July 9, 2001	175,500	$ (*)	$ 3	$ -	$ -	$ 3
Balance as of June 30, 2001	175,500	(*)	3	-	-	3
Net loss	-	-	-	-	(78)	(78)
Balance as of June 30, 2002	175,500	(*)	3	-	(78)	(75)
Issuance of common stock on October 14, 2002, net of issuance expenses of $17	70,665	(*)	83	-	-	83
Forgiveness of debt	-	-	12	-	-	12
Stock cancelled on March 19, 2003	(136,500)	(*)	(*)	-	-	-
Receipts on account of stock and warrants, net of finders and legal fees of $56	-	-	-	933	-	933
Net loss	-	-	-	-	(463)	(463)
Balance as of June 30, 2003	109,665	$ (*)	$ 98	$ 933	$ (541)	$ 490

(*) Less than $1.

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

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)
U.S. Dollars in thousands (except share and per share data)

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Receipts on Account of Common Stock	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficiency)
Balance as of July 1, 2003	109,665	$ (*)	$ 98	$ 933	$ (541)	$ 490
Issuance of common stock on July 16, 2003, net of issuance expenses of $70	3,628	(*)	1,236	(933)	-	303
Issuance of common stock on January 20, 2004	15,000	(*)	-	-	-	(*)
Issuance of warrants on January 20, 2004 for finder's fee	-	-	192	-	-	192
Common stock granted to consultants on February 11, 2004	5,000	(*)	800	-	-	800
Stock based compensation related to warrants granted to consultants on December 31, 2003	-	-	358	-	-	358
Exercise of warrants on April 19, 2004	1,500	(*)	225	-	-	225
Net loss for the year	-	-	-	-	(2,011)	(2,011)
Balance as of June 30, 2004	134,793	$ (*)	$ 2,909	$ -	$ (2,552)	$ 357

(*) Less than $1.

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

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)
U.S. Dollars in thousands (except share and per share data)

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficiency)
Balance as of July 1, 2004	134,793	$ (*)	$ 2,909	$ (2,552)	$ 357
Stock-based compensation related to warrants granted to consultants on September 30, 2004	-	-	162	-	162
Issuance of common stock and warrants on November 30, 2004 related to the October 2004 Agreement net of issuance costs of $29	16,250	(*)	296	-	296
Issuance of common stock and warrants on January 26, 2005 related to the October 2004 Agreement net of issuance costs of $5	21,500	(*)	425	-	425
Issuance of common stock and warrants on January 31, 2005 related to the January 31, 2005 Agreement	35,000	(*)	-	-	(*)
Issuance of common stock and options on February 15, 2005 to former director of the Company	250	(*)	14	-	14
Issuance of common stock and warrants on February 16, 2005 related to the January 31, 2005 Agreement	25,000	(*)	-	-	(*)

(*) Less than $1.

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

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)

U.S. Dollars in thousands (except share and per share data)

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficiency)
Issuance of warrants on February 16, 2005 for finder fee related to the January 31, 2005 Agreement	-	-	144	-	144
Issuance of common stock and warrants on March 3, 2005 related to the January 24, 2005 Agreement net of issuance costs of $24	60,000	(*)	1,176	-	1,176
Issuance of common stock on March 3, 2005 for finder fee related to the January 24, 2005 Agreement	9,225	(*)	(*)	-	-
Issuance of common stock and warrants on March 3, 2005 related to the October 2004 Agreement net of issuance costs of $6	3,750	(*)	69	-	69
Issuance of common stock and warrants to the Chief Executive Officer on March 23, 2005	12,000	(*)	696	-	696
Issuance of common stock on March 23, 2005 related to the October 2004 Agreement	1,000	(*)	20	-	20

(*) Less than $1.

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

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)
U.S. Dollars in thousands (except share and per share data)

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficiency)
Classification of a liability in respect of warrants to additional paid in capital, net of issuance costs of $ 178	-	-	542	-	542
Net loss for the year	-	-	-	(2,098)	(2,098)
Balance as of June 30, 2005	318,768	(*)	6,453	(4,650)	1,803
Exercise of warrants on November 28, 2005 to finders related to the January 24, 2005 agreement	400	(*)	-	-	-
Exercise of warrants on January 25 ,2006 to finders related to the January 25, 2005 Agreement	50	(*)	-	-	-
Reclassification of warrants from equity to liabilities due to application of ASC 815-40	-	-	(8)	-	(8)
Net loss for the year	-	-	-	(2,439)	(2,439)
Balance as of June 30, 2006	319,218	$ (*)	$ 6,445	$ (7,089)	$ (644)

(*) Less than $1.

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

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)
U.S. Dollars in thousands (except share and per share data)

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Receipts on Account of Common Stock	Accumulated Other Comprehensive Loss	Deficit Accumulated During the Development Stage	Total Stockholders' Equity
Balance as of July 1, 2006	319,218	$ (*)	$ 6,445	$ -	$ -	$ (7,089)	$ (644)
Conversion of convertible debenture, net of issuance costs of $440	1,019,815	(*)	1,787	-	-	-	1,787
Classification of a liability in respect of warrants	-	-	360	-	-	-	360
Classification of deferred issuance expenses	-	-	(379)	-	-	-	(379)
Classification of a liability in respect of options granted to non-employees consultants	-	-	116	-	-	-	116
Compensation related to options granted to employees and directors	-	-	2,386	-	-	-	2,386
Compensation related to options granted to non-employee consultants	-	-	938	-	-	-	938
Exercise of warrants related to the April 3, 2006 agreement net of issuance costs of $114	75,692	(*)	1,022	-	-	-	1,022

(*) Less than $1.

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

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)
U.S. Dollars in thousands (except share and per share data)

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Receipts on Account of Common Stock	Accumulated Other Comprehensive Loss	Deficit Accumulated During the Development Stage	Total Stockholders' Equity	Total Comprehensive Loss
Cashless exercise of warrants related to the April 3, 2006 agreement	46,674	(*)	(*)	-	-	-	-	
Issuance of common stock on May and June 2007 related to the May 14, 2007 agreement, net of issuance costs of $64	3,126,177	(*)	7,751	-	-	-	7,751	
Receipts on account of shares	-	-	-	368	-	-	368	
Cashless exercise of warrants related to the May 14, 2007 issuance	366,534	(*)	(*)	-	-	-	-	
Issuance of warrants to investors related to the May 14, 2007 agreement	-	-	651	-	-	-	651	
Unrealized loss on available for sale securities	-	-	-	-	(30)	-	(30)	$ (30)
Net loss for the year	-	-	-	-	-	(8,429)	(8,429)	(8,429)
Balance as of June 30, 2007	4,954,110	$ (*)	$ 21,077	$ 368	$ (30)	$ (15,518)	$ 5,897	-
Total comprehensive loss								$ (8,459)

(*) Less than $1.

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

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)
U.S. Dollars in thousands (except share and per share data)

	Common Stock Shares	Common Stock Amount	Additional Paid-in Capital	Receipts on Account of Common Stock	Accumulated Other Comprehensive Loss	Deficit Accumulated During the Development Stage	Total Stockholders' Equity	Total Comprehensive Loss
Balance as of July 1, 2007	4,954,110	$ (*)	$ 21,077	$ 368	$ (30)	$ (15,518)	$ 5,897	
Issuance of common stock related to investors relation agreements	69,500	(*)	275	-	-	-	275	
Issuance of common stock in July 2007 - June 2008 related to the May 14, 2007 Agreement	908,408	(*)	2,246	(368)	-	-	1,878	
Cashless exercise of warrants related to the May 14, 2007 Agreement	1,009,697	(*)	(*)	-	-	-	-	
Compensation related to options granted to employees and directors	-	-	4,204	-	-	-	4,204	
Compensation related to options granted to non–employees consultants	-	-	543	-	-	-	543	
Realized loss on available for sale securities	-	-	-	-	30	-	30	$ 30
Net loss for the year	-	-	-	-	-	(10,498)	(10,498)	(10,498)
Balance as of June 30, 2008	6,941,715	$ (*)	$ 28,345	$ -	$ -	$ (26,016)	$ 2,329	
Total comprehensive loss								$ (10,468)

(*) Less than $1.

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

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)
U.S. Dollars in thousands (except share and per share data)

	Common Stock		Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Equity
	Shares	Amount			
Balance as of July 1, 2008	6,941,715	$ (*)	$ 28,345	$ (26,016)	$ 2,329
Issuance of common stock related to investor relations agreements	171,389	(*)	133	-	133
Issuance of common stock and warrants related to the August 6, 2008 agreement, net of issuance costs of $125	1,391,304	(*)	1,475	-	1,475
Issuance of common stock and warrants related to the September 2008 agreement, net of issuance costs of $62	900,000	(*)	973	-	973
Issuance of common stock and warrants in November 2008 -January 2009, net of issuance costs of $39	1,746,575	(*)	660	-	660
Issuance of common stock and warrants related to the January 20, 2009 agreement, net of issuance costs of $5	216,818	(*)	90	-	90
Issuance of common stock and warrants related to the January 29, 2009 agreement, net of issuance costs of $90	969,826	(*)	1,035	-	1,035
Issuance of common stock and warrants related to the May 5, 2009 agreement, net of issuance costs of $104	888,406	(*)	1,229	-	1,229
Compensation related to options granted to employees and directors	-	-	1,315	-	1,315
Compensation related to options and warrants granted to non–employee consultants	-	-	97	-	97
Compensation related to restricted stock granted to employees and directors	427,228	(*)	642	-	642
Compensation related to restricted stock granted to non–employee consultants	23,625	(*)	52	-	52
Net loss for the period	-	-	-	(6,636)	(6,636)
Balance as of June 30, 2009	13,676,886	$ (*)	$ 36,046	$ (32,652)	$ 3,394

(*) Less than $1.

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

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIENCY)
U.S. Dollars in thousands (except share and per share data)

	Common Stock		Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Equity
	Shares	Amount			
Balance as of July 1, 2009	13,676,886	$ (*)	$ 36,046	$ (32,652)	$ 3,394
Issuance of common stock and warrants related to November 2008 through January 2009 agreements (on July 2009)	1,058,708	(*)	794	-	794
Issuance of common stock and warrants related to October 2009 agreements, net of issuance costs of $242	2,702,822	(*)	2,785	-	2,785
Issuance of common stock and warrants related to April 2010 agreements, net of issuance costs of $54	2,393,329	(*)	2,627	-	2,627
Issuance of common stock related to investor relations agreements	1,929	(*)	13	-	13
Exercise of options by employee	3,747	(*)	2	-	2
Compensation related to options granted to employees and directors	-	-	211	-	211
Compensation related to options and warrants granted to non–employee consultants	-	-	161	-	161
Compensation related to restricted stock and restricted stock units granted to employees and directors	981,586	(*)	1,357	-	1,357
Compensation related to restricted stock and restricted stock units granted to non–employee consultants	69,774	(*)	90	-	90
Net loss for the period	-	-	-	(7,453)	(7,453)
Balance as of June 30, 2010	20,888,781	$ (*)	$ 44,086	$ (40,105)	$ 3,981

(*) Less than $1.

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

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

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

	Common Stock		Additional Paid-in Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Equity
	Shares	Amount			
Balance as of July 1, 2010	20,888,781	$ (*)	$ 44,086	$ (40,105)	$ 3,981
Compensation related to options granted to employees and directors	-	-	6	-	6
Compensation related to options and warrants granted to non–employee consultants	-	-	11	-	11
Compensation related to restricted stock and restricted stock units granted to employees and directors	242,260	(*)	368	-	368
Compensation related to restricted stock and restricted stock units granted to non–employee consultants	38,858	(*)	55	-	55
Net loss for the period	-	-	-	(1,689)	(1,689)
Balance as of September 30, 2010	21,169,899	$ (*)	$ 44,526	$ (41,794)	$ 2,732

(*) Less than $1.

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

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)
U.S. Dollars in thousands

	Three months ended September 30,		Period from May 11, 2001 (inception) Through September 30,
	2010	2009	2010
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net loss	$ (1,689)	$ (1,617)	$ (41,794)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation	70	47	822
Capital loss	8	-	12
Impairment of property and equipment	-	-	54
Know-how write-off	-	-	2,474
Amortization of deferred issuance costs	-	-	604
Stock-based compensation to employees and directors	374	402	10,489
Stock-based compensation to non-employees consultants	88	90	2,637
Stock compensation to investor relations consultants	36	8	1,249
Know-how licensors – imputed interest	-	-	55
Salary grant in shares and warrants	-	-	711
Decrease (increase) in other accounts receivable	425	169	(367)
Decrease (increase) in prepaid expenses	(39)	(29)	10
Increase (decrease) in trade payables	1	(45)	590
Increase in other accounts payable and accrued expenses	33	24	18
Increase in interest receivable on short-term deposit	(4)	-	(19)
Increase in accrued interest due to related parties	-	-	3
Linkage differences and interest on long-term restricted lease deposit	(1)	-	(2)
Change in fair value of liability in respect of warrants	-	-	(2,696)
Fair value of warrants granted to investors	-	-	651
Amortization of discount and changes in accrued interest on convertible debentures	-	-	128
Amortization of discount and changes in accrued interest from marketable securities	-	-	(9)
Loss from sale of investments of available-for-sale marketable securities	-	-	106
Impairment and realized loss on available-for-sale marketable securities	-	-	372
Accrued severance pay, net	10	10	76
Net cash used in operating activities	$ (688)	$ (941)	$ (23,826)

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

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)
U.S. Dollars in thousands

	Three months ended September 30,		Period from May 11, 2001 (inception) through June 30,
	2010	2009	2010
CASH FLOWS FROM INVESTING ACTIVITIES:			
Acquisition of Pluristem Ltd. (1)	$ -	$ -	$ 32
Purchase of property and equipment	(426)	(51)	(2,420)
Investment in short-term deposits	-	-	(2,500)
Repayment of short-term deposits	400	-	2,002
Proceeds from sale of property and equipment	28	-	60
Investment in long-term deposits	-	-	(229)
Repayment of long-term restricted deposit	2	-	69
Purchase of available for sale marketable securities	-	-	(3,784)
Proceeds from sale of available for sale marketable securities	-	-	3,314
Purchase of know-how	-	-	(2,062)
Net cash provided by (used in) investing activities	4	(51)	(5,518)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Issuance of common stock and warrants, net of issuance costs	$ 252	$ 794	$ 27,597
Exercise of warrants and options	-	-	1,024
Issuance of convertible debenture	-	-	2,584
Issuance expenses related to convertible debentures	-	-	(440)
Repayment of know-how licensors	-	-	(300)
Repayment of notes and loan payable to related parties	-	-	(70)
Proceeds from notes and loan payable to related parties	-	-	78
Receipt of long-term loan	-	-	49
Repayment of long-term loan	(24)	-	(51)
Net cash provided by financing activities	228	794	30,471
Increase (decrease) in cash and cash equivalents	(456)	(198)	1,127
Cash and cash equivalents at the beginning of the period	1,583	2,339	-
Cash and cash equivalents at the end of the period	$ 1,127	$ 2,141	$ 1,127

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

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)
U.S. Dollars in thousands

	Three months ended September 30,		Period from May 11, 2001 (inception) through September 30,
	2010	2009	2010
(a) Supplemental disclosure of cash flow activities:			
Cash paid during the period for:			
Taxes paid due to non-deductible expenses	$ 5	$ 1	$ 59
Interest paid	$ -	$ 1	$ 18
(b) Supplemental disclosure of non-cash activities:			
Classification of liabilities and deferred issuance expenses into equity	$ -	$ -	$ 97
Conversion of convertible debenture	$ -	$ -	$ 2,227
Purchase of property and equipment in credit	$ 73	$ 67	$ 73

(1) Acquisition of Pluristem Ltd.

Fair value of assets acquired and liabilities assumed at the acquisition date:	
Working capital (excluding cash and cash equivalents)	$ (427)
Long-term restricted lease deposit	19
Property and equipment	130
In-process research and development write-off	246
	$ (32)

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

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 1:-GENERAL

a. Pluristem Therapeutics Inc., a Nevada corporation, was incorporated and commenced operations on May 11, 2001, under the name A. I. Software Inc. which was changed as of June 30, 2003 to Pluristem Life Systems Inc. On November 26, 2007, its name was changed to Pluristem Therapeutics Inc. Pluristem Therapeutics Inc. has a wholly owned subsidiary, Pluristem Ltd. ("the Subsidiary"), which is incorporated under the laws of Israel. Pluristem Therapeutics Inc. and its Subsidiary are referred to as "the Company".

b. The Company is devoting substantially all of its efforts towards conducting research and development of adherent stromal cells production technology and the commercialization of cell therapy products. Accordingly, the Company is considered to be in the development stage, as defined in Accounting Standards Codification ™ ("ASC") 915. In the course of such activities, the Company has sustained operating losses and expects such losses to continue in the foreseeable future. The Company has not generated any revenues or product sales and has not achieved profitable operations or positive cash flows from operations. The Company's accumulated losses during the development stage aggregated to $41,794 through September 30, 2010 and the Company incurred net loss of $1,689 and negative cash flow from operating activities in the amount of $688 for the three months ended September 30, 2010. There is no assurance that profitable operations, if ever achieved, could be sustained on a continuing basis.

The Company plans to continue to finance its operations with sales of equity securities and research and development grants and in the longer term, from revenues from product sales or licensing of its technology. There are no assurances, however, that the Company will be successful in obtaining an adequate level of financing needed for the long-term development and commercialization of its planned products.

These conditions raise substantial doubt about the Company's ability to continue as a going concern. The consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

c. Since December 10, 2007, the Company's shares of common stock have been traded on the NASDAQ Capital Market under the symbol PSTI. The shares were previously traded on the OTC Bulletin Board under the trading symbol "PLRS.OB". On May 7, 2007, the Company's shares also began trading on Europe's Frankfurt Stock Exchange, under the symbol PJT.

NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES

A. The accompanying unaudited interim financial statements of Pluristem Therapeutics Inc., a development stage company, have been prepared in accordance with accounting principles generally accepted in the United States of America and the rules of the Securities and Exchange Commission and should be read in conjunction with the audited financial statements and notes thereto contained in Pluristem's latest Annual Report filed with the SEC on Form 10-K. In the opinion of management, all adjustments, consisting of normal recurring adjustments, necessary for a fair presentation of financial position and the results of operations for the interim periods presented have been reflected herein. The results of operations for interim periods are not necessarily indicative of the results to be expected for the full year. Notes to the financial statements that would substantially duplicate the disclosure contained in the audited financial statements for the most recent fiscal year as reported in Form 10-K have been omitted.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 2:- SIGNIFICANT ACCOUNTING POLICIES

B. Impact of recently issued accounting standards:

In July 2010, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update 2010-20 "ASU 2010-20" Disclosures about the Credit Quality of Financing Receivables and the Allowance for Credit Losses". ASU 2010-20 is an update of Accounting Standards Codification Topic 310, Receivables. This update requires enhanced disclosures on a disaggregated basis about the nature of the credit risk inherent in the portfolio of financing receivables; how that risk is analyzed and assessed in arriving at the allowance for credit losses; and the changes and reasons for those changes in the allowance for credit losses.

The disclosures required under ASU 2010-20 as of the end of a reporting period are effective for interim and annual reporting periods ending on or after December 15, 2010. The Company does not expect the adoption of the update to have a material impact on its financial condition or results of operations.

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS

a. On December 22, 2009, the Company's authorized common stock was increased from 30,000,000 shares with a par value of $0.00001 per share to 100,000,000 shares with a par value of $0.00001 per share. All shares have equal voting rights and are entitled to one vote per share in all matters to be voted upon by stockholders. The shares have no pre-emptive, subscription, conversion or redemption rights and may be issued only as fully paid and non-assessable shares. Holders of the common stock are entitled to equal ratable rights to dividends and distributions with respect to the common stock, as may be declared by the Board of Directors out of funds legally available.

   On July 1, 2008, the authorized share capital of the Company was increased by authorizing 10,000,000 shares of preferred stock, par value $0.00001 each, with series, rights, preferences, privileges and restrictions as may be designated from time to time by the Company's Board of Directors. No shares of preferred stock have been currently issued.

b. On July 9, 2001, the Company issued 175,500 shares of common stock in consideration for $2.50, which was received on July 27, 2001.

c. On October 14, 2002, the Company issued 70,665 shares of common stock at a price of approximately $1.40 per common share in consideration for $100 before issuance costs of $17. On March 19, 2003, two directors each returned 68,250 shares of common stock with a par value of $2.00 per share, for cancellation, for no consideration.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

d. In July 2003, the Company issued an aggregate of 3,628 units comprised of 3,628 shares of common stock and 7,256 warrants to a group of investors, for total consideration of $1,236 (net of issuance costs of $70), under a private placement. The consideration was paid partly in the year ended June 30, 2003 ($933) and the balance was paid in the year ended June 30, 2004.

In this placement each unit was comprised of one share of common stock and two warrants, the first warrant was exercisable within a year from the date of issuance for one share of common stock at a price of $450 per share. The second warrant is exercisable within five years from the date of issuance for one share of common stock at a price of $540 per share. All the warrants expired unexercised.

e. On January 20, 2004, the Company consummated a private equity placement with a group of investors (the "Investors"). The Company issued 15,000 units in consideration for net proceeds of $1,273 (net of issuance costs of $227). Each unit is comprised of 15,000 shares of common stock and 15,000 warrants. Each warrant is exercisable into one share of common stock at a price of $150 per share, and may be exercised until January 31, 2007. On March 18, 2004, a registration statement on Form SB-2 was declared effective and the above-mentioned common stock was registered for re-sale. If the effectiveness of the Registration Statement is suspended subsequent to the effective date of registration (March 18, 2004), for more than certain permitted periods, as described in the private equity placement agreement, the Company shall pay penalties to the Investors in respect of the liquidated damages.

According to ASC 815-40, the Company classified the warrants as liabilities according to their fair value as remeasured at each reporting period until exercised or expired. Changes in the fair value of the warrants were reported in the statements of operations as financial income or expense.

The Company allocated the gross amount received of $1,500 to the par value of the shares issued ($0.03) and to the liability in respect of the warrants issued ($1,499.97). The amount allocated to the liability was less than the fair value of the warrants at grant date. On January 31, 2007 all the warrants expired unexercised.

In addition, the Company issued 1,500 warrants to finders in connection with this private placement, exercisable into 1,500 common shares at a price of $150 per common share until January 31, 2007. The fair value of the warrants issued in the amounts of $192 was recorded as deferred issuance costs and is amortized over a period of three years. On April 19, 2004, the finders exercised the warrants.

f. In October 2004, the Company consummated a private placement offering ("the October 2004 Agreement") pursuant to which it issued 42,500 units. Each unit is comprised of one share of common stock and one warrant. The warrant is exercisable for one common stock at an exercise price of $60 per share, subject to certain adjustments. The units were issued as follows:

In November 2004, the Company issued according to the October 2004 Agreement 16,250 units comprised of 16,250 shares of common stock and 16,250 warrants to a group of investors, for total consideration of $296 (net of cash issuance costs of $29), and additional 600 warrants to finders as finders' fees.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

f. (cont.)

In January 2005, the Company issued according to the October 2004 Agreement an additional 21,500 units for total consideration of $425 (net of cash issuance costs of $5), and additional 450 warrants were issued to finders as finders' fees.

In March 2005, the Company issued according to the October 2004 Agreement additional 3,750 units for total consideration of $69 (net of cash issuance costs of $6), and additional 175 warrants were issued to finders as finders' fees.

In March 2005, the Company issued according to the October 2004 Agreement 1,000 common shares and 1,000 share purchase warrants to one investor for total consideration of $20 which was paid to the Company in May 2005.

On November 30, 2006, all the warrants expired unexercised.

g. On January 24, 2005, the Company consummated a private placement offering (the "January 24, 2005 Agreement") which was closed on March 3, 2005 and issued 60,000 units in consideration for $1,176 (net of cash issuance costs of $24). Each unit is compromised of one share of common stock and one warrant. The warrant is exercisable for one share of common stock at a price of $60 per share. On November 30, 2006, all the warrants expired unexercised. Under this agreement the Company issued to finders 9,225 shares and 2,375 warrants with exercise price of $500 per share exercisable until November 2007. On November 30, 2007, 1,925 unexercised warrants expired.

h. On January 31, 2005, the Company consummated a private equity placement offering (the "January 31, 2005 Agreement") with a group of investors according to which it issued 60,000 units in consideration for net proceeds of $1,137 (net of issuance costs of $63). Each unit is comprised of one share of common stock and one warrant. Each warrant is exercisable into one share of common stock at a price of $60 per share. The January 31, 2005 Agreement includes a finder's fee of a cash amount equal to 5% of the amount invested ($60) and issuance of warrants for number of shares equal to 5% of the number of shares that were issued (3,000) with an exercise price of $20 per share, subject to certain adjustments, exercisable until November 30, 2006.

According to ASC 815-40, the Company classified the warrants as liabilities according to their fair value as remeasured at each reporting period until exercised or expired. Changes in the fair value of the warrants will be reported in the statements of operations as financial income or expense.

As of the date of the issuance, the Company allocated the gross amount received of $1,200 to the par value of the shares issued ($0.12) and to the liability in respect of the warrants issued ($1,200). Issuance expenses in the amount of $63 and finder's fee in the amount of $144 were recorded as deferred issuance costs. The amount allocated to the liability was less than the fair value of the warrants at grant date. On May 13, 2005, the Registration Statement became effective and the Company was no longer subject to possible penalties. As such, the liability and the deferred issuance costs related to the agreement has been classified to the Stockholders Equity as Additional Paid in Capital. As of May 13, 2005, the fair value of the liability in respect of the warrants issued was $720 and the amount of the deferred issuance costs was $178.

On November 30, 2006, all the warrants expired unexercised.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. Dollars in thousands (except per share amounts)

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

i. On March 23, 2005, the Company issued 12,000 shares of common stock and 12,000 options as a bonus to the then Chief Executive Officer, Dr. Shai Meretzki, in connection with the issuance of a Notice of Allowance by the United States Patent Office for patent application number 09/890,401. Salary expenses of $696 were recognized in respect of this bonus based on the quoted market price of the Company's stock and the fair value of the options granted using the Black–Scholes valuation model. On November 30, 2006, all the warrants expired unexercised.

j. On February 11, 2004, the Company issued an aggregate amount of 5,000 shares of common stock to a consultant and service provider as compensation for carrying out investor relations activities during the year 2004. Total compensation, measured as the grant date fair market value of the stock, amounted to $800 and was recorded as an operating expense in the statement of operations in the year ended June 30, 2004.

k. On November 28, 2005, 400 warrants, which were issued to finders as finder fees related to the January 24, 2005 Agreement, were exercised.

l. On January 25, 2006, 50 warrants, which were issued to finders as finder fees related to the January 24, 2005 Agreement, were exercised.

m. Convertible Debenture

On April 3, 2006, the Company issued Senior Secured Convertible Debentures (the "Debentures"), for gross proceeds of $3,000. In conjunction with this financing, the Company issued 236,976 warrants exercisable for three years at an exercise price of $15.00 per share. The Company paid a finder's fee of 10% in cash and issued 47,394 warrants exercisable for three years, half of which are exercisable at $15.00 and half of which are exercisable at $15.40 per share. The Company also issued 5,000 warrants in connection with the separate finder's fee agreement related to the issuance of the debenture exercisable for three years at an exercise price of $15.00 per share.

a. Interest accrued on the Debentures at the rate of 7% per annum, was payable semi-annually on June 30 and December 31 of each year and on conversion and at the maturity date. Interest was payable, at the option of the Company, either (1) in cash, or (2) in shares of common stock at the then applicable conversion price. If the Company failed to deliver stock certificates upon the conversion of the Debentures at the specified time and in the specified manner, the Company was required to make substantial payments to the holders of the Debentures.

b. The warrants, issued as of April 3, 2006, become first exercisable on the 65th day after issuance. Holders of the warrants were entitled to exercise their warrants on a cashless basis following the first anniversary of issuance if the Registration Statement is not in effect at the time of exercise.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

m. Convertible Debenture (Cont.):

In accordance with ASC 815-40, the Company allocated the consideration paid for the convertible debenture and the warrants as follows:

The warrants were recorded as a liability based on their fair value in the amount of $951 at grant date. The Company estimated the fair value of the warrants using a Black-Scholes option pricing model, with the following assumptions: volatility of 83%, risk free interest rate of 4.8%, dividend yield of 0%, and an expected life of 36 months. Changes in the fair value are recorded as interest income or expense, as applicable.

The fair value of the conversion feature of the debentures at grant date, in the amount of $1,951 was recorded as a liability.

The balance of the consideration, in the amount of $97, was allocated to the debentures. The discount in the amount of $2,903 was amortized according to the effective rate interest method over the debentures contractual period (24 months).

The fair value of the warrants issued as a finder's fee and the finder's fee in cash amounted to $535 and were recorded as deferred issuance expenses and are amortized over the Debentures' contractual period. The Company estimated the fair value of the warrants using a Black - Scholes option pricing model, with the following assumptions: volatility of 83%, risk free interest rate of 4.8%, dividend yield of 0%, and an expected life of 36 months.

According to ASC 815-40, in order to classify warrants and options (other than employee stock options) as equity and not as liabilities, the Company should have sufficient authorized and unissued shares of common stock to provide for settlement of those instruments that may require share settlement. Under the terms of the Debentures, the Company may be required to issue an unlimited number of shares to satisfy the debenture's contractual requirements. As such, on April 3, 2006, the Company's warrants and options (other than employee stock options) were classified as liabilities and measured at fair value with changes recognized currently in earnings.

As of November 9, 2006, all of the Debentures, were converted into 969,815 shares. As a result, an amount of $1,787 was reclassified into common stock and additional paid-in capital as follows: from conversion of the feature embedded in convertible debenture ($1,951), convertible debenture ($202), accrued interest ($74) net of issuance expenses in the amount of $440. In addition, the warrants and options to consultants in the amount of $476 and deferred issuance expenses in the amount of $379 were reclassified as equity.

Pursuant to an investor relations agreement dated April 28, 2006, the Company paid in cash an amount of $440 on October 19, 2006 and issued 50,000 common shares on November 9, 2006 to certain service providers following reaching certain milestones regarding the conversion of the Debentures as agreed to by the parties.

During the year ended June 30, 2007, 186,529 of the warrants which were issued on April 3, 2006, were exercised. 75,692 warrants were exercised into shares in consideration for $1,022 (net of cash exercise costs of $114), and 110,836 warrants were exercised cashless into 46,674 shares. On April 30, 2009, the rest of the warrants expired unexercised.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. Dollars in thousands (except per share amounts)

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

n. On May 14, 2007, the Company consummated a private equity placement with a group of investors for an equity investment ("May 2007 Agreement"). The Company sought a minimum of $7,000 and up to a maximum of $13,500 for shares of the Company's common stock at a per share price of $2.50, and warrants to purchase shares at an exercise price of $5.00 exercisable until five years after the closing date of the agreement.

In May 2007, under the May 2007 Agreement, the Company issued 3,126,177 shares of the Company's common stock and 3,126,177 warrants to purchase the Company's common stock in consideration for $7,751 (net of cash issuance costs of $64).

During July and August 2007, under the May 2007 Agreement, the Company issued additional 273,828 shares of the Company's common stock and 273,828 warrants to purchase the Company's common stock in consideration for $685. The consideration was paid partly prior to the issuance of the shares in the year ended June 30, 2007 ($368) and was recorded as receipts on account of shares and the balance was paid during July and August 2007.

As part of May 2007 Agreement, the Company signed an escrow agreement according to which the Company granted an option to an investor to invest, under the same conditions defined in the May 2007 Agreement, up to $5,000 which will be paid in monthly installments over 10 months starting six months subsequent to the closing date. According to the agreement, in the event that the investor fails to make any of the payments within five days of the payment due date, the option to invest the remaining amount will be cancelled. As a result of this agreement, the Company issued 634,580 shares of the Company's common stock and 634,580 warrants to purchase the Company's common stock in consideration for $1,561 (net of cash issuance costs of $25). As of March 31, 2008 the option was cancelled.

The total proceeds related to the May 2007 Agreement accumulated as of June 30, 2008 were $9,997 (net of cash issuance costs of $89), and 4,034,585 shares and 4,034,585 warrants were issued.

In connection with the May 2007 Agreement, the Company issued 275,320 warrants to finders as finders' fee. The warrants are exercisable for five years from the date of grant at an exercise price of $2.50 per share.

During 2008 and 2007, 1,361,818 and 500,000 warrants related to the May 2007 Agreement were exercised on a cashless basis for 1,009,697 shares of stock and 366,534 shares of stock, respectively.

o. The Company issued 28,398 warrants to the investors related to the May 2007 Agreement as compensation to investors who delivered the invested amount prior to the closing date of the placement. The warrants are exercisable for five years at an exercise price of $2.50 per share. The Company recorded the fair value of the warrants as financial expenses in the amount of $651 in the year ended June 30, 2007. The fair value of these warrants was determined using the Black-Scholes pricing model, assuming a risk free rate of 4.8%, a volatility factor of 128%, dividend yield of 0% and expected life of five years.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. Dollars in thousands (except per share amounts)

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

p. In the May 2007 Agreement, there is a provision that requires the Company for a period of four years (subject to acceleration under certain circumstances) not to sell any of the Company's common stock for less than $0.0125 per share (pre-split price). The May 2007 Agreement provides that any sale below that price must be preceded by consent from each purchaser in the placement.

Since that date, the Company had effected a one-for-200 reverse stock split. The Company decided to proceed and enter into additional security purchase agreements notwithstanding this provision for the following reasons:

- The agreement does not contain any provisions for the adjustment of the specified minimum price in the event of stock splits and the like. If such agreement were to have contained such a provision, the floor price would be $2.50.
- The majority of purchasers in the private placement have sold the stock purchased in the placement, and thus the number of purchasers whose consent is purportedly required has been substantially reduced. The number of shares outstanding as to which this provision currently applies according the information supplied by transfer agent is 2 million shares.
- An agreement that prevents the Company's Board of Directors from issuing shares that are necessary to finance the Company's business may be unenforceable.

It is unclear what could be the consequences of a court decision that the issuance of shares below $2.50 per share violates the May 2007 Agreement.

In connection therewith, the Company approved the issuance of warrants to purchase up to 161,724 shares of its common stock to each of the investors who was a party to the May 2007 Agreement that held shares purchased pursuant to such agreement, as of August 6, 2008, conditioned on having the investors execute a general release pursuant to which the Company will be released from liability including, but not limited to, any claims, demands, or causes of action arising out of, relating to, or regarding sales of certain equity securities notwithstanding the above mentioned provision. As of September 30, 2010 the Company received a general release from part of the investors, and issued them warrants to purchase 105,583 shares of its common stock.

q. On August 6, 2008, the Company sold 1,391,304 shares of the Company's common stock and warrants to purchase 695,652 shares of common stock at an exercise price of $1.90 to two investors in consideration of $1,600 pursuant to terms of a securities purchase agreement. The placement agent received a placement fee equal to 6% of the gross purchase price of the Units (excluding any consideration that may be paid in the future upon exercise of the warrants) as well as warrants to purchase 83,478 shares of common stock at an exercise price of $1.44 per share. The warrants will be exercisable after six months from the closing date through and including August 5, 2013. Total cash issuance costs related to this placement amounted to $125.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

U.S. Dollars in thousands (except per share amounts)

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

r. On September 22, 2008, the Company sold 900,000 shares of the Company's common stock and warrants to purchase 675,000 shares of common stock to an investor in consideration for $1,035 pursuant to terms of a securities purchase agreement. The price per share of common stock was $1.15, and the exercise price of the warrants is $1.90. The warrants will be exercisable for a period of five years. As part of this transaction, the Company paid a transaction fee to the finders equal to 6% of the actual purchase price and warrants exercisable for five years at an exercise price of $1.50 per share to purchase 54,000 of the Company's shares of common stock. Total cash issuance costs related to this placement amounted to $62.

s. From November 2008 through January 2009, the Company entered into a securities purchase agreement with investors, pursuant to which the Company sold 1,746,575 shares of its common stock at a price of $0.40 per share, for an aggregate purchase price of $699, and issued warrants to purchase up to an additional 1,746,575 shares of common stock with an exercise price of $1.00 per share. The warrants will be exercisable after six months from the closing date and will expire after five years. Pursuant to the agreement, the investors have the option, by notice to the Company no later than 10 business days following the release of an official announcement by the Company that it is initiating its first human clinical trials, to purchase an additional 931,507 shares of common stock at a purchase price of $0.75 per share, for an aggregate purchase price of $699, and receive therewith warrants to purchase up to an additional 931,507 shares of common stock with an exercise price of $1.50 per share.

   The issuance costs include $39 in cash and warrants exercisable for five years at an exercise price of $1.00 per share to purchase 96,579 of the Company's shares of common stock.

t. On January 20, 2009, the Company sold 216,818 shares of its common stock and warrants to purchase 216,818 shares of common stock to investors in consideration for $95 pursuant to terms of a securities purchase agreement. The price per share of common stock is $0.44, and the exercise price of the warrants is $1.00 per share. The warrants will be exercisable after six months from the closing date and will expire after five years. Pursuant to the agreement, the investors have the option, by notice to the Company no later than 10 business days following the release of an official announcement by the Company that it is initiating its first human clinical trials, to purchase an additional 127,200 shares of common stock at a purchase price of $0.75 per share, for an aggregate purchase price of $95, and receive therewith warrants to purchase up to an additional 127,200 shares of common stock with an exercise price of $1.50 per share (the "January 20 Option"). The January 20 Option is exercisable within six months from the closing date. As part of this transaction, the Company paid a transaction fee to finders in an amount of $5 in cash and issued them warrants exercisable for two years at an exercise price of $1.00 per share to purchase 12,273 shares of the Company's common stock.

u. On January 29, 2009, the Company entered into a subscription agreement with certain investors, pursuant to which the Company sold to such investors 969,826 units, each unit consisting of one share of common stock and a warrant to purchase one of the Company's share of common stock ("Unit"). The purchase price per Unit was $1.16 and the aggregate purchase price for the said Units was approximately $1,125. The warrants are exercisable 181 days following the issuance thereof for a period of five years thereafter at an exercise price of $1.90 per share. The Company paid a transaction fee to finders in an amount of $90 in cash and issued them warrants exercisable after six months for five years at an exercise price of $1.90 per share to purchase 80,983 shares of the Company's common stock.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

v. On May 5, 2009, the Company entered into securities purchase agreements with two investors pursuant to which the Company sold 888,406 shares of its common stock and warrants to purchase 488,623 shares of common stock in consideration for $1,333. The exercise price of the warrants is $1.96 per share and they will be exercisable for a period of five years commencing six months following the issuance thereof.

The Company paid a transaction fee to finders in an amount of $104 in cash and issued them warrants exercisable after si months for five years at an exercise price of $1.875 per share to purchase 53,304 shares of the Company's common stock.

w. On July 7, 2009, the Company announced that the first patient has been enrolled in a Phase I clinical trial of its PLX-PAD product. Upon the occurrence of such event, certain investors had an option from prior agreements from November 2008 through January 2009 to purchase additional shares and warrants. Accordingly, certain investors purchased in July 2009, 1,058,708 shares of common stock at a purchase price of $0.75 per share, for an aggregate purchase price of $794, and warrants to purchase up to an additional 1,058,708 shares of common stock with an exercise price of $1.50 per share. The warrants are exercisable for a period of 4 years and six months commencing six months following the issuance.

x. On October 12, 2009, certain institutional investors purchased 2,702,822 shares of the Company's common stock and warrants to purchase 1,081,129 shares of common stock. The price per share of common stock was $1.12, and the exercise price of the warrants was $1.60 per share. The warrants will be exercisable for a period of five years commencing six months following the issuance thereof. The gross proceeds received from this offering were approximately $3,027. Total cash costs related to this placement amounted to $242.

y. On April 27, 2010, the Company closed a private placement pursuant to which it sold to certain investors 2,393,329 shares of common stock and warrants to purchase 717,999 shares of common stock and 717,999 shares of common stock, at exercise prices per share of $1.25 (the "$1.25 Warrants") and $1.40 (the "$1.40 Warrants"), respectively. The price per share of common stock was $1.12. The aggregate gross proceeds from the sale of the common stock and the warrants were $2,681. The warrants are exercisable six months following the issuance thereof, for a period of two and a half years and five years thereafter for the $1.25 Warrants and the $1.40 Warrants, respectively.

The Company paid a transaction fee to finders in an amount of $54 in cash and issued them warrants exercisable at an exercis price of $1.12 per share to purchase 146,144 shares of the Company's common stock.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

z. The following table summarizes the issuance of shares of common stock to the Company's investor relations consultants as compensation for their services since July 1, 2007.

Period of service	Number of shares issued	Fair market value of the shares issued at the issuance date	Expenses in the statements of operations for the Year ended June 30,		
			2008	2009	2010
July – December 2007	10,000	$ 149	$ 149	$ -	$ -
February – July 2008	7,500	18	18	-	-
March - September 2008	3,500	8	6	2	-
April – June 2008	50,000	102	102	-	-
July 2008 – June 2009	16,129	10	-	10	-
July –September 2008	40,000	46	-	46	-
October 2008	750	1	-	1	-
October 2008	20,000	12	-	12	-
December 2008 – November 2009	50,000	24	-	14	10
February – July 2009	9,510	12	-	12	-
February – April 2009	30,000	32	-	32	-
April 2009	3,500	4	-	4	-
July 2009	1,929	3	-	-	3
Total	**242,818**	**$ 421**	**$ 275**	**$ 133**	**$ 13**

The issuance of shares to the consultants was in some cases in addition to cash compensation the consultants were entitled to.

Since July 1, 2010, the Company didn't issue shares to its investors relations consultants.

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

aa. Options, warrants, restricted stock and restricted stock units to employees, directors and consultants:

The Company has approved two incentive option plans from 2003 and from 2005 (the "2003 Plan" and the "2005 Plan", and collectively, the "Plans"). Under these Plans, options, restricted stock and restricted stock units (the "Awards") may be granted to the Company's officers, directors, employees and consultants.

Each option granted under the 2005 Plan, as it was amended and restated on January 21, 2009, is exercisable through the expiration date of the 2005 Plan, which is December 31, 2018, unless stated otherwise. The Awards vest over two years from the date of grant, as follows: 25% vests six months after the date of grant, and the remaining Awards vest monthly, in equal instalments over 18 months unless other vesting schedules are specified. Any Awards that are cancelled or forfeited before expiration become available for future grants.

As of September 30, 2010, the number of shares of common stock authorized for issuance under the 2005 Plan amounted to 5,894,354. 551,492 shares are still available for future grant under the 2005 Plan as of June 30, 2010. Under the 2003 Plan 20,500 options are authorized for issuance, and 12,870 options are still available for future grant.

a. Options to employees and directors:

The Company accounted for its options to employees and directors under the fair value method in accordance with ASC 718. A summary of the Company's share option activity for options granted to employees and directors under the Plans is as follows:

	Three months ended September 30, 2010			
	Number	Weighted Average Exercise Price	Weighted Average Remaining Contractual Terms (in years)	Aggregate Intrinsic Value Price
Options outstanding at beginning of period	2,351,919	$ 3.73		
Options forfeited	(5,548)	1.31		
Options outstanding at end of the period	2,346,371	$ 3.74	6.50	$ 537
Options exercisable at the end of the period	2,294,842	$ 3.81	6.47	$ 493
Options vested and expected to vest	2,345,169	$ 3.74	6.50	$ 535

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

aa. Options, warrants, restricted stock and restricted stock units to employees, directors and consultants (cont.):

a. Options to employees and directors (cont.):

Intrinsic value of exercisable options (the difference between the Company's closing stock price on the last trading day in the period and the exercise price, multiplied by the number of in-the-money options) represents the amount that would have been received by the employees and directors option holders had all option holders exercised their options on September 30, 2010. This amount changes based on the fair market value of the Company's common stock.

Compensation expenses related to options granted to employees and directors were recorded as follows:

	Three months ended September 30,		Period from inception through September 30,
	2010	2009	2010
Research and development expenses	$ 4	$ 32	$ 2,584
General and administrative expenses	2	72	5,538
	$ 6	$ 104	$ 8,122

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

aa. Options, warrants, restricted stock and restricted stock units to employees, directors and consultants (cont.):

b. Options and warrants to non-employees:

A summary of the Company's activity related to options and warrants to consultants is as follows:

	Three months ended September 30, 2010			
	Number	Weighted Average Exercise Price	Weighted Average Remaining Contractual Terms (in years)	Aggregate Intrinsic Value Price
Options and warrants outstanding at beginning of period	389,750	$ 3.97		
Options and warrants granted				
Options and warrants forfeited	(25,000)	$ 2.5		
Options and warrants outstanding at end of the period	364,750	$ 4.07	6.15	$ 164
Options and warrants exercisable at the end of the period	326,426	$ 4.54	5.84	$ 107
Options and warrants vested and expected to vest	364,750	$ 4.07	6.15	$ 164

Compensation expenses related to options and warrants granted to consultants were recorded as follows:

	Three months ended September 30,		Period from inception through September 30,
	2010	2009	2010
Research and development expenses	$ 10	$ 31	$ 1,616
General and administrative expenses	1	42	802
	$ 11	$ 73	$ 2,418

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

aa. Options, warrants, restricted stock and restricted stock units to employees, directors and consultants (cont.):

c. Restricted stock and restricted stock units to employees and directors:

On August 12, 2010, the Company's Compensation Committee approved a grant of total 270,000 restricted shares to two of the Company's officers as a bonus. The shares will become fully vested upon meeting a certain milestone.

The following table summarizes the activities for unvested restricted stock units and restricted stock granted to employees and directors for the three months ended September 30, 2010:

	Number
Unvested at the beginning of period	1,356,665
Granted	270,000
Forfeited	(21,021)
Vested	(242,260)
Unvested at the end of the period	1,363,384
Expected to vest after September 30, 2010	1,334,806

Compensation expenses related to restricted stock and restricted stock units granted to employees and directors were recorded as follows:

	Three months ended September 30,		Period from inception through September 30,
	2010	2009	2010
Research and development expenses	$ 135	$ 120	$ 967
General and administrative expenses	233	178	1,400
	$ 368	$ 298	$ 2,367

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

aa. Options, warrants, restricted stock and restricted stock units to employees, directors and consultants (cont.):

d. Restricted stock and restricted stock units to consultants:

The following table summarizes the activities for unvested restricted stock units and restricted stock granted to consultants for the three months ended September 30, 2010:

	Number
Unvested at the beginning of period	73,261
Granted	76,106
Forfeited	-
Vested	(58,858)
Unvested at the end of the period	90,509
Expected to vest after September 30, 2010	90,509

Compensation expenses related to restricted stock and restricted stock units granted to consultants were recorded as follows:

	Three months ended September 30,		Period from inception through September 30,
	2010	2009	2010
Research and development expenses	$ 24	$ 17	$ 116
General and administrative expenses	53	-	103
	$ 77	$ 17	$ 219

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 3: - SHARE CAPITAL AND STOCK OPTIONS (CONT.)

bb. Summary of warrants and options:

A summary of all the warrants and options outstanding as of September 30, 2010 is presented in this table:

Warrants / Options	Exercise Price per Share	Options and Warrants for Common Stock	Options and Warrants Exercisable	Weighted Average Remaining Contractual Terms (in years)
Warrants:	$1.00	2,072,245	2,072,245	3.15
	$1.12	146,144	146,144	1.95
	$1.25 – 1.28	817,999	100,000	2.25
	$1.40 - $ 1.50	1,914,185	1,196,186	4.05
	$1.60	1,081,129	1,081,129	4.53
	$1.80 - $ 2.00	3,140,112	3,140,112	3.21
	$2.50	81,898	81,898	1.72
	$4.40	3,750	3,750	0.05
	$5.00	2,394,585	2,394,585	1.74
Total warrants		**11,652,047**	**10,216,049**	
Options:	$0.00	90,000	52,508	8.79
	$0.62	581,115	530,211	7.91
	$1.04	90,006	88,549	7.45
	$2.97	20,000	20,000	7.61
	$3.50	1,020,761	1,020,761	5.78
	$3.72 - $ 3.80	36,116	36,116	5.53
	$4.00	42,500	42,500	6.05
	$4.38 - $ 4.40	480,407	480,407	6.57
	$6.80	36,250	36,250	7.12
	$8.20	48,547	48,547	5.90
	$20.00	146,669	146,669	5.57
Total options		**2,592,371**	**2,502,518**	
Total warrants and options		**14,244,418**	**12,718,567**	

This summary does not include 748,959 shares of restricted stock and 704,934 RSUs that are not vested as of September 30, 2010.

PLURISTEM THERAPEUTICS INC. AND ITS SUBSIDIARY
(A Development Stage Company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
U.S. Dollars in thousands (except per share amounts)

NOTE 4: - SUBSEQUENT EVENTS

On October 11, 2010 and on October 12, 2010, the Company entered into securities purchase agreements with certain investors, pursuant to which the Company agreed to sell to such investors 4,375,000 shares ("Shares") of the common stock at a price of $1.20 per share and warrants to purchase 2,625,000 shares of common stock (the "Warrants"), at an exercise price per share of $1.80. No separate consideration was paid for the Warrants. The aggregate net proceeds from the sale of the Shares and the Warrants is approximately $5,009. The closing was on October 18, 2010. The Warrants have a term of four years and are exercisable starting six months following the issuance thereof.

In connection with the purchase agreements, the Company agreed to file a resale registration statement with the Securities and Exchange Commission covering the Shares and the shares of common stock issuable upon the exercise of the Warrants within 60 days from closing.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Forward - Looking Statements

This quarterly report on Form 10-Q contains certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and Federal securities laws, and is subject to the safe-harbor created by such Act and laws. Forward-looking statements may include statements regarding our goals, beliefs, strategies, objectives, plans, including product and technology developments, future financial conditions, results or projections or current expectations. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "expect," "plan," "anticipate," "believe," "estimate," "predict," "potential" or "continue," the negative of such terms, or other comparable terminology. These statements are subject to known and unknown risks, uncertainties, assumptions and other factors that may cause actual results to be materially different from those contemplated by the forward-looking statements. Such forward-looking statements appear in this Item 2 – "Management's Discussion and Analysis of Financial Condition and Results of Operations," and include, but are not limited to, statements regarding the following: the expected development and potential benefits from our products in treating various medical conditions, finishing our Phase I clinical trials, the safety and efficacy of our PLX-PAD product as well as the extent to which it is tolerated, our expectations regarding our short and long-term capital requirements, our plans to raise additional funding, including non-dilutive funding, our outlook for the coming months and information with respect to any other plans and strategies for our business. Our business and operations are subject to substantial risks, which increase the uncertainty inherent in the forward-looking statements contained in this report. Except as required by law, we undertake no obligation to release publicly the result of any revision to these forward-looking statements that may be made to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. Further information on potential factors that could affect our business is described under the heading "Risk Factors" in Part I, Item 1A of our Annual Report on Form 10-K for the fiscal year ended June 30, 2010. Readers are also urged to carefully review and consider the various disclosures we have made in that report.

Our financial statements are stated in thousands United States Dollars (U.S.$) and are prepared in accordance with United States Generally Accepted Accounting Principles.

In this quarterly report, unless otherwise specified, all dollar amounts are expressed in United States dollars.

As used in this quarterly report, the terms "we", "us", "our", the "company" and "Pluristem" mean Pluristem Therapeutics Inc. and our wholly owned subsidiary, Pluristem Ltd., unless otherwise indicated or as otherwise required by the context.

Overview

We are a bio-therapeutics company dedicated to the commercialization of non-personalized (allogeneic) cell therapy products for the treatment of several severe degenerative, ischemic and autoimmune disorders. We are developing a pipeline of products, stored ready-to-use, that are derived from human placenta, a non-controversial, non-embryonic, adult stromal cell source. The placental adherent stromal cells (ASCs) are grown in the Company's proprietary PluriX™ three-dimensional bioreactor, which imitates the natural microstructure of the body.

We are currently focusing on clinical indication that the route of administration is intramuscular, which means that the cells are administrated locally to the muscle and not systemically. This route of administration may be applicable for several different indications, such as: peripheral artery disease (PAD), critical limb ischemia (CLI), intermittent claudication, neuropathic pain, wound healing and orthopedic injuries. In addition we reported pre-clinical studies utilizing our proprietary PLX during the systemic administration in treating for multiple sclerosis, ischemic stroke, and inflammatory bowel disease.

Our first product in development, PLX-PAD, is intended to improve the quality of life of millions of people suffering from PAD. Phase I clinical trials for PLX-PAD are now in progress in Germany and the US. The Phase I study is designed to evaluate the safety of using PLX-PAD in patients with CLI, the end stage of PAD.

Following receipt of Food and Drug Administration (FDA) and European authority approvals, we commenced enrollment of patients for our Phase I clinical trials of PLX-PAD in June 2009 in Germany and in September 2009 in the US. A total of 15 patients were enrolled in the trial in Germany. The last patient was dosed in this trial in April 2010, representing the complete patient enrollment in that country. In the US trial, which is performed at three sites, a total of up to 12 adults with the disease will be included.

On September 14, 2010 we announced interim results from our Phase I clinical trials in both the U.S. and Germany utilizing our PLX-PAD product. The 3 month clinical follow-up data include 21 patients, representing 77% of the patients required to complete the Phase I trials. The interim results suggest that PLX-PAD is potentially safe and well tolerated.

Both trials have currently met their primary safety endpoints. Further, the administration of PLX-PAD cells did not induce an immune response in any of the patients dosed, demonstrating that injection of PLX-PAD cells is well tolerated. In addition, the Phase I trials were designed to evaluate certain efficacy parameters, and the interim results suggest that the use of our PLX-PAD product was effective according to such parameters. Such efficacy parameters do not include all parameters required under applicable regulations to determine that our PLX-PAD product is effective, which will be the subject of the next stages of the clinical trials process that we plan to conduct.

We have not generated revenues since our inception. Historically, we have relied on private placement issuances and public offerings of equity, as well as on governmental grants, to fund our operations.

We do not expect to generate revenues from sales of products in the next 12 months, and therefore it is likely that we will need to raise additional working capital to fund our ongoing operations and growth. Cash used for operations will be affected by numerous known and unknown risks and uncertainties including, but not limited to, our ability to successfully develop and commercialize our products and the degree to which competitive products are introduced to the market. Our products will likely not be ready for sale for at least three years, if at all. We believe that the funds we have, which include net proceeds of approximately $5,009,000 from a private offering that we closed on October 18, 2010, together with an approved R&D grant from the Israeli Office of Chief Scientist (the OCS), will be sufficient for operating until at least the end of calendar year of 2011. As long as our cash flows from operations remain insufficient to fund operations, we will continue depleting our financial resources and seeking additional capital through equity financing and governmental grants. If we raise additional funds through the issuance of equity, the percentage ownership of the company held by existing stockholders will be reduced and those stockholders may experience significant dilution. In addition, new securities may contain rights, preferences or privileges that are senior to those of our common stock.

Our independent registered public accounting firm's report to our financial reports for the fiscal year ended June 30, 2010, stated that there was a substantial doubt that we will be able to continue as a going concern. There can be no assurance that acceptable financing to fund our ongoing operations can be obtained on suitable terms, if at all. If we are unable to obtain the financing necessary to support our operations, we may need to take measures to reduce our operating costs, or, if such measures will not be sufficient, we may be unable to continue as a going concern. In that event, we may be forced to cease operations and our stockholders could lose their entire investment in our company.

RESULTS OF OPERATIONS –THREE MONTHS ENDED SEPTEMBER 30, 2010 COMPARED TO THREE MONTHS ENDED SEPTEMBER 30, 2009.

We have not generated any revenues, and we have negative cash flow from operations of $23,826,000 and have accumulated a deficit of $41,794,000 since our inception in May 2001. This negative cash flow is mostly attributable to research and development, clinical program and general and administrative expenses. We estimate our net operating cash expenses in the next 12 months will be approximately $7,000,000.

Research and Development

Research and development expenses, net of participation of the OCS, for the three months ended September 30, 2010 increased by 15% from $867,000 for the three months ended September 30, 2009 to $998,000. The increase is attributed to salaries and benefits expenses as a result of hiring 11 new employees to support our clinical trials activity since September 2009.

General and Administrative

General and administrative expenses for the three months ended September 30, 2010 decreased slightly by 2% from $770,000 for the three months ended September 30, 2009 to $756,000.

Financial Income, net

Financial income increased from $20,000 for the three months ended September 30, 2009 to $65,000 for the three months ended September 30, 2010 due to exchange rate adjustments.

Net Loss

Net loss for the three months ended September 30, 2010 was $1,689,000, as compared to net loss of $1,617,000 for the three months ended September 30, 2009. Net loss per share for the three months ended September 30, 2010 was $0.08, as compared to $0.11 for the three months ended September 30, 2009. The net loss per share decreased as a result of the increase in the weighted average number of our shares following issuances of additional shares since September 30, 2009.

Liquidity and Capital Resources

As of September 30, 2010, total current assets were $2,113,000 and total current liabilities were $1,230,000. On September 30, 2010, we had a working capital surplus of $883,000 and an accumulated deficit of $41,794,000. We finance our operations and plan to continue doing so with issuances of securities and with funds from grants from the OCS.

Cash and cash equivalents as of September 30, 2010 amounted to $1,127,000. This is a decrease of $456,000 from the $1,583,000 reported as of June 30, 2010. Cash balances decreased in the three months ended September 30, 2010 for the reasons presented below.

Operating activities used cash of $688,000 in the three months ended September 30, 2010. Cash used by operating activities in the three months ended September 30, 2010 primarily consisted of payments of salaries to our employees, and payments of fees to our consultants, subcontractors and professional services providers including costs of the clinical trials, less research and development grants by the OCS.

Investing activities provided cash of $4,000 in the three months ended September 30, 2010. The investing activities consisted primarily of repayments of short-term deposits, offset by investments in equipment for our R&D facilities and construction of a new research lab.

Financing activities generated cash of $228,000 during the three months ended September 30, 2010 substantially all of such amount is attributable to the April 2010 offerings.

On October 11, 2010 and on October 12, 2010, we entered into securities purchase agreements with certain investors, pursuant to which we sold to such investors 4,375,000 shares (Shares) of our Common stock (Common Stock) at a price of $1.20 per share and warrants to purchase 2,625,000 shares of common Stock (collectively, Warrants), at an exercise price per share of $1.80. No separate consideration was paid for the Warrants. The aggregate gross proceeds from the sale of the Shares and the Warrants was approximately $5,250,000, which, less placement agent fees and other related expenses, resulted in net proceeds of approximately $5,009,000. The closing was on October 18, 2010. The Warrants have a term of four years and are exercisable starting six months following the issuance thereof.

Leader Underwriters (1993) Ltd. which acted as lead placement agent in Israel, and Rodman & Renshaw, LLC, which acted as U.S. placement agent, received cash compensation of $203,233 and warrants to purchase 119,950 shares of Common Stock, on the same terms as the Warrants.

We believe that the funds we have, together with the approved R&D grant from the OCS, will be sufficient for operating until at least the end of calendar year of 2011.

Our independent registered public accounting firm's report to our financial reports for the fiscal year ended June 30, 2010, states that there is a substantial doubt that we will be able to continue as a going concern. Our management believes that we will need to raise additional funds before we have any cash flow from operations. We are continually looking for sources of funding, including non-diluting sources such as the OCS grants. We have an effective shelf registration statement which we have used in recent public offerings we made and may continue to use in the future to raise additional funds.

Off Balance Sheet Arrangements

We have no off balance sheet arrangements.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures - We maintain a system of disclosure controls and procedures that are designed for the purposes of ensuring that information required to be disclosed in our SEC reports is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer (CEO) and our Chief Financial Officer (CFO), as appropriate to allow timely decisions regarding required disclosures.

As of the end of the period covered by this report, we carried out an evaluation, under the supervision and with the participation of our CEO and our CFO, of the effectiveness of our disclosure controls and procedures as defined in Rule 13a-15(e) of the Securities Exchange Act of 1934, as amended. Based on that evaluation, our CEO and CFO concluded that our disclosure controls and procedures are effective.

Changes in Internal Control Over Financial Reporting - There has been no change in our internal control over financial reporting during the first quarter of fiscal 2011 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II - OTHER INFORMATION

Item 6. Exhibits.

31.1* Rule 13a-14(a) Certification of Chief Executive Officer.

31.2* Rule 13a-14(a) Certification of Chief Financial Officer.

32.1** Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350.

32.2** Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350.

* Filed herewith.

** Furnished herewith.

SIGNATURES

In accordance with the requirements of the Exchange Act, the registrant caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

PLURISTEM THERAPEUTICS INC.

By: /s/ Zami Aberman
Zami Aberman, Chief Executive Officer
(Principal Executive Officer)
Date: November 8 , 2010

By: /s/ Yaky Yanay
Yaky Yanay, Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)
Date: November 8, 2010

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As filed with the Securities and Exchange Commission on November 29, 2010
Registration No. 333-

SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

Form S-3
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933
PLURISTEM THERAPEUTICS INC.
(Exact name of registrant as specified in its charter)

Nevada	**98-0351734**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification Number)*
MATAM Advanced Technology Park, Building No. 20 Haifa 31905 Israel Tel: 011 972 74 710 7171 *(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)*	**Nevada Agency And Transfer Company 50 West Liberty Street Suite 880 Reno, Nevada, 89501** *(Name, address, including zip code, and telephone number, including area code, of agent for service)*

Copy to:

Edwin L. Miller Jr., Esq.
Zysman, Aharoni, Gayer and Sullivan & Worcester LLP
One Post Office Square
Boston, Massachusetts 02110
Telephone: (617) 338-2800
Fax: (617) 338-2880

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

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, check the following box. ☐

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. ☒

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) 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 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. ☐

If this form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box ☐

If this form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. ☐

Large accelerated filer ☐	Accelerated filer ☐	Non-accelerated filer ☐ (Do not check if a smaller reporting company)	Smaller reporting company ☒

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price Per Share (2)	Proposed Maximum Aggregate Offering Price (2)	Amount of Registration Fee
Common Stock	4,375,000	$ 1.38	6,037,500	$ 430.47
Common Stock	2,776,049 (3)	$ 1.38	3,830,947.6	$ 273.15
Total	7,151,049			$ 703.62

(1) Pursuant to Rule 416 under the Securities Act of 1933, as amended, in addition to the number of shares of common stock listed above, there are being registered hereby an additional indeterminate number of shares of common stock as may become issuable to the Selling Shareholders (as defined herein) as a result of stock splits, stock dividends and similar transactions, and, in any such event, the number of shares registered hereby shall be automatically increased to cover the additional shares.

(2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) under the Securities Act of 1933, as amended, on the basis of the average of the high and low prices of the registrant's common stock on the Nasdaq Capital Market on November 23, 2010.

(3) Represents shares of common stock being registered for resale by certain Selling Shareholders which are issuable upon exercise of certain Warrants (as defined herein) pursuant to agreements between the registrant and those Selling Shareholders.

The registrant hereby amends this registration statement on such 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 of 1933, as amended, or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the 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.

PROSPECTUS

Subject to Completion, Dated November 29, 2010

PLURISTEM THERAPEUTICS INC.

Resale of 7,151,049 Shares of Common Stock

This prospectus relates to the resale from time to time of up to 7,151,049 shares of common stock, par value $0.00001, or the Shares, that have been issued or are issuable to the selling shareholders, or, the Selling Shareholders, identified under the heading "Selling Shareholders" in this prospectus, as follows:

- 4,375,000 Shares issued to certain Selling Shareholders, or the Issued Shares; and
- An aggregate 2,776,049 Shares issuable upon exercise of warrants, or the Warrants issued to the Selling Shareholders, or the Warrant Shares.

The Selling Shareholders may sell the Issued Shares and the Warrant Shares from time to time on the Nasdaq Capital Market or any exchange on which the stock of our company may be listed in the future at the prevailing market price or in negotiated transactions or in any other manner specified under "Plan of Distribution" in this prospectus.

We are not selling any Shares in this offering and therefore will not receive any proceeds from the resale of Shares pursuant to this offering. We received proceeds from the sale of the Issued Shares as part of a private placement that closed on October 18, 2010, as further described in this prospectus. We may also receive proceeds from the Warrants held by some of the Selling Shareholders, of which the underlying Warrant Shares are being registered hereby, if the Selling Shareholders exercise those Warrants through a cash exercise.

Our Shares are traded on the Nasdaq Capital Market under the symbol "PSTI".

Before buying Shares you should carefully read this prospectus, any applicable prospectus supplement and the documents incorporated by reference herein and therein, including the "Risk Factors" section of our Annual Report on Form 10-K for the fiscal year ended June 30, 2010.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

This prospectus is dated_____, 2010.

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You should rely only on the information contained or incorporated by reference in this prospectus. We have not, and, to our knowledge, the Selling Shareholders have not, authorized anyone to provide you with additional or different information. If anyone provides you with additional, different or inconsistent information, you should not rely on it. You should not assume that the information we have included in this prospectus is accurate as of any date other than the date of this prospectus or that any information we have incorporated by reference is accurate as of any date other than the date of the document incorporated by reference. Our business, financial condition, results of operations and prospects may have changed since that date.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or the SEC, utilizing a “shelf” registration process. Under this shelf process, the Selling Shareholders may offer up to a total of 7,151,049 Shares, from time to time, in one or more offerings in any manner described under the section in this prospectus entitled “Plan of Distribution.”

References in this prospectus to “we,” “us,” “the company,” “our” or “Pluristem” mean Pluristem Therapeutics Inc.

SPECIAL NOTE REGARDING FORWARD-LOOKING INFORMATION

This prospectus, any prospectus supplement and the documents we incorporate by reference in this prospectus contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and other Federal securities laws. All statements, other than statements of historical fact, that we include in this prospectus, any prospectus supplement and in the documents we incorporate by reference in this prospectus, may be deemed forward-looking statements for purposes of the Securities Act of 1933, as amended, or the Securities Act, and the Securities Exchange Act of 1934, as amended, or the Exchange Act. We use the words “anticipate,” “believe,” “estimate,” “expect,” “intend,” “may,” “plan,” “project,” “will,” “would” and similar expressions to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We cannot guarantee that we actually will achieve the plans, intentions or expectations disclosed in our forward-looking statements and, accordingly, you should not place undue reliance on our forward-looking statements. There are a number of important factors that could cause actual results or events to differ materially from the forward-looking statements that we make, including the factors included in the documents we incorporate by reference in this prospectus. You should read these factors and the other cautionary statements made in the documents we incorporate by reference as being applicable to all related forward-looking statements wherever they appear in this prospectus, any prospectus supplement and any document incorporated by reference. We caution you that, except as otherwise required by law, we do not undertake any obligation to update forward-looking statements we make.

OUR COMPANY

We are a bio-therapeutics company dedicated to the commercialization of non-personalized (allogeneic) cell therapy products for the treatment of several severe degenerative, ischemic and autoimmune disorders. We are developing a pipeline of products, stored ready-to-use, that are derived from human placenta, a non-controversial, non-embryonic, adult stromal cell source. The placental adherent stromal cells are grown in the company's proprietary PluriX™ three-dimensional bioreactor, which imitates the natural microstructure of the body.

Pluristem's first product in development, PLX-PAD, is intended to improve the quality of life of people suffering from peripheral artery disease, or PAD. Phase I clinical trials for PLX-PAD are in progress in Germany and the U.S. The Phase I study is designed to evaluate the safety of using PLX-PAD in patients with critical limb ischemia, the final stage of PAD.

USE OF PROCEEDS

We will not receive any proceeds from the sale of the Shares by the Selling Shareholders. However, if the Warrants are exercised in full through a cash exercise, we would realize proceeds before expenses in the amount of approximately $4,933,760. The net proceeds of the exercise of the Warrants will be used for working capital and general corporate purposes.

SELLING SHAREHOLDERS

The Issued Shares being offered by the Selling Shareholders were acquired in a private placement that closed on October 18, 2010, or the Private Placement. The Warrant Shares being offered by the Selling Shareholders are issuable upon exercise of Warrants purchased in the Private Placement by certain Selling Shareholders and Warrants granted to certain Selling Shareholders as compensation for their services in facilitating the Private Placement. For additional information regarding the issuance of the Issued Shares and the Warrants, see “The Private Placements Pursuant To Which We Issued Securities to the Selling Shareholders”. We are registering the Shares in order to permit the Selling Shareholders to offer the same for resale from time to time.

The table below lists the Selling Shareholders and other information regarding the beneficial ownership of the Shares and by each of the Selling Shareholders.

Under the terms of the Warrants, a Selling Shareholder may not exercise the Warrants to the extent such exercise would cause such Selling Shareholder, together with its affiliates, to beneficially own a number of shares of common stock which would exceed 4.999% of our then outstanding Shares following such conversion, excluding for purposes of such determination Warrant Shares which have not been exercised. The Share number in the table below do not reflect this limitation. The Selling Shareholders may sell all, some or none of their Shares in this offering. See "Plan of Distribution."

To our knowledge, and except as indicated in the footnotes to the table below, none of the Selling Shareholders has held any position or office or had any other material relationship with us or any of our predecessors or affiliates within the past three years other than as a result of the ownership of our securities.

Except as indicated in the footnotes to the table below, to our knowledge, none of the Selling Shareholders is a director, officer, consultant or holder of 10% or more of our shares, or a broker-dealer or an affiliate of a broker-dealer. The information provided in the table below with respect to each Selling Shareholder has been obtained from that Selling Shareholder.

Name	Number of Shares of Common Stock Beneficially Owned Prior to the Offering (a)	Percentage of Common Stock Outstanding	Number of Issued Shares Being Offered Hereby (b)	Number of Warrant Shares Being Offered Hereby (c)	Number of Shares of Common Stock to be Owned After Completion of the Offering (d)	Percentage of Common Stock Outstanding After Completion of the Offering
A.S. Bartman Investments Ltd. (1)	200,000	*	125,000	75,000	-	*
Alpha Capital Anstalt (2)	333,334	1.3%	208,334	125,000	-	*
Mr. Avinoam Wagner (3)	90,343	*	27,778	16,667	45,898	*
Cranshire Capital, L.P. (4)	664,493	2.5%	197,917	118,750	347,826	1.3%
DAFNA Lifescience Ltd. (5)	115,194	*	52,084	31,250	31,860	*
DAFNA Lifescience Market Neutral Ltd. (6)	83,520	*	37,500	22,500	23,520	*
DAFNA Lifescience Select Ltd. (7)	268,548	1.0%	118,750	71,250	78,548	*
Mr. Dani Younisian (8)	144,000	*	50,000	30,000	64,000	*
Mr. David Nissim (9)	256,000(9)	*	40,000	24,000	80,000	*
Mr. Eliezer Chen (10)	252,858	*	125,000	75,000	52,858	*
Fidelity Venture Capital (11)	160,000	*	100,000	60,000	-	*
Freestone Advantage Partners, L.P. (12)	16,666	*	10,416	6,250	-	*
Gaya D Ltd. (13)	112,000	*	70,000	42,000	-	*

Name	Number of Shares of Common Stock Beneficially Owned Prior to the Offering (a)	Percentage of Common Stock Outstanding	Number of Issued Shares Being Offered Hereby (b)	Number of Warrant Shares Being Offered Hereby (c)	Number of Shares of Common Stock to be Owned After Completion of the Offering (d)	Percentage of Common Stock Outstanding After Completion of the Offering
GCA Strategic Investment Fund Limited (14)	636,624	2.4%	208,334	125,000	303,290	1.1%
Industries and Investments of Sefen Limited (15)	376,000	1.4%	235,000	141,000	-	*
JGB Capital LP (16)	26,667	*	16,667	10,000	-	*
JGB Capital Offshore Ltd. (17)	40,000	*	25,000	15,000	-	*
Leader & Co. Finance (2001) Ltd. (18)	1,020,602	3.8%	591,553	429,049	-	*
Mahog 1 (19)	36,800	*	23,000	13,800	-	*
Mahog 5 (20)	147,200	*	92,000	55,200	-	*
Migdal Brazil and Latin America Mutual Fund (21)	24,000	*	15,000	9,000	-	*
Migdal BRIC Mutual Fund (22)	8,000	*	5,000	3,000	-	*
Migdal Dikla China Mutual Fund (23)	96,000	*	60,000	36,000	-	*
Migdal Dikla Turkey Mutual Fund (24)	11,200	*	7,000	4,200	-	*
Migdal Dikla US Mutual Fund (25)	20,800	*	13,000	7,800	-	*
Migdal Hamizrach Harachok Mutual Fund (26)	20,800	*	13,000	7,800	-	*
Migdal Hodu Mutual Fund (27)	128,000	*	80,000	48,000	-	*
Provident Fund of the Hebrew University of Jerusalem Ltd. (28)	320,000	1.2%	125,000	75,000	120,000	*
Mr. Rafi Silman (29)	128,000	*	40,000	24,000	64,000	*
SAMC LLC (30)	66,667	*	41,667	25,000	-	*

Name	Number of Shares of Common Stock Beneficially Owned Prior to the Offering (a)	Percentage of Common Stock Outstanding	Number of Issued Shares Being Offered Hereby (b)	Number of Warrant Shares Being Offered Hereby (c)	Number of Shares of Common Stock to be Owned After Completion of the Offering (d)	Percentage of Common Stock Outstanding After Completion of the Offering
T.P. Technology Pharmaceuticals Ltd. (31)	800,000	3.0%	500,000	300,000	-	*
Mrs. Tania Spivak and Mr. Eldad Spivak	65,600	*	41,000	24,600	-	*
Mr. Todd Patkin (32)	557,817	2.1%	100,000	60,000	397,817	1.5%
Mr. Trevor Colley	160,000	*	100,000	60,000	-	*
Mr. Yehoshua Abramovich (33)	144,000	*	40,000	24,000	80,000	*
Yelin Lapidot Gemel (B) (34)	38,400	*	24,000	14,400	-	*
Yelin Lapidot Hishtalmut (B) (35)	43,200	*	27,000	16,200	-	*
Yelin Lapidot Keren Hishtalmut (36)	144,000	*	90,000	54,000	-	*
Yelin Lapidot Kupa Merkazit Le'pitzuim (37)	24,000	*	15,000	9,000	-	*
Yelin Lapidot Kupat Gemel (38)	179,200	*	112,000	67,200	-	*
Yelin Lapidot Kupat Gemel Menayatit (39)	96,000	*	60,000	36,000	-	*
Mr. Yoel Yogev	67,200	*	42,000	25,200	-	*

Name	Number of Shares of Common Stock Beneficially Owned Prior to the Offering (a)	Percentage of Common Stock Outstanding	Number of Issued Shares Being Offered Hereby (b)	Number of Warrant Shares Being Offered Hereby (c)	Number of Shares of Common Stock to be Owned After Completion of the Offering (d)	Percentage of Common Stock Outstanding After Completion of the Offering
Yokor Investments Ltd. (40)	112,000	*	70,000	42,000	-	*
Mr. Yom Tov Sidi (41)	1,645,687	6.0%	400,000	240,000	1,005,687	3.7%
R. Weissberg Consulting and Management Ltd. (42)	7,200	*	-	7,200	-	*
Yoav Consultants Ltd. (43)	11,400	*	-	11,400	-	*
Rodman & Renshaw, LLC (44)	171,955	*	-	45,833	126,122	*
Mr. Ronen Ulman (45)	7,902	*	-	6,250	1,652	*
ROS Financial Consulting (46)	10,000	*	-	6,250	3,750	*

* indicates percentages that are below 1%.

(a) Except as otherwise noted, and pursuant to applicable community property laws, each person or entity set forth in the table has sole voting and investment power with respect to all shares of common stock listed as owned by that person or entity. Shares beneficially owned include shares that may be acquired pursuant to options and warrants exercisable within 60 days of the date of this prospectus. Although not exercisable until on or after April 18, 2011, for clarity, the Warrant Shares are included in this column. The information in this table is based on 26,429,278 shares of common stock outstanding as of November 24, 2010.

(b) The number of shares in the column "Number of Issued Shares Being Offered Hereby" represents all of the Issued Shares that each Selling Shareholder may offer under this prospectus. We do not know how long the Selling Shareholders will hold the Issued Shares before selling them or how many Issued Shares they will sell, and we currently have no agreements, arrangements or understandings with any of the Selling Shareholders regarding the sale of any of the Issued Shares.

(c) The number of shares in the column "Number of Warrant Shares Being Offered Hereby" represents all of the Warrant Shares that each Selling Shareholder may offer under this prospectus. We do not know if the Selling Shareholders will exercise the Warrants, or any part thereof, and in case they do, how long the Selling Shareholders will hold the Warrant Shares before selling them or how many Warrant Shares they will sell, and we currently have no agreements, arrangements or understandings with any of the Selling Shareholders regarding the exercise of the Warrants or the sale of any of the Warrant Shares.

(d) Assumes the sale of all the Shares. The Selling Shareholders may, however, sell all, some or no portion of the Shares.

(1) Mr. Eythan Salman has voting and/or investment control over A.S. Bartman Investments Ltd.

(2) Mr. Konrad Ackerman has voting and/or investment control over Alpha Capital Anstalt.

(3) In addition to his Shares, Mr. Avinoam Wagner owns 28,686 shares of common stock and warrants to purchase 17,212 shares of common stock which may be exercised within 60 days.

(4) In addition to its Shares, Cranshire Capital, L.P. owns warrants to purchase 347,826 shares of common stock which may be exercised within 60 days. Mr. Mitchell P. Kopin has voting and/or investment control over securities held by Cranshire Capital, L.P.

(5) In addition to its Shares, DAFNA Lifescience Ltd. owns warrants to purchase 31,860 shares of common stock

which may be exercised within 60 days. Mr. Nathan Fischel has voting and/or investment control over DAFNA Lifescience Ltd.

(6) In addition to its Shares, DAFNA Lifescience Market Neutral Ltd. owns warrants to purchase 23,520 shares of common stock which may be exercised within 60 days. Mr. Nathan Fischel has voting and/or investment control over DAFNA Lifescience Market Neutral Ltd.

(7) In addition to its Shares, DAFNA Lifescience Select Ltd. owns warrants to purchase 78,548 shares of common stock which may be exercised within 60 days. Mr. Nathan Fischel has voting and/or investment control over DAFNA Lifescience Select Ltd.

(8) In addition to his Shares, Mr. Dani Younisian owns 40,000 shares of common stock and warrants to purchase 24,000 shares of common stock which may be exercised within 60 days.

(9) In addition to the Shares, Mr. David Nissim owns directly 50,000 Shares of common stock and warrants to purchase 30,000 Shares of common stock which may be exercised within 60 days. Mr. Nissim is deemed to beneficially own additional 112,000 Shares owned by Gaya D Ltd. (see note (13) below) which are not included next to Mr. Nissim's name in the table.

(10) In addition to its Shares, Mr. Eliezer Chen owns 33,036 shares of common stock and warrants to purchase 19,822 shares of common stock which may be exercised within 60 days.

(11) Mr. Dron Azmon and Mr. Alon Azmon beneficially own the securities held by Fidelity Venture Capital and have investment control and/or voting power over said securities.

(12) Mr. Mitchell P. Kopin has voting and/or investment control over the securities held by Freestone Advantage Partners, L.P.

(13) Mr. David Nissim has voting and/or investment control over Gaya D Ltd. See also note (9) above.

(14) In addition to its Shares, GCA Strategic Investment Fund Limited owns warrants to purchase 303,290 shares of common stock which may be exercised within 60 days. Mr. Lewis N. Lester Sr. has voting and/or investment control over said securities.

(15) Industries and Investments of Sefen Limited is a public company listed on the Tel-Aviv Stock Exchange. Mr. Moran Sternleib has voting and/or investment control over this Selling Shareholder.

(16) Mr. Brett Cohen has voting and/or investment control over JGB Capital LP.

(17) Mr. Brett Cohen has voting and/or investment control over JGB Capital Offshore Ltd.

(18) Mr. Amir Vardi has voting and/or investment control over the securities held by Leader & Co. Finance (2001) Ltd. Leader & Co. Finance (2001) Ltd. acted as our Israeli placement agent in the Private Placement and received cash compensation as well as a Warrant to purchase up to 74,117 of our shares of common stock. Leader & Co. Finance (2001) Ltd. purchased such Warrant for its own account and without a view of distribution thereof, or distribution of the Warrant Shares underlying such Warrant. Leader & Co. Finance (2001) Ltd. is not in the business of buying and selling securities, directly or through a broker; however, in connection with the issuance of the 74,117 Warrants mentioned above it may be deemed an underwriter.

(19) Mahog 1 is a mutual fund incorporated under the laws of the State of Israel. The investment committee of Yelin Lapidot Portfolio Management has voting and/or investment control over the securities held by Mahog 1.

(20) Mahog 5 is a mutual fund incorporated under the laws of the State of Israel. The investment committee of Yelin Lapidot Portfolio Management has voting and/or investment control over the securities held by Mahog 5.

(21) Migdal Brazil and Latin America Mutual Fund is a mutual fund incorporated under the laws of the State of Israel. The investment committee of Migdal Mutual Funds Ltd. has voting and/or investment control over the securities held by Migdal Brazil and Latin America Mutual Fund.

(22) Migdal BRIC Mutual Fund is a mutual fund incorporated under the laws of the State of Israel. The investment committee of Migdal Mutual Funds Ltd. has voting and/or investment control over the securities held by this Selling Shareholder.

(23) Migdal Dikla China Mutual Fund is a mutual fund incorporated under the laws of the State of Israel. The investment committee of Migdal Mutual Funds Ltd. has voting and/or investment control over the securities held by this Selling Shareholder.

(24) Migdal Dikla Turkey Mutual Fund is a mutual fund incorporated under the laws of the State of Israel. The investment committee of Migdal Mutual Funds Ltd. has voting and/or investment control over the securities held by this Selling Shareholder.

(25) Migdal Dikla US Mutual Fund is a mutual fund incorporated under the laws of the State of Israel. The investment committee of Migdal Mutual Funds Ltd. has voting and/or investment control over the securities held by this Selling Shareholder.

(26) Migdal Hamizrach Harachok Mutual Fund is a mutual fund incorporated under the laws of the State of Israel. The investment committee of Migdal Mutual Funds Ltd. has voting and/or investment control over the securities held by this Selling Shareholder.

(27) Migdal Hodu Mutual Fund is a mutual fund incorporated under the laws of the State of Israel. The investment committee of Migdal Mutual Funds Ltd. has voting and/or investment control over the securities held by this Selling Shareholder.

(28) In addition to its Shares, Provident Fund of the Hebrew University of Jerusalem Ltd. owns 75,000 shares of common stock and warrants to purchase 45,000 shares of common stock which may be exercised within 60 days. Provident Fund of the Hebrew University of Jerusalem Ltd. is a provident fund incorporated under the laws of the State of Israel. The investment committee of Provident Fund of the Hebrew University of Jerusalem Ltd. has voting and/or investment control over the securities held by Provident Fund of the Hebrew University of Jerusalem Ltd.

(29) In addition to its Shares, Mr. Rafi Silman owns 40,000 shares of common stock and warrants to purchase 24,000 shares of common stock which may be exercised within 60 days.

(30) Mr. Brett Cohen has voting and/or investment control over SAMC LLC.

(31) Mr. Gil Rosenfeld and Ms. Yael Sitruk Rosenfeld have voting and/or investment control over T.P. Technology Pharmaceuticals Ltd.

(32) In addition to his Shares, Mr. Todd Patkin owns 397,817 shares of common stock.

(33) In addition to his Shares, Mr. Yehoshua Abramovich owns 50,000 shares of common stock and warrants to purchase 30,000 shares of common stock which may be exercised within 60 days.

(34) Yelin Lapidot Gemel(B) is a provident fund incorporated under the laws of the State of Israel. The investment committee of Yelin Lapidot Provident Funds Management Ltd. has voting and/or investment control over the over the securities held by Yelin Lapidot Gemel.

(35) Yelin Lapidot Hishtalmut(B) is a provident fund incorporated under the laws of the State of Israel. The investment committee of Yelin Lapidot Provident Funds Management Ltd. has voting and/or investment control over the securities held by this Selling Shareholder.

(36) Yelin Lapidot Keren Hishtalmut is a provident fund incorporated under the laws of the State of Israel. The investment committee of Yelin Lapidot Provident Funds Management Ltd. has voting and/or investment control over the securities held by this Selling Shareholder.

(37) Yelin Lapidot Kupa Merkazit Le'pitzuim is a provident fund incorporated under the laws of the State of Israel. The investment committee of Yelin Lapidot Provident Funds Management Ltd. has voting and/or investment control over the securities held by this Selling Shareholder.

(38) Yelin Lapidot Kupat Gemel is a provident fund incorporated under the laws of the State of Israel. The investment committee of Yelin Lapidot Provident Funds Management Ltd. has voting and/or investment control over the securities held by this Selling Shareholder.

(39) Yelin Lapidot Kupat Gemel Menayatit is a provident fund incorporated under the laws of the State of Israel. The investment committee of Yelin Lapidot Provident Funds Management Ltd. has voting and/or investment control over the securities held by this Selling Shareholder.

(40) Mr. Yohanan Korman has voting and/or investment control over Yokor Investments Ltd.

(41) In addition to his Shares, Mr. Yom Tov Sidi owns 400,000 shares of common stock and warrants to purchase 605,687 shares of common stock which may be exercised within 60 days.

(42) Mr. Ron Weissberg has voting and/or investment control over R. Weissberg Consulting and Management Ltd. R. Weissberg Consulting and Management Ltd. received the Warrant as compensation for its services facilitating the Private Placement, and received such Warrant for its own account and without a view of distribution thereof, or of the Warrant Shares underlying such Warrant. R. Weissberg Consulting is not in the business of buying and selling securities, directly or through a broker; however, it may be deemed to be an underwriter with respect to the Shares included next to its name in the table.

(43) Mr. Yohanan Korman has voting and/or investment control over Yoav Consultants Ltd. Yoav Consultants Ltd. received the Warrant as compensation for its services facilitating the Private Placement, and received such Warrant for its own account and without a view of distribution thereof, or of the Warrant Shares underlying such Warrant. Yoav Consultants Ltd. is not in the business of buying and selling securities, directly or through a broker, however, it may be deemed to be an underwriter with respect to the Shares included next to its name in the table.

(44) In addition to its Shares, Rodman & Renshaw, LLC owns warrants to purchase 126,122 shares of common stock which may be exercised within 60 days. Mr. David Horin has voting and/or investment control over the Shares included next to Rodman & Renshaw, LLC's name in the table. Rodman & Renshaw, LLC acted as our U.S. placement agent in the Private Placement and received cash compensation as well as a Warrant to purchase up to 45,833 of our shares of common stock. Rodman & Renshaw, LLC received such Warrant for its own account and not with a view to distribution thereof or the Warrant Shares underlying such Warrant in contravention of the Securities Act. In addition, Rodman & Renshaw, LLC served as placement agent in two other private placements that we conducted in the last three years. Rodman & Renshaw is a registered broker-dealer, and therefore is an underwriter of the Shares set forth in the table.

(45) In addition to his Shares, Mr. Ronen Ulman owns warrants to purchase 1,652 shares of common stock which may be exercised within 60 days. Mr. Ulman received the Warrant as compensation for his services facilitating the Private Placement. Mr. Ronen Ulman received such Warrant for his own account and without a view of distribution thereof, or of the Warrant Shares underlying such Warrant. Mr. Ulman is not in the business of buying and selling securities, directly or through a broker, however, he may be deemed to be an underwriter with respect to the Shares included next to his name in the table.

(46) In addition to its Shares, ROS Financial Consulting Ltd. owns warrants to purchase 3,750 shares of common stock which may be exercised within 60 days. Ms. Ruhama Salman has voting and/or investment control over ROS Financial Consulting Ltd. this Selling Shareholder received the Warrant as compensation for its services facilitating the Private Placement, and received such Warrant for its own account and without a view of distribution thereof, or of the Warrant Shares underlying such Warrant. ROS Financial Consulting Ltd. is not in the business of buying and selling securities, directly or through a broker, however, it may be deemed to be an underwriter with respect to the Shares included next to its name in the table.

THE PRIVATE PLACEMENTS PURSUANT TO WHICH WE ISSUED SECURITIES TO THE SELLING SHAREHOLDERS

On October 18, 2010, we consummated securities purchase transactions with certain investors, pursuant to which we agreed to sell to such investors the 4,375,000 Issued Shares at a price of $1.20 per share. We also issued to such investors, for no additional consideration, Warrants to purchase up to 2,624,999 shares of common stock, at an exercise price per share of $1.80. Such Warrants are exercisable for a term of three and a half years, commencing on April 18, 2011. In addition, we issued to two placement agents and other entities who provided services to facilitate the Private Placement Warrants to purchase up to 151,050 shares of common stock, as partial remuneration for their services. The exercise price of 105,217 of the 151,050 Warrants is $1.20 per share of common stock, and the remaining Warrants have an exercise price of $1.80 per share of common stock. 74,117 of the 151,050 Warrants are exercisable for three years commencing on April 18, 2011, and the remaining 76,933 are exercisable for a period of two to five years commenting on October 18, 2010.

The aggregate net proceeds from the sale of the Issued Shares and the Warrants was approximately $5,009,000.

DESCRIPTION OF COMMON STOCK

For a description of the material terms and provisions of our common stock and any other class of our securities which qualifies or limits our common stock, please see the description of our capital stock in our Registration Statement on Form 8-A, as amended, filed with the SEC on December 10, 2007, which is incorporated by reference in this prospectus.

PLAN OF DISTRIBUTION

The Selling Shareholders, which as used herein include donees, pledgees, transferees or other successors-in-interest selling Shares or interests in Shares received after the date of this prospectus from a Selling Shareholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their Shares or interests in Shares on any stock exchange, market or trading facility on which the Shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The Selling Shareholders may use any one or more of the following methods when disposing of Shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the Shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- broker-dealers may agree with the Selling Shareholders to sell a specified number of such Shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The Selling Shareholders may, from time to time, pledge or grant a security interest in some or all of the Shares owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the Shares, from time to time, under this prospectus, or under an amendment or supplement to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending the list of Selling Shareholders to include the pledgee, transferee or other successors in interest as Selling Shareholders under this prospectus. The Selling Shareholders also may transfer the Shares in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of our Shares or interests therein, the Selling Shareholders may loan or pledge the Shares to broker-dealers that in turn may sell these securities. The Selling Shareholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of Shares offered by this prospectus, which Shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the Selling Shareholders from the sale of the Shares offered by them will be the purchase price of the Shares less discounts or commissions, if any. Each of the Selling Shareholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of Shares to be made directly or through agents. We will not receive any of the proceeds from this offering, except for proceeds from cash exercise of Warrants.

The Selling Shareholders also may resell all or a portion of the Shares in open market transactions in reliance upon Rule 144 under the Securities Act, provided that they meet the criteria and conform to the requirements of that rule.

The Selling Shareholders and any underwriters, broker-dealers or agents that participate in the sale of the Shares or interests therein may be "underwriters" within the meaning of Section 2(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the Shares may be underwriting discounts and commissions under the Securities Act. Selling Shareholders who are "underwriters" within the meaning of Section 2(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act. Rodman and Renshaw, LLC, one of the Selling Shareholders, is a registered broker-dealer and is therefore an "underwriter" within the meaning of the Securities Act.

To the extent required, the Shares to be sold, the names of the Selling Shareholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

In order to comply with the securities laws of some states, if applicable, the Shares may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the Shares may not be sold unless they have been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

We have advised the Selling Shareholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of Shares in the market and to the activities of the Selling Shareholders and their affiliates. In addition, to the extent applicable, we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the Selling Shareholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The Selling Shareholders may indemnify any broker-dealer that participates in transactions involving the sale of the Shares against certain liabilities, including liabilities arising under the Securities Act.

VALIDITY OF THE SECURITIES

The validity of the securities offered hereby has been passed upon for us by Zysman, Aharoni, Gayer and Sullivan & Worcester, LLP, Boston, Massachusetts.

EXPERTS

The financial statements of Pluristem Therapeutics Inc. appearing in Pluristem Therapeutics Inc.'s Annual Report (Form 10-K) for the fiscal year ended June 30, 2010, have been audited by Kost Forer Gabbay & Kasierer, a member of Ernst & Young Global, independent registered public accounting firm, as set forth in their report thereon (which contains an explanatory paragraph describing conditions that raise substantial doubt about the Company's to continue as a going concern as described in Note 1.b. to the consolidated financial statements), included therein, and incorporated herein by reference. Such financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements and other documents with the SEC. You may read and copy any document we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference room.

The SEC also maintains a website, the address of which is www.sec.gov. That site also contains our annual, quarterly and current reports, proxy statements, information statements and other information.

We have filed this prospectus with the SEC as part of a registration statement on Form S-3 under the Securities Act. This prospectus does not contain all of the information set forth in the registration statement because some parts of the registration statement are omitted in accordance with the rules and regulations of the SEC. You can obtain a copy of the registration statement from the SEC at the address listed above or from the SEC's website.

We also maintain a website at www.pluristem.com, through which you can access our SEC filings. The information set forth on our website and on the SEC's website is not part of this prospectus.

INCORPORATION OF DOCUMENTS BY REFERENCE

We are "incorporating by reference" certain documents we file with the SEC, which means that we can disclose important information to you by referring you to those documents. The information in the documents incorporated by reference is considered to be part of this prospectus. Statements contained in documents that we file with the SEC and that are incorporated by reference in this prospectus will automatically update and supersede information contained in this prospectus, including information in previously filed documents or reports that have been incorporated by reference in this prospectus, to the extent the new information differs from or is inconsistent with the old information.

We have filed or may file the following documents with the SEC. These documents are incorporated herein by reference as of their respective dates of filing:

(1) Our Annual Report on Form 10-K for the fiscal year ended June 30, 2010;

(2) Our Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2010;

(3) Our Current Report on Form 8-K, as filed with the SEC on October 12, 2010;

(4) Our Current Report on Form 8-K, as filed with the SEC on October 18, 2010; and

(5) The description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on December 10, 2007, as amended.

All documents filed by us pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act (1) after the date of the filing of this registration statement and prior to its effectiveness and (2) until all of the Shares have been sold or the offering is otherwise terminated, except in each case for information contained in any such filing where we indicate that such information is being furnished and is not to be considered "filed" under the Exchange Act, will be deemed to be incorporated by reference in this prospectus and the accompanying prospectus supplement and to be a part hereof from the date of filing of such documents.

We will provide a copy of the documents we incorporate by reference, at no cost, to any person who receives this prospectus. To request a copy of any or all of these documents, you should write or telephone us at MATAM Advanced Technology Park, Building No. 20, Haifa, 31905, Israel, Attention: Yaky Yanay, (+972) 74 710 7171.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the various expenses to be incurred in connection with the registration of the resale of securities being registered hereby, all of which will be borne by the registrant. The Selling Shareholders will incur additional expenses if they sell any Shares. All amounts shown are estimates except the SEC registration fee.

SEC registration fee	$ 703.62
Legal fees and expenses	10,000
Accounting fees and expenses	5,000
Miscellaneous	2,000
Total expenses	$17,703.62

Item 15. Indemnification of Directors and Officers.

Under the Nevada Revised Statutes, director immunity from liability to a company or its shareholders for monetary liabilities applies automatically unless it is specifically limited by a company's Articles of Incorporation. Our Articles of Incorporation provide that we shall indemnify our officers, directors, employees and agents to the fullest extent permitted by the laws of the State of Nevada. In addition, our Articles of Incorporation provide that a director or officer of the company shall not be personally liable to the company or our stockholders for damages for breach of fiduciary duty as a director or officer, but such statement shall not eliminate or limit the liability of a director or officer for (i) acts or omissions which involve intentional misconduct, fraud or a knowing violation of the law or (ii) the unlawful payment of dividends. Any repeal or modification of the provisions described in this paragraph by stockholders of the company will be prospective only, and will not adversely affect any limitation on the personal liability of a director or officer of the company for acts or omissions prior to such repeal or modification.

Further, our Articles of Incorporation provide that every person who was or is a party to, or is threatened to be made a party to, or is involved in any such action, suit or proceeding, whether civil, criminal, administrative or investigative, by the reason of the fact that he or she, or a person with whom he or she is a legal representative, is or was a director of the company, or who is serving at the request of the company as a director or officer of another company, or is a representative in a partnership, joint venture, trust or other enterprise, shall be indemnified and held harmless to the fullest extent legally permissible under the laws of the State of Nevada from time to time against all expenses, liability and loss (including attorneys' fees, judgments, fines, and amounts paid or to be paid in a settlement) reasonably incurred or suffered by him or her in connection therewith. Such right of indemnification will be a contract right which may be enforced in any manner desired by such person. The expenses of officers and directors incurred in defending a civil suit or proceeding must be paid by the company as incurred and in advance of the final disposition of the action, suit, or proceeding, under receipt of an undertaking by or on behalf of the director or officer to repay the amount if it is ultimately determined by a court of competent jurisdiction that he or she is not entitled to be indemnified by the company. Such right of indemnification will not be exclusive of any other right of such directors, officers or representatives may have or hereafter acquire, and, without limiting the generality of such statement, they shall be entitled to their respective rights of indemnification under any bylaw, agreement, vote of stockholders, provision of law, or otherwise, as well as their rights under this paragraph above.

We have obtained directors and officers insurance for the benefit of its directors and its officers.

Item 16. Exhibits and Financial Statement Schedules.

The exhibits to this Registration Statement are listed in the Exhibit Index following the signature page of this Registration Statement.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in this registration statement. Notwithstanding the foregoing, any increase or decrease in the volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in this registration statement or any material change to such information in this registration statement;

provided, however, that paragraphs (1)(i), (1)(ii) and (1)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or 15(d) of the Exchange Act that are incorporated by reference in the registration statement or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii) or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(5) That, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(6) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Haifa, State of Israel, on November 29, 2010.

PLURISTEM
THERAPEUTICS INC.

By:/s/ Zami Aberman
Zami Aberman
Chief Executive Officer

SIGNATURES AND POWER OF ATTORNEY

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities indicated as of the date indicated below; and each of the undersigned officers and directors of Pluristem Therapeutics Inc. hereby constitute and appoint Zami Aberman and Yaky Yanay, and each of them singly, with full power of substitution, our true and lawful attorneys-in-fact and agents to take any actions to enable Pluristem Therapeutics Inc. to comply with the Securities Act, and any rules, regulations and requirements of the SEC, in connection with this registration statement, including the power and authority to sign for us in our names in the capacities indicated below any and all amendments to this registration statement and any other registration statement filed pursuant to the provisions of Rule 462 under the Securities Act.

Signature	Title	Date
/s/ Zami Aberman Zami Aberman	Chief Executive Officer, Director and Chairman of the Board (Principal Executive Officer)	November 29, 2010
/s/ Yaky Yanay Yaky Yanay	Chief Financial Officer (Principal Financial and Accounting Officer)	November 29, 2010
_____ Mark Germain	Director	
/s/ Israel Ben-Yoram Israel Ben-Yoram	Director	November 29, 2010
_____ Isaac Braun	Director	
/s/ Hava Meretzki Hava Meretzki	Director	November 29, 2010
/s/ Nahum Rosman Nahum Rosman	Director	November 29, 2010
_____ Shai Pines	Director	
/s / Doron Shorrer Doron Shorrer	Director	November 25 2010

EXHIBIT INDEX

Exhibit No.	Description
4.1	Form of Common Stock Purchase Warrant dated October 18, 2010 issued by the Company (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, dated October 12, 2010)
4.2	Form of Regulation D Securities Purchase Agreement dated October 11, 2010 for Common Stock and Warrants of the Company (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, dated October 12, 2010)
4.3	Form of Regulation S Securities Purchase Agreement dated October 12, 2010 for Common Stock and Warrants of the Company (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, dated October 12, 2010)
5.1*	Opinion of Zysman Aharoni, Gayer and Sullivan & Worcester LLP
23.1	Consent of Zysman Aharoni, Gayer Sullivan & Worcester LLP, (included in Exhibit 5.1)
23.2*	Consent of Kost Forer Gabbay & Kasierer, a member of Ernst & Young Global.
24.1*	Power of Attorney (See page II-4 of this Registration Statement).

* Filed herewith.