

# OPEXA THERAPEUTICS, INC.

## **FORM SB-2/A** (Securities Registration: Small Business)

Filed 12/20/07

|             |                                                         |
|-------------|---------------------------------------------------------|
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| Telephone   | (281) 272-9331                                          |
| CIK         | 0001069308                                              |
| Symbol      | OPXA                                                    |
| SIC Code    | 2834 - Pharmaceutical Preparations                      |
| Industry    | Biotechnology & Drugs                                   |
| Sector      | Healthcare                                              |
| Fiscal Year | 12/31                                                   |

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

Amendment No. 1  
to

FORM SB-2  
REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

**Opexa Therapeutics, Inc.**  
(Name of small business issuer on its charter)

**Texas**  
(State or Other Jurisdiction of Incorporation  
or Organization)

**2834**  
(Primary Standard Industrial  
Classification Code Number)

**76-0333165**  
(I.R.S. Employer  
Identification Number)

**2635 North Crescent Ridge Drive  
The Woodlands, Texas 77381  
(281) 272-9331**  
(Address and telephone number  
of principal executive offices  
and principal place of business)

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**New York, NY**  
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**Approximate date of commencement of proposed sale to the public:** As soon as practicable after the effective date of this registration statement.

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, 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 post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering: ☐ \_\_\_\_\_

If delivery of the prospectus is expected to be made pursuant to Rule 434, check the following box: ☐ \_\_\_\_\_

**CALCULATION OF REGISTRATION FEE:**

| <b>Title of each class of securities to be registered</b>                        | <b>Number of<br/>shares being<br/>registered</b> | <b>Price per<br/>security</b> |     | <b>Proposed<br/>Maximum<br/>Aggregate<br/>Offering<br/>Price</b> | <b>Amount of<br/>Registration<br/>Fee</b> |
|----------------------------------------------------------------------------------|--------------------------------------------------|-------------------------------|-----|------------------------------------------------------------------|-------------------------------------------|
| Common Stock, \$0.50 par value per share                                         | 5,175,000                                        | \$ 3.79                       | (1) | \$ 19,613,250                                                    | \$ 602.13                                 |
| Series E Warrant to purchase Common Stock (3)                                    | 5,175,000                                        | \$ 0.15                       | (2) | \$ 776,250                                                       | \$ 23.83                                  |
| Common stock underlying the Series E Warrants                                    | 5,175,000                                        | \$ 3.79                       | (2) | \$ 19,613,250                                                    | \$ 602.13                                 |
| Underwriter Purchase Options (3)                                                 | 450,000                                          |                               |     | \$ 100                                                           | \$ -                                      |
| Common Stock underlying the Underwriter Purchase Option                          | 450,000                                          | \$ 4.55                       | (2) | \$ 2,047,500                                                     | \$ 62.86                                  |
| Series E Warrants Underlying the Underwriter Purchase Option (3)                 | 450,000                                          | \$ 0.18                       | (2) | \$ 81,000                                                        | \$ 2.49                                   |
| Common Stock underlying the Series E Warrants in the Underwriter Purchase Option | 450,000                                          | \$ 3.79                       | (2) | \$ 1,705,500                                                     | \$ 52.36                                  |

(1) Estimated solely for the purpose of calculating the amount of registration fee pursuant to Rule 457(c) under the Securities Act of 1933, as amended.

(2) Calculated pursuant to Rule 457(g) based on an estimate of the proposed maximum aggregate offering price.

(3) Pursuant to Rule 416 under the Securities Act, there are also being registered hereby such additional indeterminate number of shares as may become issuable pursuant to the antidilution provisions of the warrants.

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.

Preliminary Prospectus

Subject to Completion, Dated December \_\_\_\_\_, 2007



OPEXA THERAPEUTICS

Opexa Therapeutics, Inc.

**4,500,000 Shares of Common Stock and  
4,500,000 Warrants to Purchase One Share of Common Stock**

We are offering 4,500,000 shares of common stock and warrants to purchase 4,500,000 shares of common stock at an exercise price of \$\_\_\_\_\_(125% of the offering price of one share of common stock). This prospectus also covers the offer and sale of 4,500,000 shares of our common stock issuable upon exercise of the warrants.

Our common stock is currently traded on the NASDAQ Capital Market under the symbol "OPXA." We expect that the warrants will be listed for trading on the NASDAQ Capital Market under the symbol "OPXAW". On December 18, 2007, the reported closing price per share of our common stock was \$2.40.

**Investing in our common stock involves a high degree of risk. You should read carefully this entire prospectus, including the section captioned "Risk Factors" beginning on page 3, before making a decision to purchase our stock.**

| Public Offering Price                      | Per Share of<br>Common<br>Stock | Per Series E<br>Warrant | Total |
|--------------------------------------------|---------------------------------|-------------------------|-------|
| Public Offering Price                      | \$                              | \$ 0.150                | \$    |
| Underwriting discounts and commissions (1) | \$                              | \$ 0.015                | \$    |
| Proceeds, before expenses to Opexa         | \$                              | \$ 0.135                | \$    |

(1) 10% of the gross proceeds to be paid to the underwriters. We have also agreed to pay the underwriter a non-accountable expense allowance equal to 1% of the gross proceeds of the offering.

We have granted the underwriters a 45-day option to purchase up to 675,000 shares of common stock and 675,000 warrants to cover over-allotments, if any.

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

MDB CAPITAL GROUP LLC

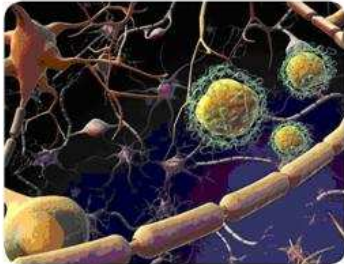
The date of this prospectus is \_\_\_\_\_, 2007



## OPEXA THERAPEUTICS

Opexa Therapeutics is a cellular therapy company developing patient-specific therapies to treat several major illnesses, including multiple sclerosis, rheumatoid arthritis and diabetes. Our lead product is Tovaxin® for the treatment of multiple sclerosis. Tovaxin is currently in a fully-enrolled, 150 patient Phase IIb study in the United States and results are expected in the fourth quarter of 2008.

### Tovaxin® Treatment Approach to Multiple Sclerosis



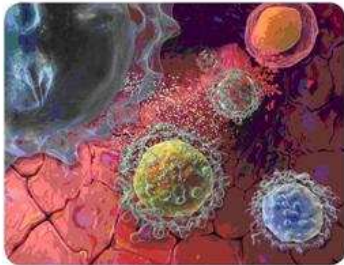
#### MS is a disease of the central nervous system

- Multiple Sclerosis (MS) is a chronic, progressive, degenerative disorder that affects nerve fibers in the brain and spinal cord.
- The myelin sheath (a fatty substance consisting of proteins) surrounds and insulates nerve fibers and facilitates the conduction of nerve impulse transmissions.
- In MS, myelin reactive T-cells (depicted as the green cell) become activated in the peripheral circulation and infiltrate the central nervous system.



#### MS results in demyelinated nerve fibers

- In MS, activated myelin reactive T-cells induce a cascade of events leading to an attack on the myelin sheath.
- These events also induce a pro-inflammatory immune response.
- Eventually nerve fiber axons are damaged causing impulse transmissions to diffuse into the tissue resulting in the accumulation of disability.



#### Tovaxin® treatment approach

- Tovaxin is a patient specific T-cell vaccine that targets the root cause of MS.
- Tovaxin T-cell vaccine has a dual mechanism of action:
  - Tovaxin induces an immune response to deplete pathogenic T-cells.
  - Tovaxin rebalances the immune system by inducing a shift from an inflammatory to an anti-inflammatory state.

## TABLE OF CONTENTS

|                                                                | Page |
|----------------------------------------------------------------|------|
| Prospectus Summary                                             | 1    |
| Forward Looking Statements                                     | 10   |
| Use of Proceeds                                                | 10   |
| Price Range of Our common Stock and Dividend Policy            | 11   |
| Selected Historical Financial Data                             | 11   |
| Our Business                                                   | 19   |
| Management                                                     | 29   |
| Executive Compensation                                         | 32   |
| Security Ownership of Certain Beneficial Owners and Management | 36   |
| Certain Relationships and Related Party Transactions           | 40   |
| Description of Securities                                      | 40   |
| Underwriting                                                   | 43   |
| Legal Matters                                                  | 47   |
| Experts                                                        | 47   |
| Where You Can Find More Information                            | 47   |
| Glossary of Terms                                              | 48   |
| Index To Financial Statements F-1                              | F-1  |

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information that is different. This prospectus may only be used where it is legal to sell these shares of our common stock. The information in this prospectus may only be accurate as of the date of this prospectus.

The registration statement containing this prospectus, including the exhibits to the registration statement, provides additional information about us and the shares of our common stock covered by this prospectus. The registration statement, including the exhibits, can be read on the SEC website or at the SEC offices mentioned under the heading “Where You Can Find More Information.”

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## PROSPECTUS SUMMARY

*The following summary highlights selected information from this prospectus and does not contain all of the information that you should consider before investing in our common stock. This prospectus contains information regarding our businesses and detailed financial information. You should carefully read this entire prospectus, including the historical financial statements and related notes, before making an investment decision.*

*In this prospectus, “Opexa Therapeutics, Inc.,” the “company,” “we,” “us” or “our” refer to Opexa Therapeutics, Inc., a Texas corporation, and its subsidiaries, except where otherwise indicated or required by context.*

### Our Business

We are a biopharmaceutical company developing autologous (using one’s own cells) cellular therapies to treat several major illnesses, including multiple sclerosis (MS), rheumatoid arthritis (RA), and diabetes. These therapies are based on our proprietary T-cell and adult stem cell technologies.

Our lead product, Tovaxin®, is a T-cell based therapeutic vaccine for MS licensed from the Baylor College of Medicine, which offers a unique and personalized approach to treating the disease by inducing an immune response against the autoimmune myelin peptide-reactive T-cells (MRTCs), which are believed to be responsible for the initiation of the disease process.

We are currently conducting a fully enrolled 150 patient Phase IIb clinical trial for Tovaxin. Patients treated in a 10-subject, open-label Phase I/II dose escalation clinical trial with Tovaxin have experienced minimal side effects and the “per protocol” analysis of patients treated with Tovaxin achieved a 90% reduction ( $p=0.0039$ ) in annualized relapse rate (ARR). Annualized Relapse Rate is a defined neurological episode and is generally the primary clinical efficacy measure for MS therapies. The group treated with the mid dose ( $30-45 \times 10^6$  attenuated T-cells) achieved a 100% reduction in ARR. The Phase IIb trial is being conducted with the mid dose.

In a one-year, 8-subject extension clinical trial of relapsing remitting (RRMS) and secondary progressive (SPMS) subjects, the “per-protocol” analysis of Tovaxin therapy achieved a 92% ( $p=0.0078$ ) reduction in annualized relapse rate (ARR) in subjects who received two treatment doses of  $30-45 \times 10^6$  attenuated T-cells eight weeks apart and were monitored for an additional 44 weeks. Subjects in the extension study had previously been treated an average of approximately 5 years earlier at Baylor College of Medicine under the direction of the Tovaxin inventor Jingwu Zhang, M.D., Ph.D with an early version of the T-cell vaccine.

Some patients in the open label Phase I/II studies also appear to experience an improvement of their Kurtzke Expanded Disability Status Scale (EDSS), a scoring method used to measure the disability of MS patients. Improvements in EDSS are not frequently observed in patients following treatment with other currently licensed therapies. Although the data from our Phase I/II trials appears to be promising, the Phase IIb trial is being conducted to confirm these results.

We also hold exclusive worldwide license for the intellectual property rights and research results of an autologous T-cell vaccine for RA from the Shanghai Institutes for Biological Sciences (SIBS), Chinese Academy of Sciences of the People’s Republic of China.

Our RA T-cell vaccination (TCV) technology is conceptually similar to Tovaxin. RA is an autoimmune T-cell-mediated disease in which pathogenic T-cells trigger an inflammatory autoimmune response of the synovial joints of the wrists, shoulders, knees, ankles and feet which causes pain, stiffness, and swelling around the joints and erosion into cartilage and bone. The RA TCV technology allows the isolation of these pathogenic T-cells from synovial fluid drawn from a patient. These T-cells will be grown to therapeutic levels and attenuated by gamma irradiation in our laboratory. The attenuated T-cells will be injected subcutaneously into patients thereby inducing an immune response directed at the pathogenic T-cells in the patient’s body. This immune response regulates the level of pathogenic T-cells and potentially allows the reduction of joint swelling in RA patients. Human trials that have been conducted in China show minimal side-effects and promising efficacy measured as a reduction of joint swelling following the T-cell vaccination.

We also have an exclusive license from the University of Chicago, through its prime contractor relationship with Argonne National Laboratory, to a stem cell technology in which adult multipotent stem cells are derived from monocytes (white blood cells) obtained from the patient's own blood. We are initially pursuing indications in diabetes mellitus with our stem cell therapy and are conducting preclinical animal studies.

Our stem cell technology isolates novel multipotent stem cells derived from peripheral blood monocytes. *In vitro* experiments with monocyte-derived stem cells (MDSC) have shown their capacity to differentiate into a wide variety of cell types including pancreatic  $\beta$  cells. We have demonstrated that these pancreatic islets clusters derived from MDSCs are composed of three pancreatic cells types ( $\alpha$ ,  $\beta$  and  $\delta$ ). These islet clusters are responsive to glucose and mimic the normal pulsatile pattern observed in human islets. The importance of these stem cells is the ability to easily isolate them from an individual's circulating monocytes, expand them and administer them back into the same patient. This autologous approach provides a method to overcome any rejection issues and the need for immunosuppressant drugs, which are often associated with current islet cell transplantations. This technology may lead to the formation of an unlimited source of pancreatic islet cells suitable for an autologous cell therapy for the treatment of diabetes mellitus.

#### Our Executive Offices

Our principal executive and administrative office facility is located in The Woodlands, Texas at 2635 North Crescent Ridge Drive, The Woodlands, Texas 77381 and our telephone number is (281) 272-9331. We maintain a website at [www.opexatherapeutics.com](http://www.opexatherapeutics.com), however the information on our website is not part of this prospectus, and you should rely only on information contained in this prospectus when making a decision as to whether or not to invest in shares of our common stock.

#### THE OFFERING

|                                                               |                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Securities offered:                                           | 4,500,000 shares of our common stock;<br>4,500,000 Series E warrants to purchase a share of our common stock; and<br>4,500,000 shares of common stock issuable upon exercise of the Series E warrants.                                                                                                                                                                                        |
| Series E Warrant terms:                                       | Exercisable upon issuance and until the 5 year anniversary of the issuance, at an exercise price per share equal to \$_____ (125% of offering price). Warrants may be redeemed, in whole and not in part, at a price of \$.01 per warrant upon 30 days advance notice, if the last sales price of the common stock equals or exceeds 200% of the then exercise price for 20 consecutive days. |
| Shares of common stock to be outstanding after this offering: | 11,196,784 shares                                                                                                                                                                                                                                                                                                                                                                             |
| Warrants and options to be outstanding after this offering:   | 9,214,277 warrants and options                                                                                                                                                                                                                                                                                                                                                                |
| Common stock NASDAQ Capital Market symbol:                    | OPXA                                                                                                                                                                                                                                                                                                                                                                                          |
| Expected Warrant NASDAQ Capital Market Symbol:                | OPXAW                                                                                                                                                                                                                                                                                                                                                                                         |
| Over-allotment option:                                        | 675,000 shares and 675,000 Series E warrants (15% of the total number of shares and warrants sold to the public)                                                                                                                                                                                                                                                                              |
| Use of proceeds:                                              | We intend to use the net proceeds of this offering to conduct our clinical studies, fund research and development projects and corporate purposes, including to meet working capital needs. Pending these uses, the net proceeds will be invested in an interest-bearing money market account with a financial institution.                                                                   |

Risk factors:

See “Risk Factors” for a discussion of the factors you should carefully consider before deciding to invest in our common stock.

The number of shares of our common stock to be outstanding after this offering is based on 6,696,784 shares of common stock outstanding as of December 18, 2007, assumes no exercise of the over-allotment option, and excludes:

- 1,043,925 shares of common stock issuable upon the exercise of outstanding options issued pursuant to our current stock option plan;
- 3,670,352 shares issuable upon the exercise of outstanding warrants;
- 4,500,000 shares of common stock issuable upon the exercise of Series E warrants offered under this prospectus; and
- 900,000 shares of common stock that have been reserved for issuance upon exercise of the underwriters’ purchase option, as described in the “Underwriting” section of this prospectus.

The number of our warrants and options to be outstanding after this offering is based on 3,670,352 warrants and 1,043,925 options outstanding as of December 18, 2007 and assumes no exercise of the over-allotment option. Each warrant is exercisable for one share of common stock. The exercise prices of our outstanding warrants range from \$5.00 to \$40.00, with a weighted average exercise price of \$13.52.

## RISK FACTORS

*The shares offered hereby have not been approved or disapproved by the Security and Exchange Commission or the securities regulatory authority of any state, nor has any such regulatory body reviewed this prospectus for accuracy or completeness. The shares offered hereby are speculative, involve an unusually high degree of risk and should only be purchased by those who can afford to lose their entire investment. Therefore, prospective investors should carefully consider the following risk factors before purchasing the shares offered hereby.*

### Risks Related to Our Business

The following factors affect our business and the industry in which we operate. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known or which we currently consider immaterial may also have an adverse effect on our business. If any of the matters discussed in the following risk factors were to occur, our business, financial condition, results of operations, cash flows, or prospects could be materially adversely affected.

#### ***Our business is at an early stage of development.***

Our business is at an early stage of development. We do not have any products in late-stage clinical trials or on the market. We are still in the early stages of identifying and conducting research on potential products. Only one of our products has progressed to the stage of being studied in human clinical trials in the United States (U.S.). Our potential products will require regulatory approval prior to marketing in the United States and other countries. Obtaining such approval will require significant research and development and preclinical and clinical testing. We may not be able to develop any products, to obtain regulatory approvals, to enter clinical trials for any of our product candidates, or to commercialize any products. Our product candidates may prove to have undesirable and unintended side effects or other characteristics adversely affecting their safety, efficacy or cost-effectiveness that could prevent or limit their use. Any product using any of our technology may fail to provide the intended therapeutic benefits, or achieve therapeutic benefits equal to or better than the standard of treatment at the time of testing or production.

#### ***We have a history of operating losses and do not expect to be profitable in the near future.***

We have not generated any profits since our entry into the biotechnology business, have no source of revenues, and have incurred significant operating losses. We expect to incur additional operating losses for the foreseeable future and, as we increase our research and development activities, we expect our operating losses to increase significantly. We do not have any sources of revenues and may not have any in the foreseeable future.

#### ***We will need additional capital to conduct our operations and develop our products and our ability to obtain the necessary funding is uncertain.***

We need to obtain significant additional capital resources from sources including equity and/or debt financings, license arrangements, grants and/or collaborative research arrangements in order to develop products and continue our business. As of September 30, 2007, we had cash, cash equivalents and marketable securities of approximately \$5.8 million. Our current burn rate is approximately \$1 million per month excluding capital expenditures. We will need to raise additional capital to fund our working capital needs beyond first quarter 2008. We must rely upon third-party debt or equity funding and we can provide no assurance that we will be successful in any funding effort. The failure to raise such funds will necessitate the curtailment or ceasing of operations and impact the completion of the clinical trials.

The timing and degree of any future capital requirements will depend on many factors, including:

- the accuracy of the assumptions underlying our estimates for capital needs in 2007 and beyond;

- scientific progress in our research and development programs;
- the magnitude and scope of our research and development programs;
- our ability to establish, enforce and maintain strategic arrangements for research, development, clinical testing, manufacturing and marketing;
- our progress with preclinical development and clinical trials;
- the time and costs involved in obtaining regulatory approvals;
- the costs involved in preparing, filing, prosecuting, maintaining, defending and enforcing patent claims; and
- the number and type of product candidates that we pursue.

We do not have any committed sources of capital, although we have issued and outstanding warrants that, if exercised, would result in an equity capital raising transaction. Additional financing through strategic collaborations, public or private equity financings, capital lease transactions or other financing sources may not be available on acceptable terms, or at all. Additional equity financings could result in significant dilution to our stockholders. Further, if additional funds are obtained through arrangements with collaborative partners, these arrangements may require us to relinquish rights to some of our technologies, product candidates or products that we would otherwise seek to develop and commercialize ourselves. If sufficient capital is not available, we may be required to delay, reduce the scope of or eliminate one or more of our programs, any of which could have a material adverse effect on our financial condition or business prospects.

***We have a "going-concern qualification" in our certifying accountant's financial statement report, which may make capital raising more difficult and may require us to scale back or cease operations.***

The report of our auditors includes a going concern qualification which indicates an absence of obvious or reasonably assured sources of future funding that will be required by us to maintain ongoing operations. To date we have successfully funded Opexa by attracting additional issues of equity. We believe that our ongoing efforts will continue to successfully fund operations until positive cash flow is attained. However, there is no guarantee that our efforts will be able to attract additional necessary equity and/or debt investors. If we are unable to obtain this additional funding, we may not be able to continue operations. To date we have been able to obtain funding and meet our obligations in a reasonably timely manner. However, if in the future we are unsuccessful in attracting new sources of funding then we will be unable to continue in business.

***Clinical trials are subject to extensive regulatory requirements, very expensive, time-consuming and difficult to design and implement. Our products may fail to achieve necessary safety and efficacy endpoints during clinical trials.***

Human clinical trials are very expensive and difficult to design and implement, in part because they are subject to rigorous Food and Drug Administration (FDA) requirements, and must otherwise comply with federal, state and local requirements and policies of the medical institutions where they are conducted. The clinical trial process is also time-consuming. We estimate that clinical trials of our product candidates will take at least several years to complete. Furthermore, failure can occur at any stage of the trials, and we could encounter problems that cause us to abandon or repeat clinical trials. The commencement and completion of clinical trials may be delayed by several factors, including:

- FDA or Institutional Review Board (IRB) objection to proposed protocols;
- discussions or disagreement with FDA over the adequacy of trial design to potentially demonstrate effectiveness, and subsequent design modifications;
- unforeseen safety issues;
- determination of dosing issues and related adjustments;

- lack of effectiveness during clinical trials;
- slower than expected rates of patient recruitment;
- product quality problems (e.g., sterility or purity)
- challenges to patient monitoring and data collection during or after treatment (for example, patients' failure to return for follow-up visits); and
- failure of medical investigators to follow our clinical protocols.

In addition we or the FDA (based on its authority over clinical studies) may delay a proposed investigation or suspend clinical trials in progress at any time if it appears that the study may pose significant risks to the study participants or other serious deficiencies are identified.

***We are dependent upon our management team and a small number of employees.***

Our business strategy is dependent upon the skills and knowledge of our management team. We believe that the special knowledge of these individuals gives us a competitive advantage. If any critical employee leaves, we may be unable on a timely basis to hire suitable replacements to effectively operate our business. We also operate with a very small number of employees and thus have little or no backup capability for their activities. The loss of the services of any member of our management team or the loss of a number of other employees could have a material adverse effect on our business.

***We are dependent on contract research organizations and other contractors for clinical testing and for certain research and development activities, thus the timing and adequacy of our clinical trials and such research activities are, to a certain extent, beyond our control.***

The nature of clinical trials and our business strategy requires us to rely on contract research organizations, independent clinical investigators and other third party service providers to assist us with clinical testing and certain research and development activities. For example, our current Phase IIb clinical study of Tovaxin for MS being managed by the contract research organization PharmaNet, LLC. As a result, our success is dependent upon the success of these outside parties in performing their responsibilities. Although we believe our contractors are economically motivated to perform on their contractual obligations, we cannot directly control the adequacy and timeliness of the resources and expertise applied to these activities by our contractors. If our contractors do not perform their activities in an adequate or timely manner, the development and commercialization of our drug candidates could be delayed.

***If we fail to meet our obligations under our license agreements, we may lose our rights to key technologies on which our business depends.***

Our business depends on three licenses from third parties. These third party license agreements impose obligations on us, such as payment obligations and obligations to diligently pursue development of commercial products under the licensed patents. If a licensor believes that we have failed to meet our obligations under a license agreement, the licensor could seek to limit or terminate our license rights, which could lead to costly and time-consuming litigation and, potentially, a loss of the licensed rights. During the period of any such litigation, our ability to carry out the development and commercialization of potential products could be significantly and negatively affected. If our license rights were restricted or ultimately lost, our ability to continue our business based on the affected technology platform could be severely adversely affected.

***Our current research and manufacturing facility is not large enough to manufacture future stem cell and T-cell therapies.***

We conduct our research and development in a 10,200 square foot facility in The Woodlands, Texas, which includes an approximately 800 square foot suite of three rooms for the manufacture of stem cell and T-cell therapies through Phase III trials. Our current facility is not large enough to conduct commercial-scale manufacturing operations. We will need to expand further our manufacturing staff and facility, obtain a new facility or contract with corporate collaborators or other third parties to assist with future drug production.

In the event that we decide to establish a commercial-scale manufacturing facility, we will require substantial additional funds and will be required to hire and train significant numbers of employees and comply with applicable regulations, which are extensive. We do not have funds available for building a manufacturing facility, and we may not be able to build a manufacturing facility that both meets regulatory requirements and is sufficient for our commercial-scale manufacturing.

We may arrange with third parties for the manufacture of our future products. However, our third-party sourcing strategy may not result in a cost-effective means for manufacturing our future products. If we employ third-party manufacturers, we will not control many aspects of the manufacturing process, including compliance by these third parties with the FDA's current Good Manufacturing Practices and other regulatory requirements. We further may not be able to obtain adequate supplies from third-party manufacturers in a timely fashion for development or commercialization purposes, and commercial quantities of products may not be available from contract manufacturers at acceptable costs.

***Patents obtained by other persons may result in infringement claims against us that are costly to defend and which may limit our ability to use the disputed technologies and prevent us from pursuing research and development or commercialization of potential products.***

A number of pharmaceutical, biotechnology and other companies, universities and research institutions have filed patent applications or have been issued patents relating to cell therapy, stem cells, T-cells, and other technologies potentially relevant to or required by our expected products. We cannot predict which, if any, of such applications will issue as patents or the claims that might be allowed. We are aware that a number of companies have filed applications relating to stem cells. We are also aware of a number of patent applications and patents claiming use of stem cells and other modified cells to treat disease, disorder or injury.

If third party patents or patent applications contain claims infringed by either our licensed technology or other technology required to make and use our potential products and such claims are ultimately determined to be valid, there can be no assurance that we would be able to obtain licenses to these patents at a reasonable cost, if at all, or be able to develop or obtain alternative technology. If we are unable to obtain such licenses at a reasonable cost, we may not be able to develop some products commercially. There can be no assurance that we will not be obliged to defend ourselves in court against allegations of infringement of third party patents. Patent litigation is very expensive and could consume substantial resources and create significant uncertainties. An adverse outcome in such a suit could subject us to significant liabilities to third parties, require disputed rights to be licensed from third parties, or require us to cease using such technology.

***If we are unable to obtain future patents and other proprietary rights our operations will be significantly harmed.***

Our ability to compete effectively is dependent in part upon obtaining patent protection relating to our technologies. The patent positions of pharmaceutical and biotechnology companies, including ours, are uncertain and involve complex and evolving legal and factual questions. The coverage sought in a patent application can be denied or significantly reduced before or after the patent is issued. Consequently, we do not know whether the patent applications for our technology will result in the issuance of patents, or if any future patents will provide significant protection or commercial advantage or will be circumvented by others. Since patent applications are secret until the applications are published (usually eighteen months after the earliest effective filing date), and since publication of discoveries in the scientific or patent literature often lags behind actual discoveries, we cannot be certain that the inventors of our licensed patents were the first to make the inventions covered by the patent applications or that the licensed patent applications were the first to be filed for such inventions. There can be no assurance that patents will issue from the patent applications or, if issued, that such patents will be of commercial benefit to us, afford us adequate protection from competing products, or not be challenged or declared invalid.

*Our competition includes fully integrated biopharmaceutical and pharmaceutical companies that have significant advantages over us.*

The markets for therapeutic stem cell products, multiple sclerosis products, and rheumatoid arthritis products are highly competitive. We expect that our most significant competitors are fully integrated pharmaceutical companies and more established biotechnology companies. These companies are developing stem cell-based products and they have significantly greater capital resources and expertise in research and development, manufacturing, testing, obtaining regulatory approvals, and marketing than we currently do. Many of these potential competitors are further along in the process of product development and also operate large, company-funded research and development programs. As a result, our competitors may develop more competitive or affordable products, or achieve earlier patent protection or product commercialization than we are able to achieve. Competitive products may render any products or product candidates that we develop obsolete.

*Restrictive and extensive government regulation could slow or hinder our production of a cellular product.*

The research and development of stem cell therapies is subject to and restricted by extensive regulation by governmental authorities in the United States and other countries. The process of obtaining FDA and other necessary regulatory approvals is lengthy, expensive and uncertain. We may fail to obtain the necessary approvals to continue our research and development, which would hinder our ability to manufacture or market any future product.

*To be successful, our product candidates must be accepted by the health care community, which can be very slow to adopt or unreceptive to new technologies and products.*

Our product candidates, if approved for marketing, may not achieve market acceptance since hospitals, physicians, patients or the medical community in general may decide to not accept and utilize these products. The product candidates that we are attempting to develop represent substantial departures from established treatment methods and will compete with a number of more conventional drugs and therapies manufactured and marketed by major pharmaceutical companies. The degree of market acceptance of any of our developed products will depend on a number of factors, including:

- our establishment and demonstration to the medical community of the clinical efficacy and safety of our product candidates;
- our ability to create products that are superior to alternatives currently on the market;
- our ability to establish in the medical community the potential advantage of our treatments over alternative treatment methods; and
- reimbursement policies of government and third-party payers.

If the health care community does not accept our products for any of the foregoing reasons, or for any other reason, our business would be materially harmed.

#### **Risks Related to Our Common Stock**

*There is currently a limited market for our common stock, and any trading market that exists in our common stock may be highly illiquid and may not reflect the underlying value of the Company's net assets or business prospects.*

Although our common stock is traded on the NASDAQ Capital Market, there is currently a limited market for our common stock and there can be no assurance that an improved market will ever develop. Investors are cautioned not to rely on the possibility that an active trading market may develop.

*As our share price is volatile, we may be or become the target of securities litigation, which is costly and time-consuming to defend.*

In the past, following periods of market volatility in the price of a company's securities or the reporting of unfavorable news, security holders have often instituted class action litigation. If the market value of our common stock experiences adverse fluctuations and we become involved in this type of litigation, regardless of the outcome, we could incur substantial legal costs and our management's attention could be diverted from the operation of our business, causing our business to suffer.

*Our "blank check" preferred stock could be issued to prevent a business combination not desired by management or our current majority shareholders.*

Our articles of incorporation authorize the issuance of "blank check" preferred stock with such designations, rights and preferences as may be determined by our board of directors without shareholder approval. Our preferred stock could be utilized as a method of discouraging, delaying, or preventing a change in our control and as a method of preventing shareholders from receiving a premium for their shares in connection with a change of control.

*Future sales of our common stock in the public market could lower our stock price.*

We may sell additional shares of common stock in subsequent public or private offerings. We may also issue additional shares of common stock to finance future acquisitions. We cannot predict the size of future issuances of our common stock or the effect, if any, that future issuances and sales of shares of our common stock will have on the market price of our common stock. Sales of substantial amounts of our common stock (including shares issued in connection with an acquisition), or the perception that such sales could occur, may adversely affect prevailing market prices for our common stock.

*We presently do not intend to pay cash dividends on our common stock.*

We currently anticipate that no cash dividends will be paid on the common stock in the foreseeable future. While our dividend policy will be based on the operating results and capital needs of the business, it is anticipated that all earnings, if any, will be retained to finance the future expansion of the our business.

*There are a large number of shares underlying our warrants that may be available for future sale. Substantial sales of our common stock by our current holders or us could cause our stock price to decline and issuances by us may dilute your ownership interest in our company.*

We are unable to predict whether significant amounts of our common stock will be sold by our current holders after this offering. Any sales of substantial amounts of our common stock in the public market by our current holders or us, or the perception that these sales might occur, such as might arise from exercise of outstanding warrants, could lower the market price of our common stock. Further, if we issue additional equity securities to raise additional capital, your ownership interest in our company may be diluted and the value of your investment may be reduced. Please read "Description of Securities" for information about the number of shares that will be outstanding and that could be acquired through warrant exercise after this offering.

*There is currently no market for our Series E warrants and we do not expect a liquid market for the Series E warrants to develop.*

There is currently no market for our Series E warrants; and, although we expect to have the Series E warrants listed on the NASDAQ Capital Market, we do not expect a significant liquid market for the Series E warrants to develop. To the extent a market for the Series E warrants does develop, the price for the Series E warrants will depend, in large part, on the price of our common stock.

*If we do not maintain an effective registration statement or comply with applicable state securities laws, you may not be able to exercise the warrants.*

In order for you to be able to exercise the warrants offered hereby, the underlying shares must be covered by an effective registration statement and qualify for an exemption under the securities laws of the state in which you live. We cannot assure you that we will continue to maintain a current registration statement relating to the offer and sale of the warrants and the common stock underlying these warrants, or that an exemption from registration or qualification will be available throughout their term. This may have an adverse effect on the demand for the warrants and the prices that can be obtained from reselling them.

***The warrants may be redeemed on short notice. This may have an adverse impact on their price.***

We may redeem the warrants for \$0.01 per warrant once a share of common stock has traded at \$\_\_\_\_\_ (200% of the share public offering price) for 20 consecutive trading days. If we give notice of redemption, you will be forced to sell or exercise your warrants or accept the redemption price. The notice of redemption could come at a time when it is not advisable or possible for you to exercise the warrants. As a result, you would be unable to benefit from owning the warrants being redeemed.

#### **FORWARD LOOKING STATEMENTS**

This prospectus contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933. These statements relate to future events and/or future financial performance and involve known and unknown risks, uncertainties and other factors that may cause the actual results, levels of our activity, performance or achievements or the industry in which we operate to be materially different from any future results, levels of activity, performance or achievements expressed or implied by the forward-looking statements. These risks and other factors include those listed under “Risk Factors” and those described elsewhere in this prospectus.

In some cases, you can identify forward-looking statements by our use of terms such as “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” or the negative of these terms or other comparable terminology. These statements are only predictions. Actual events or results may differ materially. In evaluating these statements, you should specifically consider various factors, including the risks outlined under “Risk Factors.” These factors may cause our actual results to differ materially from any forward-looking statement.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, it cannot guarantee future results, levels of activity, performance, or achievements. Moreover, neither the Company nor any other person assumes responsibility for the accuracy and completeness of these forward-looking statements. We do not intend to update any of the forward-looking statements after the date of this prospectus to conform prior statements to actual results.

#### **USE OF PROCEEDS**

We expect that we will receive net proceeds of approximately \$15.2 million (or \$17.5 million if the underwriter exercises its over-allotment option in full) after deducting underwriting discounts and commissions and estimated offering expenses that we will pay, assuming no proceeds from warrants being issued and an assumed offering price of \$3.79 for each share and \$0.15 for each warrant.

We intend to use the net proceeds of our sales of common stock and the associated warrants in this offering to complete the Tovaxin Phase IIb clinical study, fund the second year open label extension study being offered to patients who complete the Phase IIb study, initiate an extension study of the Phase IIb participants and fund the advancement of our MDSC–Diabetes program into a Phase I clinical study. The proceeds should fund the company through the first quarter of 2009. Pending these uses, the net proceeds will be invested in an interest-bearing money market account with a financial institution.

## PRICE RANGE OF OUR COMMON STOCK AND DIVIDEND POLICY

Shares of our common stock are traded on the NASDAQ Capital Market under the symbol “OPXA”. Our common stock trades on a limited, sporadic and volatile basis. As of December 18, 2007, the last reported sales price of our common stock was \$2.40. As of December 18, 2007, there were 6,696,784 shares of our common stock outstanding that were held by approximately 335 holders of record and approximately 926 beneficial holders.

The following table sets forth, for the periods indicated, the range of high and low bid information for our common stock.

|                                             | Price Ranges |         |
|---------------------------------------------|--------------|---------|
|                                             | High         | Low     |
| <b>Fiscal Year Ended December 31, 2006</b>  |              |         |
| First Quarter                               | \$ 7.00      | \$ 4.40 |
| Second Quarter                              | 10.10        | 5.10    |
| Third Quarter                               | 9.15         | 4.93    |
| Fourth Quarter                              | 7.00         | 5.40    |
| <b>Fiscal Year Ending December 31, 2007</b> |              |         |
| First Quarter                               | \$ 6.05      | \$ 3.90 |
| Second Quarter                              | 5.89         | 4.05    |
| Third Quarter                               | 5.35         | 3.50    |
| Fourth Quarter (to date December 18, 2007)  | 4.30         | 1.85    |

Holders of shares of common stock will be entitled to receive cash dividends when, as and if declared by our Board of Directors, out of funds legally available for payment thereof. However, if dividends are not declared by our Board of Directors, no dividends shall be paid. We have not paid any dividends on our common stock since our inception.

We do not anticipate that any cash dividends will be paid in the foreseeable future. While our dividend policy will be based on the operating results and capital needs of the business, we anticipate that all earnings, if any, will be retained to finance our future expansion. Therefore, prospective investors who anticipate the need for immediate income by way of cash dividends from their investment should not purchase the shares offered by this prospectus.

## SELECTED HISTORICAL FINANCIAL DATA

The following selected consolidated financial data should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements and related notes included elsewhere in this prospectus. The selected consolidated financial data in this section is not intended to replace the consolidated financial statements and accompanying footnotes. The selected consolidated balance sheet data as of December 31, 2006, as restated, has been derived from our audited consolidated financial statements included elsewhere in this prospectus. The consolidated financial data and consolidated balance sheet data for the nine months ended September 30, 2006 and 2007, as restated, have been derived from unaudited consolidated financial statements included elsewhere in this prospectus. Historical results are not necessarily indicative of the results to be expected in the future.

|                                                                         | Restated<br>Year Ended<br>December 31,<br>2005 | Restated<br>Year Ended<br>December 31,<br>2006 | Restated<br>Nine Months<br>Ended<br>September 30,<br>2006 | Restated<br>Nine Months<br>Ended<br>September 30,<br>2007 |
|-------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|
| <b>Consolidated Statements of Operations Data:</b>                      |                                                |                                                |                                                           |                                                           |
| Revenues                                                                | \$ -                                           | \$ -                                           | \$ -                                                      | \$ -                                                      |
| Operating Expenses                                                      |                                                |                                                |                                                           |                                                           |
| Research and development                                                | 5,159,853                                      | 7,850,373                                      | 4,532,240                                                 | 10,148,930                                                |
| General and administrative                                              | 6,259,075                                      | 5,461,047                                      | 5,676,221                                                 | 2,557,609                                                 |
| Depreciation and amortization                                           | 98,080                                         | 174,117                                        | 122,469                                                   | 149,371                                                   |
| Loss on disposal of assets                                              | 22,810                                         | 2,376                                          | 2,377                                                     | 4,034                                                     |
| Net operating loss                                                      | (11,539,818)                                   | (13,487,913)                                   | (10,333,307)                                              | (12,859,944)                                              |
| Interest income                                                         | 81,930                                         | 688,299                                        | 477,547                                                   | 423,086                                                   |
| Other income                                                            | 28,174                                         | 46,450                                         | 46,450                                                    | -                                                         |
| Gain on extinguishment of debt                                          | -                                              | -                                              | -                                                         | 1,612,440                                                 |
| Gain/(loss) on derivative liability                                     | 3,896,841                                      | 104,978                                        | (860,130)                                                 | -                                                         |
| Interest expense                                                        | (7,323,851)                                    | (984)                                          | (891)                                                     | (10,875)                                                  |
| Net loss                                                                | <u>\$ (14,856,724)</u>                         | <u>\$ (12,649,170)</u>                         | <u>\$ (10,670,331)</u>                                    | <u>\$ (10,835,293)</u>                                    |
| Net loss per common share, basic and diluted                            | <u>\$ (9.49)</u>                               | <u>\$ (2.35)</u>                               | <u>\$ (2.16)</u>                                          | <u>\$ (1.62)</u>                                          |
| Weighted average number of common shares outstanding, basic and diluted | 1,564,837                                      | 5,390,910                                      | 4,950,862                                                 | 6,696,784                                                 |

|                                            | Restated<br>December 31,<br>2006 | Restated<br>September 30,<br>2007 |
|--------------------------------------------|----------------------------------|-----------------------------------|
| <b>Consolidated Balance Sheets Data:</b>   |                                  |                                   |
| Current assets                             | \$ 15,444,891                    | \$ 6,230,016                      |
| Fixed assets                               | 1,361,377                        | 1,355,753                         |
| Total assets                               | <u>\$ 16,806,268</u>             | <u>\$ 7,585,769</u>               |
| Current liabilities                        | \$ 9,287,128                     | \$ 2,077,237                      |
| Long term liabilities                      | 96,242                           | 177,339                           |
| Total liabilities                          | 9,383,370                        | 2,254,576                         |
| Common stock                               | 3,348,351                        | 3,348,351                         |
| Additional paid in capital                 | 63,118,180                       | 75,863,587                        |
| Accumulated deficit                        | (59,043,633)                     | (73,880,745)                      |
| Total stockholders' equity                 | 7,422,898                        | 5,331,193                         |
| Total liabilities and stockholders' equity | <u>\$ 16,806,268</u>             | <u>\$ 7,585,769</u>               |

**MANAGEMENT'S DISCUSSION AND ANALYSIS  
OF FINANCIAL CONDITIONS AND RESULTS OF OPERATIONS**

The following discussion of our financial condition and results of operations should be read together with the consolidated financial statements and related notes that are included elsewhere in this prospectus. This discussion may contain forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under "Risk Factors", "Disclosure Regarding Forward-Looking Statements" or in other parts of this prospectus. We undertake no obligation to update any information in our forward-looking statements except as required by law.

**Overview**

We are a development-stage company and have a limited operating history. Our predecessor company for financial reporting purposes was formed on January 22, 2003 to acquire rights to our adult stem cell technology. In November 2004 we acquired Opexa Pharmaceuticals, Inc. and its MS treatment technology. We are still developing all of our technology, and to date, we have not generated any revenues from our operations. As we continue to execute our operations plan, we expect our development and operating expenses to increase.

**Research and development.** We have made and expect to continue to make substantial investments in research and development in order to develop and market our technology. Research and development costs consist primarily of general and administrative and operating expenses related to research and development activities. We expense research and development costs as incurred. Acquired research and development that has no alternative future use is expensed when acquired. Property, plant and equipment for research and development that has an alternative future use is capitalized and the related depreciation is expensed as research and development costs. We expect our research and development expense to increase as we continue to invest in the development of our technology.

**General and administrative.** General and administrative expenses consist primarily of salaries and benefits, stock compensation expenses, office expense, professional services fees, and other corporate overhead costs. We anticipate increases in general and administrative expenses as we continue to develop and prepare for commercialization of our technology.

**Results of Operations**

*Three Months Ended September 30, 2007 Compared with the Three Months Ended September 30, 2006*

**Net Sales.** We recorded no sales for the three months ended September 30, 2007 and 2006.

**Research and Development Expenses.** Research and development expense was \$3,189,256 for the three months ended September 30, 2007, compared to \$2,113,878 for the three months ended September 30, 2006. The increase in expenses was primarily due to the costs of the Phase IIb clinical trial for Tovaxin and stock compensation expense recorded in 2007. We have made and expect to continue to make substantial investments in research and development in order to develop and market our technology. We expense research and development costs as incurred. Acquired research and development that has no alternative future use is expensed when acquired. We expect our research and development expense to increase as we continue to invest in the development of our technology.

**General and Administrative Expenses.** Our general and administrative expense was \$842,079 for the three months ended September 30, 2007, as compared to \$1,430,507 for the three months ended September 30, 2006. The decrease in expenses is primarily due to a decrease in stock compensation expenses, professional service fees and overhead expenses. We anticipate increases in general and administrative expenses as we continue to develop and prepare for commercialization of our technology.

**Interest Expense.** Interest expense was \$4,731 for the three months ended September 30, 2007, compared to \$278 for the three months ended September 30, 2006. The increase in interest expense was primarily due to a loan payable consisting of an equipment line of up to \$250,000 with Wells Fargo of which \$236,563 was outstanding as of September 30, 2007.

**Interest Income.** Interest income was \$102,292 for the three months ended September 30, 2007 compared to \$259,141 for the three months ended September 30, 2006. The decrease was due to the reduction in cash balances that were available for investment in cash equivalent investments.

**Net loss.** We had a net loss for the three months ended September 30, 2007, of \$2,371,780, or \$0.35 per share (basic and diluted), compared with a net loss of \$919,283, or \$0.14 per share (basic and diluted), for the three months ended September 30, 2006. The increase in net loss is primarily due to the costs of the Phase IIb clinical trial for Tovaxin offset by a reduction in stock-based compensation expense and gain on extinguishment of debt.

*Nine Months Ended September 30, 2007 Compared with the Nine Months Ended September 30, 2006*

**Net Sales.** We recorded no sales for the nine months ended September 30, 2007 and 2006.

**Research and Development Expenses.** Research and development expense was \$10,148,930 for the nine months ended September 30, 2007, compared to \$4,532,240 for the nine months ended September 30, 2006. The increase in expenses was primarily due to the costs of the Phase IIb clinical trial for Tovaxin, research and development in support of pre-clinical diabetes stem cell therapies and stock compensation expense recorded in 2007. We have made and expect to continue to make substantial investments in research and development in order to develop and market our technology. We expense research and development costs as incurred. Acquired research and development that has no alternative future use is expensed when acquired. We expect our research and development expense to increase as we continue to invest in the development of our technology.

**General and Administrative Expenses.** General and administrative expense was \$2,557,609 for the nine months ended September 30, 2007, as compared to \$5,676,221 for the nine months ended September 30, 2006. The decrease in expenses is primarily due to a decrease in stock compensation expenses, professional service fees and overhead expenses. We anticipate increases in general and administrative expenses as we continue to develop and prepare for commercialization of our technology.

**Interest Expense.** Interest expense was \$10,875 for the nine months ended September 30, 2007, compared to \$891 for the nine months ended September 30, 2006. The increase in interest expense was primarily due to a loan payable consisting of an equipment line of up to \$250,000 with Wells Fargo of which \$236,563 was outstanding as of September 30, 2007.

**Interest Income.** Interest income was \$423,086 for the nine months ended September 30, 2007 compared to \$477,547 for the nine months ended September 30, 2006. The decrease was due to the reduction in cash balances that were available for investment in cash equivalent investments.

**Net loss.** We had a net loss for the nine months ended September 30, 2007, of \$10,835,293, or \$1.62 per share (basic and diluted), compared with a net loss of \$10,670,331, or \$2.16 per share (basic and diluted), for the nine months ended September 30, 2006. The increase in net loss is primarily due to the costs associated with the Phase IIb clinical trial for Tovaxin offset by a reduction in stock-based compensation expense, gain on extinguishment of liability and loss on derivative instruments.

#### **Comparison of Year Ended December 31, 2006 with the Year Ended December 31, 2005**

**Net Sales.** We recorded no sales for the twelve months ended December 31, 2006 and December 31, 2005.

**Research and Development Expense.** Research and development expense was \$7,850,373 for the twelve months ended December 31, 2006, as compared to \$5,159,853 the twelve months ended December 31, 2005. The increase in expenses was primarily due to the costs of the Phase I/II and Phase IIb clinical trials for Tovaxin and research and development in support of pre-clinical diabetes stem cell therapies. We have made and expect to continue to make substantial investments in research and development in order to develop and market our technology. We expense research and development costs as incurred. Acquired research and development that has no alternative future use is expensed when acquired. Property, plant and equipment for research and development that has an alternative future use is capitalized and the related depreciation is expensed as research and development costs. We expect our research and development expense to increase as we continue to invest in the development of our technology.

**General and Administrative Expenses.** Our general and administrative expenses during the twelve months ended December 31, 2006, was \$5,461,047 as compared to \$6,259,075 for the twelve months ended December 31, 2005. The decrease in expenses is due to a combination of factors including a decrease in stock compensation expenses, professional service fees and overhead expenses in 2006. General and administrative expenses consist primarily of salaries and benefits, stock compensation expense, office expense, professional services fees, and other corporate overhead costs. We anticipate increases in general and administrative expenses as we continue to develop and prepare for commercialization of our technology.

**Interest Expense.** Interest expense was \$984 for the twelve months ended December 31, 2006 compared to \$7,323,851 for the twelve months ended December 31, 2005. Interest expense during 2005 was due to notes payable that were outstanding during the second quarter of 2005 which were subsequently converted into equity in June 2005, resulting in acceleration of the amortization of the discount related to the notes.

**Interest Income.** Interest income was \$688,299 for the twelve months ended December 31, 2006 compared to \$81,930 for the twelve months ended December 31, 2005. The increase was due to the investment of the cash proceeds from a 2006 equity financing in short term and cash equivalent investments.

**Gain (Loss) on Derivative Instruments Liabilities, net.** We recognized a gain on derivative instruments of \$104,978 for the twelve months ended December 31, 2006 compared to \$3,896,841 for the twelve months ended December 31, 2005. The decrease is a result of the net unrealized (non-cash) change in the fair value of our derivative instrument liabilities.

**Net Loss.** We had net loss for the year ended December 31, 2006, of \$12,649,170 or (\$2.35) per share (basic and diluted), compared with a net loss of \$14,856,724 or (\$9.49) per share (basic and diluted), for the twelve months ended December 31, 2005.

#### **Liquidity and Capital Resources**

**Changes in cash flow.** Cash used in operations for the nine month period ended September 30, 2007 was \$6,154,074, as compared to \$5,899,299 used in operations for the nine months ended September 30, 2006. The increase in cash used in operations is primarily due to an increase in operating expenses offset in part by the maturity of approximately \$2.9 million in marketable securities and its reclassification to cash and cash equivalents and by an increase in accrued expenses resulting from the Phase IIb clinical trial. Cash used in investing activities for the nine month period ended September 30, 2007 was \$147,782, as compared to \$487,567 for the nine months ended September 30, 2006. The decrease was primarily due to a decrease in equipment purchases. Cash provided from financing activities for the nine month period ended September 30, 2007 was \$126,241, as compared to \$21,153,520 for the nine months ended September 30, 2006. The decrease was due to the proceeds from the April 2006 equity financing.

We used approximately \$11.0 million of cash for operating activities for the year ended December 31, 2006 compared to approximately \$6.2 million for the same period of 2005. The increase in use of cash is primarily due to an increase in research and development expenditures related to the clinical trials for our Tovaxin therapy for MS and the purchase of marketable securities.

Capital expenditures were approximately \$0.6 million in 2006 and consisted primarily of laboratory equipment and leasehold improvements related to the construction of manufacturing facilities.

**Liquidity** . Historically, the Company has financed its operations primarily from the sale of its debt and equity securities. As of September 30, 2007, the Company had cash, cash equivalents and marketable securities of approximately \$5.8 million.

Our financing activities generated approximately \$21.3 million for the year ended December 31, 2006 as compared to approximately \$8.2 million for the same year ended December 31, 2005. In both periods, the cash generated from financing activities resulted from the sale of common stock in equity financings.

Our current burn rate is approximately \$1 million per month excluding capital expenditures. Without the proceeds of this offering, we would need to raise additional capital to fund our working capital needs beyond the first quarter of 2008. Currently, we have determined that if we do not raise additional funds, there is a concern about our ability to continue our operations and our independent accountants have added a going concern paragraph to their report on the audit financial statements for the year ended December 31, 2006.

We recently terminated a private offering of equity to accredited investors. We sought to raise up to \$20 million in gross proceeds and considered selling either common stock or convertible preferred stock with warrants to purchase common stock. We later determined that a public offering of common stock was more desirable for the company and therefore terminated our private financing effort on October 24, 2007. This offering supersedes the previous private equity offering.

#### Contractual Commitments

A tabular disclosure of contractual obligations at December 31, 2006, is as follows:

|                                    | Total        | Payments Due by Period |             |             |                      |
|------------------------------------|--------------|------------------------|-------------|-------------|----------------------|
|                                    |              | Less than<br>1 year    | 1 - 3 years | 3 - 5 years | More than<br>5 years |
| Operating Leases                   | \$ 1,274,175 | \$ 117,774             | \$ 276,978  | \$ 295,080  | \$ 584,343           |
| Consulting and Research Agreements | \$ 142,647   | \$ 142,147             | \$ 500      | \$ -        | \$ -                 |
| Total                              | \$ 1,416,822 | \$ 259,921             | \$ 277,478  | \$ 295,080  | \$ 584,343           |

#### Off-Balance Sheet Arrangements

As of December 31, 2006, we had no off-balance sheet arrangements.

#### Critical Accounting Policies

Our discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the U.S. The preparation of these consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities and expenses. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We believe the following critical accounting policies affect our most significant judgments and estimates used in preparation of our consolidated financial statements.

**Reverse Acquisition.** We treated the merger of PharmaFrontiers Corp. into Sportan as a reverse acquisition. Pursuant to the guidance in Appendix B of SEC Accounting Disclosure Rules and Practices Official Text, the “merger of a private operating company into a non-operating public shell corporation with nominal net assets typically results in the owners and management of the private company having actual or effective operating control of the combined company after the transaction, with the shareholders of the former public shell continuing only as passive investors. These transactions are considered by the staff to be capital transactions in substance, rather than business combinations. That is, the transaction is equivalent to the issuance of stock by the private company for the net monetary assets of the shell corporation, accompanied by a recapitalization.” Accordingly, the reverse acquisition has been accounted for as a recapitalization. For accounting purposes, the original PharmaFrontiers Corp. is considered the acquirer in the reverse acquisition. The historical financial statements are those of the original PharmaFrontiers Corp. Earnings per share for periods prior to the merger are restated to reflect the number of equivalent shares received by the acquiring company.

**Stock-Based Compensation.** On January 1, 2006, we adopted the provisions of Statement of Financial Accounting Standards No. 123R, "Share-Based Payment" ("SFAS 123R") which establishes accounting for equity instruments exchanged for employee service. We utilize the Black-Scholes option pricing model to estimate the fair value of employee stock based compensation at the date of grant, which requires the input of highly subjective assumptions, including expected volatility and expected life. Further, as required under SFAS 123R, we now estimate forfeitures for options granted, which are not expected to vest. Changes in these inputs and assumptions can materially affect the measure of estimated fair value of our share-based compensation. These assumptions are subjective and generally require significant analysis and judgment to develop. When estimating fair value, some of the assumptions will be based on, or determined from, external data and other assumptions may be derived from our historical experience with stock-based payment arrangements. The appropriate weight to place on historical experience is a matter of judgment, based on relevant facts and circumstances.

We estimated volatility by considering historical stock volatility. As allowed by Staff Accounting Bulletin (SAB) No. 107, Share-Based Payment, we have opted to use the simplified method for estimating expected term equal to the midpoint between the vesting period and the contractual term.

**Research and Development.** The costs of materials and equipment or facilities that are acquired or constructed for research and development activities and that have alternative future uses are capitalized as tangible assets when acquired or constructed. The cost of such materials consumed in research and development activities and the depreciation of such equipment or facilities used in those activities are research and development costs. However, the costs of materials, equipment, or facilities acquired or constructed for research and development activities that have no alternative future uses are considered research and development costs and are expensed at the time the costs are incurred.

**Accounting for Derivative Instruments.** Statement of Financial Accounting Standard ("SFAS") No. 133, "Accounting for Derivative Instruments and Hedging Activities," as amended, requires all derivatives to be recorded on the balance sheet at fair value. These derivatives are separately valued and accounted for on our balance sheet. Fair values for securities traded in the open market and derivatives are based on quoted market prices. Where market prices are not readily available, fair values are determined using market based pricing models incorporating readily observable market data and requiring judgment and estimates.

The pricing model we use for determining fair values of our derivatives is the Black Scholes Pricing Model. Valuations derived from this model are subject to ongoing internal and external verification and review. The model uses market-sourced inputs such as interest rates, exchange rates and stock price volatilities. Selection of these inputs involves management's judgment and may impact net income.

In September 2000, the Emerging Issues Task Force ("EITF") issued EITF 00-19, "Accounting for Derivative Financial Instruments Indexed to and Potentially Settled in, a Company's Own Stock," ("EITF 00-19") which requires freestanding contracts that are settled in a company's own stock, including common stock warrants, to be designated as an equity instrument, asset or a liability. Under the provisions of EITF 00-19, a contract designated as an asset or a liability must be carried at fair value on a company's balance sheet, with any changes in fair value recorded in the company's results of operations. A contract designated as an equity instrument must be included within equity, and no fair value adjustments are required. In accordance with EITF 00-19, in June 2006, we determined that certain outstanding warrants to purchase our common stock should be separately accounted for as liabilities. We had not classified these derivative liabilities as such in our historical financial statements. In order to reflect these changes, we restated our financial statements for the year ended December 31, 2005 to record the fair value of these warrants on our balance sheet and record unrealized changes in the values of these derivatives in our consolidated statement of operations as "Gain (loss) on derivative liabilities."

We have evaluated the provisions of the registration rights agreement that require us to pay registration delay payments in combination with the financial instrument and concluded that the combined instrument meets the definition of a derivative under SFAS 133.

In December 2006, the FASB issued FASB Staff Position No. EITF 00-19-2, Accounting for Registration Payment Arrangements ( EITF 00-19-2). EITF 00-19-2 addresses an issuer's accounting for registration payment arrangements. It specifies that the contingent obligation to make future payments or otherwise transfer consideration under a registration payment arrangement, whether issued as a separate agreement or included as a provision of a financial instrument or other agreement, should be separately recognized and measured in accordance with FASB Statement No. 5, Accounting for Contingencies. The guidance in EITF 00-19-2 amends FASB Statements No. 133, Accounting for Derivative Instruments and Hedging Activities, and No. 150, Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity, and FASB Interpretation No. 45, Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others, to include scope exceptions for registration payment arrangements. EITF 00-19-2 also requires additional disclosure regarding the nature of any registration payment arrangements, alternative settlement methods, the maximum potential amount of consideration and the current carrying amount of the liability, if any. This EITF is effective immediately for registration payment arrangements and the financial instruments subject to those arrangements that are entered into or modified subsequent to the date of issue of this EITF. For registration payment arrangements and financial instruments subject to those arrangements that were entered into prior to the issuance of this EITF, this is effective for financial statements issued for fiscal years beginning after December 15, 2006, and interim periods within those fiscal years. The impact of implementing EITF 00-19-2 in the fiscal year 2007 resulted in a cumulative effect of a change in accounting principle with a credit to beginning retained earnings of \$6,656,677 and a reversal of the same amount to the derivative liability account.

## OUR BUSINESS

### Overview

We are a biopharmaceutical company developing autologous cellular therapies to treat several major illnesses, including multiple sclerosis (MS), rheumatoid arthritis (RA) and diabetes. These therapies are based on our proprietary T-cell and adult stem cell technologies.

#### T-Cell Therapy

We have the exclusive worldwide license from Baylor College of Medicine to an individualized T-cell therapeutic vaccine, Tovaxin, which is in United States (U.S.) FDA Phase IIb human clinical trials to evaluate its safety and effectiveness in treating MS.

MS is the result of a person's own T-cells attacking the myelin sheath that coats the nerve cells of the central nervous system (CNS). Tovaxin consists of attenuated patient-specific myelin reactive T-cells (MRTCs) against peptides from one or more of the primary proteins on the surface of the myelin sheath (myelin basic protein (MBP), proteolipid protein (PLP) and myelin oligodendrocyte glycoprotein (MOG)). Patient-specific MRTCs are expanded in culture with specific peptides identified by our proprietary test of the patient's peripheral blood, the cells are attenuated by gamma irradiation, and then returned to the patient as a subcutaneous injection. Although further testing is necessary, results from our initial human trials appear to indicate that these attenuated T-cells cause an immune response directed at the autoreactive T-cells in the patient's body, stimulating a reduction in the level of harmful T-cells.

We believe that our initial human trials suggest that Tovaxin safely induces the depletion and regulation of MRTCs, possibly stabilizing the disease, reducing the annualized relapse rate, and potentially improving the disability scores of patients. Patients treated in a 10-subject, open-label Phase I/II dose escalation clinical trial with Tovaxin have experienced minimal side effects and the "per protocol" analysis of patients treated with Tovaxin achieved a 90% reduction ( $p=0.0039$ ) in annualized relapse rate (ARR). The group treated with the mid dose ( $30-45 \times 10^6$  attenuated T-cells) achieved a 100% reduction in ARR. The Phase IIb trial is being conducted with the mid dose.

In a one-year, 8-subject extension clinical trial of relapsing remitting (RRMS) and secondary progressive (SPMS) subjects, the "per-protocol" analysis of Tovaxin therapy achieved a 92% ( $p=0.0078$ ) reduction in annualized relapse rate (ARR) in subjects who received two treatment doses of  $30 - 45 \times 10^6$  attenuated T-cells eight weeks apart and were monitored for an additional 44 weeks. Subjects in the extension study had previously been treated an average of approximately 5 years earlier at Baylor College of Medicine under the direction of the inventor of Tovaxin Jingwu Zhang, M.D., Ph.D with an early version of the T-cell vaccine.

In November 2006, we enrolled the first patient in a double blind, placebo controlled, 150 patient Phase IIb clinical trial. We completed enrollment of all 150 patients in May 2007.

Our Rheumatoid Arthritis (RA) T-cell vaccination (TCV) technology is conceptually similar to Tovaxin. RA is an autoimmune T-cell-mediated disease in which pathogenic T-cells trigger an inflammatory autoimmune response of the synovial joints of the wrists, shoulders, knees, ankles and feet which causes pain, stiffness, and swelling around the joints and erosion into cartilage and bone. Our RA TCV technology allows the isolation of these pathogenic T-cells from synovial fluid drawn from a patient. We will expand and attenuate these T-cells in our laboratory. The attenuated T-cells will be injected subcutaneously into patients with the goal of inducing an immune response directed at the Pathogenic T-cells in the patient's body. We believe this immune response could reduce the level of pathogenic T-cells and potentially allow the reduction of joint swelling in RA patients.

#### Stem Cell Therapy

We have developed a proprietary adult stem cell technology to produce novel monocyte-derived stem cells (MDSC) from blood. These MDSC can be derived from a patient's monocytes, expanded ex vivo, and then administered to the same patient. We believe that because this is an autologous therapy, there should be no rejection issues as self-derived MDSC pose no immunological problems. Normally, allogenic cells are deleted by host immune responses and require the use of anti-rejection drugs.

Our novel multi-potent stem cell is derived from peripheral blood monocytes which when cultured under defined conditions are able to further differentiate into several cellular lineages. Molecular biology and immunohistochemical studies have shown that these MDSCs have specific markers that distinguish them from other stem cells. In addition these studies have also shown a time-dependence for the expression of these specific gene products during the growth and differentiation of MDSCs. *In vitro* experiments with MDSCs have shown their capacity to differentiate towards hematopoietic, epithelial, endothelial, endocrine and neuronal cells. Our main focus is the further development of this monocyte-derived stem cell (MDCS) technology as a novel platform for the *in vitro* generation of highly specialized cells for potential application in autologous cell therapy for patients with diseases such as diabetes mellitus and cardiovascular disease.

#### **Other Opportunities**

We intend to conduct basic research to determine the potential use of stem cells and differentiated cells in other indications, such as macular degeneration, stroke, myocardial infarction, wound healing and Parkinson's disease. We intend to partner or sublicense some of these indications if they are not pursued for internal development. For those indications where we believe we can participate commercially, we desire to partner in key commercial markets outside of the U.S.

#### **The Company's Products and Services**

##### **Our T-cell Platform**

##### **Multiple Sclerosis - Background**

In the U.S., approximately 400,000 people suffer from MS, a chronic progressive autoimmune disease of the central nervous system (CNS) that is caused by myelin autoreactive T-cells progressively eroding the myelin that surrounds and insulates nerve fibers of the brain and spinal cord resulting in varying amounts of disability. Globally, there are approximately 2.5 million MS patients representing a drug market believed to be approximately \$5 billion in 2005. The US markets accounted for slightly more than 50 percent of global MS sales in 2005, approximately \$2.5 billion. MS remains a challenging autoimmune disease to treat because the pathophysiologic mechanisms are diverse, and the chronic, unpredictable course of the disease makes it difficult to determine whether the favorable effects of short-term treatment will be sustained. Therapies that are easy to use and can safely prevent or stop the progression of disease represent the greatest unmet need in MS.

In recent years, the understanding of MS pathogenesis has evolved to comprise an initial, T-cell-mediated inflammatory activity followed by selective demyelination (erosion of the myelin coating of the nerve fibers) and then neurodegeneration. The discovery of disease-relevant immune responses has accelerated the development of targeted therapeutic products for the treatment of the early stages of MS.

Some subjects, who have the appropriate genetic background, have increased susceptibility for the *in vivo* activation and clonal expansion of myelin autoreactive T-cells. These myelin autoreactive T-cells may remain dormant, but at some point they are activated in the periphery, possibly by molecular mimicry (i.e., recognition of epitopes that are common to autoantigens and microbial antigens as exogenous triggers), thus enabling them to cross the blood-brain barrier (BBB) and infiltrate the healthy tissue of the brain and spinal cord. The cascade of pathogenic events leads to demyelination of axons, which causes nerve impulse transmissions to diffuse into the tissue.

**Current Therapy for Multiple Sclerosis**

Current MS disease modifying drugs on the market are mostly palliative and generally work through a mechanism of immunomodulation or immunosuppression. These therapies for MS are dominated by three forms of interferon that require frequent subcutaneous or intramuscular injections (Avonex, Betaseron and Rebif). Copaxone is an immunomodulator composed of a random copolymer of amino acids that is administered daily. Novantrone (mitoxanthrone) is an immunosuppressive drug that can only be given four times per year with a life time limit of 8 to 12 doses. All of the current therapies only slow the progression of MS and they have significant patient compliance challenges because of the dosing schedule, limited decrease in relapse rate, side effects profile (e.g., the interferon formulations produce severe flu-like symptoms, injection site reactions, infection and neutralizing antibodies (ranging from 5% to 45%) are developed that limits the efficacy of treatment; Copaxone causes significant injection site reactions; while Novantrone causes infections, bone marrow suppression, nausea, hair thinning, bladder infections, and mouth sores). These drugs must be administered daily to weekly. Tysabri®, a selective adhesion molecule inhibitor (an alpha 4 integrin antagonist), represents another class of MS drugs that works by preventing immune system cells (all leukocytes carrying the alpha 4 integrin glycoprotein on their surface) from crossing the BBB and move into the CNS. Tysabri® requires a once per month infusion and has been reintroduced to the market after being originally withdrawn in 2005 based on safety concerns over several patient deaths due to virally mediated brain inflammation – a condition called progressive multifocal leukoencephalopathy (PML).

**Tovaxin for Multiple Sclerosis**

We believe that Tovaxin works selectively on the myelin autoreactive T-cells by harnessing the body’s natural immune defense system and feedback mechanisms to deplete these T-cells and induce favorable immune regulatory responses by rebalancing the immune system. Tovaxin is manufactured by taking the MRTCs from the blood, expanding them to a therapeutic dose *ex-vivo* , and attenuating them with gamma irradiation to prevent DNA replication. These attenuated MRTCs are then injected subcutaneously into the body in large quantities. The body recognizes specific T-cell receptor molecules of these MRTCs as foreign and mounts an immune response reaction against them, not only destroying the injected attenuated MRTCs, but also the circulating, myelin autoreactive T-cells carrying the peptide-specific T-cell receptor molecules. In addition, T-cell activation molecules on the surface of the activated MRTCs used as vaccine induce favorable immune regulatory responses, which promote anti-inflammatory responses. Because the therapy uses an individual’s own cells, the only directly identifiable side effect, observed thus far, is injection site reaction in a small percentage of the patients. These reactions clear within 24 hours.

We believe that this technology platform may have applications in other T-cell mediated diseases such as Crohn’s disease, psoriasis, RA and Type 1diabetes.

**Tovaxin Intellectual Property**

The technology is based on discoveries made by Dr. Jingwu Zang of Baylor College of Medicine in Houston. We have an exclusive, worldwide license from the Baylor College of Medicine to develop and commercialize three technology areas for MS, namely T-cell vaccination, peptides, and diagnostics. Under the License Agreement with the Baylor College of Medicine, we have rights to a total of 11 patents (2 U.S. and 9 foreign) and 80 patent applications (6 U.S. and 74 foreign).

**Tovaxin Manufacturing**

We manufacture our TCV therapy in our own Good Manufacturing Practice (“GMP”) facility. The TCV technology producing Tovaxin is similar to that of traditional microbial vaccine technology, where the pathogen (or the attenuated derivative) is used to derive the protective antigens necessary to induce protective immune responses. In preparing the Tovaxin for a patient, the myelin autoreactive T-cells causing the disease are taken from the blood, specifically identified, and expanded *ex vivo* by incubating these T-cells with selected peptides of MBP, PLP, and MOG in the presence of antigen-presenting cells and growth factors. Myelin-peptide reactive T-cells are grown to therapeutic levels and cryopreserved. Prior to use, the MRTCs are expanded, formulated, and attenuated (by irradiation) to render them incompetent to replicate but viable for therapy. These attenuated T-cells are administered in a defined schedule of subcutaneous injections. We have shown that a single draw of a 500 ml bag of blood is sufficient to provide a full year’s therapeutic regimen of Tovaxin.

## Clinical Development of Tovaxin

Tovaxin is currently in a Phase IIb clinical trial. Patients treated in our Phase I/II open-label studies with Tovaxin have experienced minimal side effects, an approximate 90% average reduction in annualized relapse rate and improvements in EDSS disability scores.

### Tovaxin Phase IIb Clinical Trial

The Phase IIb trial, entitled “A Multicenter, Randomized, Double-Blind, Placebo-Controlled Study of Subcutaneous Tovaxin in Subjects with Clinically Isolated Syndrome or Relapsing Remitting Multiple Sclerosis”, is a multi-site double-blind, randomized, placebo-controlled 150 (100 treated, 50 placebo) patient trial. The trial is being conducted at 33 sites in the U.S. The primary endpoint will be brain lesion evaluation (the total number of gadolinium-enhancing lesions) via MRI with a secondary endpoint being annual relapse rate. This trial is designed to demonstrate the safety and efficacy of Tovaxin. We completed enrollment in May 2007 and expect top-line results in the fourth quarter of 2008.

## Our Adult Stem Cell Platform

### Stem Cells – Background

Stem cells are undifferentiated primary cells that have the potential to become any tissue or organ of the body. They hold therapeutic promise for the development of effective treatments and possibly cure for various diseases. The current stem cell research efforts have been divided between embryonic and tissue specific adult stem cells as potential therapeutic progenitor cells. Recent experiments with embryonic stem (ES) cells have demonstrated that these highly proliferative, pluripotent cells can differentiate into pancreatic-like  $\beta$ -cells. The major problem with ES cells is their pluripotency and risk that these cells, once transplanted, could form tumors. Given that, adult tissue specific stem cells have become attractive as a potential cell therapeutic. Adult tissue specific stem cells have advantages over ES cells; first, these cells can be isolated from a more manageable source such as bone marrow or other tissues; second, they proliferate in a controlled fashion and without the likelihood of tumorigenicity, and third, they can be used in an autologous setting and avoid the potential for rejection which exists for allogeneic use of stem cells.

Hematopoietic stem cells (HSC's), present in the bone marrow and precursors to all blood cells, are currently the only type of stem cells commonly used for therapy. Doctors have been transferring HSC's in bone marrow transplants for more than 40 years. Advanced techniques for collecting or “harvesting” HSC's are now used to treat leukemia, lymphoma and several inherited blood disorders.

The clinical potential of stem cells has also been demonstrated in the treatment of other human diseases, including diabetes and advanced kidney cancer. However, these new therapies have been offered only to a very limited number of patients using adult stem cells.

Stem cell therapies have technical, ethical and legal hurdles to overcome before they will be able to be used to possibly affect tissue and organ repair. A significant hurdle to most uses of stem cells is that scientists do not yet fully understand the signals that turn specific genes on and off to influence the differentiation of the stem cell. Therefore, scientists will have to be able to precisely control the differentiation of stem cells into the specific cell type to be used in therapy and drug testing. Current knowledge of the signals controlling differentiation falls well short of being able to mimic these conditions precisely to consistently have identical differentiated cells for each specified use.

To realize the promise of novel cell-based therapies for such pervasive and debilitating diseases such as diabetes and kidney cancer, scientists must be able to easily and reproducibly manipulate stem cells so that they possess the necessary characteristics for successful differentiation, transplantation and engraftment. To be useful for transplant purposes, stem cells must be reproducibly made to: proliferate extensively and generate sufficient quantities of tissue, differentiate into the desired cell type(s), survive in the recipient after transplant, integrate into the surrounding tissue after transplant, function appropriately for the duration of the recipient's life, avoid harming the recipient in any way, and avoid the problem of immune rejection. There is no assurance that any commercialized cell-based therapies will ever be developed.

#### Therapies utilizing Our Stem Cell Platform

We have developed a proprietary adult stem cell technology to produce monocyte-derived stem cells (MDSC) from blood. These MDSC can be derived from a patient's monocytes, expanded *ex vivo*, and then administered to the same patient. We believe that because this is an autologous therapy, there should be no allogenic rejection issues as self-derived MDSC pose no immunological problems. Normally, allogenic cells are deleted by host immune responses and require the use of anti-rejection drugs.

Our novel multi-potent stem cell is derived from peripheral blood monocytes which when cultured under defined conditions are able to further differentiate into several cellular lineages. Molecular biology and immunohistochemical studies have shown that these MDSCs have specific markers that distinguish them from other stem cells. In addition these studies have also shown a time-dependence for the expression of these specific gene products during the growth and differentiation of MDSCs. In vitro experiments with MDSCs have shown their capacity to differentiate towards hematopoietic, epithelial, endothelial, endocrine and neuronal cells. Our main focus is the further development of this monocyte-derived stem cell technology as a novel platform for the in vitro generation of highly specialized cells for potential application in autologous cell therapy for patients with diseases such as diabetes mellitus and cardiovascular disease.

Working either alone or in conjunction with strategic partners, we intend to utilize these MDSC from the same patient to attempt to develop a therapy which may cause autologous tissue or organ repair. The initial internal therapeutic target is diabetes mellitus. Other therapeutic targets would be pursued through early-stage licensing or strategic alliances. The diabetes program is currently in pre-clinical development.

#### Pancreatic Islet Cell Development

Diabetes is a disease characterized by the failure or loss of pancreatic  $\beta$ -cells to generate sufficient levels of the hormone insulin required to meet the body's need to maintain normal nutrient homeostasis. Type 1 diabetes is caused by the complete loss of pancreatic  $\beta$ -cells when the body's own immune system mistakenly attacks and destroys a person's  $\beta$ -cells. While for Type 2 diabetes the causes are far more complicated and poorly understood, the results of the disease are similar in that often the  $\beta$ -cells fail to generate sufficient amounts of insulin to maintain normal homeostasis. The loss of insulin results in an increase in blood glucose levels and will eventually lead to the development of premature cardiovascular disease, stroke, and kidney failure. Currently there is no permanent cure for diabetes; however, recent clinical islet cell transplantations have shown good success in restoring long-term endogenous insulin production and glycemic stability in subjects who have Type 1 diabetes mellitus with unstable baseline control. Persistent islet function without injected insulin dependence provides considerable benefit.

Current cell transplant therapy for the treatment of diabetes is limited by an inadequate supply of insulin-producing cells. Cadaveric sources are limited and up to three pancreas are required to obtain clinically significant quantities of  $\beta$ -cells for one patient. The identification of novel adult human stem cells provides a new prospect for obtaining a sufficient number of insulin-producing  $\beta$ -cells for transplantation. Using our technology a single blood draw may be adequate to produce clinical quantities of  $\beta$ -cells for a patient.

*In vitro* experiments with MDSC have shown their capacity to differentiate toward a wide variety of cell types including pancreatic  $\beta$ -like cells. These cells aggregate into clusters resembling pancreatic Islets of Langerhans termed monocyte derived islets (MDI). The cluster aggregates show endocrine gene expression. Biochemical assays have demonstrated that MDI can synthesize and secrete significant amounts of insulin during their growth and respond in a glucose-dependent manner. In addition, MDI can be stimulated or repressed by the addition of agonists or antagonists of insulin *in vitro*.

The importance of these stem cells is the ability to easily and cost effectively derive them from an individual's circulating monocytes, expand them and administer them back into the same patient. This autologous approach provides a method to overcome any rejection issues and the need for immunosuppressant drugs, which are often associated with current transplantations.

#### **Stem Cell Pre-Clinical and Clinical Development**

We are conducting pre-clinical studies to demonstrate proof of concept and method of delivery with a planned IND (Investigational New Drug) submission to the FDA during 2008. We hope to commence a Phase I study for monocyte-derived islet transplantation of patients with Type 1 diabetes mellitus in 2009.

#### **Licenses, Patents and Proprietary Rights**

We believe that proprietary protection of our technologies is critical to the development of our business. We intend to continue to protect our proprietary intellectual property through patents and other appropriate means. We rely upon trade-secret protection for some confidential and proprietary information and take active measures to control access to that information. We currently have non-disclosure agreements with all of our employees, consultants, vendors, advisory board members and contract research organizations.

Our intellectual property strategy includes developing proprietary technology for the sourcing, scale up, manufacturing, and storage of T cells and multipotent adult stem cells and the use of these cells in multiple therapeutic applications. This strategy will include expanding on technologies in-licensed to us as well as in-licensing additional technologies through collaborations with universities and biotech companies.

We have exclusive, worldwide licenses to certain patents that relate to our T-cell technology and our multipotent adult stem cell technology.

#### **T-Cell Therapy Intellectual Property**

We have an exclusive, worldwide license from the Baylor College of Medicine to certain patent applications relating to the treatment of MS using attenuated T-cells and to the use of the T-cell technology as a diagnostic. The license was granted to us by Baylor in exchange for common stock in Opexa Pharmaceuticals which we acquired in November 2004. The license requires us to pay royalties on sales of products covered by the license. We have filed additional patent applications related to T-Cell vaccination for MS.

#### **Rheumatoid Arthritis Therapy Intellectual Property**

We have an exclusive worldwide license for the intellectual property rights and research results of an autologous T cell vaccine for RA from the Shanghai Institutes for Biological Sciences (SIBS), Chinese Academy of Sciences of the People's Republic of China. We made a one time \$125,000 license payment and agreed to pay a royalty on net sales of products covered by the license. We have filed additional patent applications related to T-Cell vaccination for RA.

#### **Stem Cell Therapy Intellectual Property**

We have an exclusive, worldwide license from the University of Chicago, through its prime contractor relationship with Argonne National Laboratory, to a patent application related to the development of adult multipotent stem cells from monocytes isolated from adult human peripheral blood. The technology was discovered and developed at the Argonne National Laboratory, a U.S. Department of Energy Laboratory.

Pursuant to the license we have issued a total of 53,462 shares of our common stock and paid \$232,742 to the University of Chicago. We will owe milestone payments upon demonstration of efficacy in Phase II clinical studies, submission for product approval to the FDA and approval of licensed products totaling \$1,350,000. We will also pay royalties on net sales of products covered by the license.

We have filed additional patent applications related to the process of obtaining monocyte-derived stem cells. In addition, we have filed a patent application for the process of differentiation of MDSCs into monocyte-derived islets which function like pancreatic islet cells.

## **Our Product Pipeline**

### **Multiple Sclerosis Therapy**

Tovaxin is a vaccine approach for treating MS, in that it induces the body's immune system to attack the MRTCs that we believe are responsible for destroying the myelin sheath coating of the axons in the central nervous system. We believe that the depletion and regulation of the MRTCs may stop progression of multiple sclerosis. Tovaxin is currently in a Phase IIb clinical trial. We completed enrollment of this trial in May, 2007.

### **Rheumatoid Arthritis Therapy**

Our Rheumatoid Arthritis (RA) T-cell vaccination (TCV) technology is conceptually similar to Tovaxin. RA is an autoimmune T-cell-mediated disease in which pathogenic T-cells trigger an inflammatory autoimmune response of the synovial joints of the wrists, shoulders, knees, ankles and feet which causes pain, stiffness, and swelling around the joints. This technology is in preclinical development.

### **Diabetes Stem Cell Therapy**

We believe that there are approximately 20.8 million people in the U.S. who have diabetes. More than 1 million of these people have Type 1 diabetes mellitus. Among adults with diagnosed diabetes, approximately 31% take insulin to control their disease. Research studies have found that improved glycemic control benefits people with either Type 1 or Type 2 diabetes. Islet transplantation using Opexa's proprietary monocyte-derived islet cell may offer the potential to improve glycemic control in a subgroup of patients with Type 1 and Type 2 diabetes mellitus who are disabled by refractory hypoglycemia. We are in preclinical development and plan to file an IND in 2008 and initiate a Phase I clinical trial in 2009.

### **Other Opportunities**

We intend to conduct basic research to determine the potential use of our stem cells in other indications such as macular degeneration, heart attack, and Parkinson's disease. Liver cells (hepatocytes) derived from our stem cells may be valuable across the biopharmaceutical industry to test for drug toxicity or to help cure liver diseases. We intend to partner or sublicense some of these indications if they are not pursued for internal development. For those indications where we believe it can participate commercially, we will possibly take partners in key commercial markets outside of the United States.

## **Research Collaborations**

We anticipate that from time to time in the future we will enter into collaborative research agreements with other academic and research institutions. We will use such agreements to enhance our research capabilities. Typically, in the industry, such agreements provide the industry partner with rights to license the intellectual property created through the collaboration. We may also enter into collaborative research agreements with other pharmaceutical companies when we believe such collaboration will support the development and commercialization of our technology.

## **Commercialization Through Third Parties**

We anticipate that we will grant sublicenses for certain applications of our technologies. We believe that by sublicensing some of the rights to our technology to pharmaceutical companies and other third parties, we will be able to more efficiently develop some applications of our technologies. We currently do not have any sublicenses.

## Competition

The development of therapeutic agents for human disease is intensely competitive. Major pharmaceutical companies currently offer a number of pharmaceutical products to treat MS, heart attack, stroke, Parkinson's disease, diabetes, liver diseases, arthritis and other diseases for which our technologies may be applicable. Many pharmaceutical and biotechnology companies are investigating new drugs and therapeutic approaches for the same purposes, which may achieve new efficacy profiles, extend the therapeutic window for such products, alter the prognosis of these diseases, or prevent their onset. We believe that our products, when and if successfully developed, will compete with these products principally on the basis of improved and extended efficacy and safety and their overall economic benefit to the health care system. We expect competition to increase. We believe that our most significant competitors will be fully integrated pharmaceutical companies and more established biotechnology companies. Smaller companies may also be significant competitors, particularly through collaborative arrangements with large pharmaceutical or biotechnology companies. Some of our primary competitors in the current treatment of and in the development of treatments for MS include Biogen-Idec, Elan, Serono, Aventis, Teva, and Bayer/Schering AG. Some of our primary competitors in the development of stem cell therapies include Aastrom Biosciences, Geron, Gamida-Cell Ltd, Stem Cells Inc., Cellerant Therapeutics, and Osiris Therapeutics. Many of these competitors have significant products in development that could be competitive with our potential products.

## Sales and Marketing

We intend to develop a sales force to market our MS cell therapy products in the U.S. Given the concentration of MS treatment among a relatively small number of specialized neurologists, we believe that a modest size sales force would be sufficient to market the MS products.

We plan to partner with large biotech and pharmaceutical companies for the marketing and sales of our MS and RA T-cell products outside the U.S. and for our stem cell therapy products.

## Description of Property

Our 10,200 sq. ft. facility is located on 3 acres at 2635 North Crescent Ridge Drive in The Woodlands, Texas. This location provides space for research and development and manufacturing capacity for clinical trials; a specialized Flow Cytometry and Microscopy lab; support of clinical trials with 800 sq. ft. of GMP (good manufacturing practice) manufacturing suites; Quality Systems management with a Quality Control Laboratory, Regulatory Affairs, Quality Assurance; as well as administrative support space. There is 2,500 sq. ft. of space still available for future build-out. The facility including the property is leased for a term ending in 2015 with two options for an additional five years each at the then prevailing market rate.

## Government Regulation

Our research and development activities and the future manufacturing and marketing of our potential products are, and will be, subject to regulation for safety and efficacy by a number of governmental authorities in the United States and other countries.

In the U.S., pharmaceuticals, biologicals and medical devices are subject to FDA regulation. The Federal Food, Drug and Cosmetic Act, as amended, and the Public Health Service Act, as amended, the regulations promulgated thereunder, and other Federal and state statutes and regulations govern, among other things, the testing in human subjects, manufacture, safety, efficacy, labeling, storage, export, record keeping, approval, marketing, advertising and promotion of our potential products. Product development and approval within this regulatory framework takes a number of years and involves significant uncertainty combined with the expenditure of substantial resources.

## FDA Approval

We will need to obtain FDA approval of any therapeutic product we plan to market and sell. The testing and approval process will require substantial time, effort and expense. The steps required before our potential products may be marketed in the U.S. include:

*Preclinical Laboratory and Animal Tests.* Preclinical tests include laboratory evaluation of the product and animal studies in specific disease models to assess the potential safety and efficacy of the product and our formulation as well as the quality and consistency of the manufacturing process.

*Submission to the FDA of an Application for an Investigational New Drug Exemption, or IND, Which Must Become Effective Before U.S. Human Clinical Trials May Commence.* The results of the preclinical tests are submitted to the FDA as part of an IND, and the IND becomes effective 30 days following its receipt by the FDA, as long as there are no questions, requests for delay or objections from the FDA. The sponsor of an IND must keep FDA informed during the duration of the study through required amendments and reports, including adverse event reports.

*Adequate and Well-Controlled Human Clinical Trials to Establish the Safety and Efficacy of the Product.* Clinical trials, which test the safety and efficacy of the product in humans, are conducted in accordance with protocols that detail the objectives of the study, the parameters to be used to monitor safety and the efficacy criteria to be evaluated. Any product administered in a U.S. clinical trial must be manufactured in accordance with Current Good Manufacturing Practice (cGMP or GMP). Each protocol is submitted to the FDA as part of the IND.

The protocol for each clinical study must be approved by an independent Institutional Review Board, or IRB, at the institution at which the study is conducted and the informed consent of all participants must be obtained. The IRB will consider, among other things, the existing information on the product, ethical factors, the safety of human subjects, the potential benefits of the therapy and the possible liability of the institution.

Clinical development is traditionally conducted in three sequential phases, which may overlap:

- In Phase I, products are typically introduced into healthy human subjects or into selected patient populations (i.e., patients with a serious disease or condition under study, under physician supervision, as may be the case with our potential products) to test for adverse reactions, dosage tolerance, absorption and distribution, metabolism, excretion and clinical pharmacology.
- Phase II involves studies in a limited population of patients with the disease or condition under study to (i) determine the efficacy of the product for specific targeted indications and populations, (ii) determine optimal dosage and dosage tolerance and (iii) identify possible and common adverse effects and safety risks. (Phase II may be divided into Phase IIa and Phase IIb studies to address these issues.) When a dose is chosen and a candidate product is found to have preliminary evidence of effectiveness, and to have an acceptable safety profile in Phase II evaluations, Phase III trials begin
- Phase III trials are undertaken to develop additional safety and effectiveness information from an expanded patient population, generally at multiple study sites. This information obtained is used to develop a better understanding of the risks and benefits of the product, and to determine appropriate labeling for use.

Based on clinical trial progress and results, FDA may request changes or may require discontinuance of the trials at any time if significant safety issues arise.

*Submission to the FDA of Marketing Authorization Applications.* The results of the preclinical studies and clinical studies are submitted to the FDA in the form of marketing approval authorization applications such as New Drug Applications (NDAs) or Biologics License Applications (BLAs). A BLA is required for biological products subject to licensure under the Public Health Service Act. FDA approval is required prior to commercial sale or shipment of the drug or biologic, and a BLA shall only be approved once FDA examines the product and inspects the manufacturing establishment to assure conformity to the BLA and all applicable regulations. The Center for Biologics Evaluation and Research has regulatory responsibility for review of biologics including cellular products and human cells, tissues and cellular and tissue-based products (HCT/Ps), while the Center for Drug Evaluation and Research is responsible for review of certain therapeutic biological products.

The time for approval may vary widely depending on the specific product and disease to be treated, and a number of factors, including the risk/benefit profile identified in clinical trials, the availability of alternative treatments, and the severity of the disease. Additional animal studies or clinical trials may be requested during the FDA review period, which might add to the review time.

FDA's marketing approval for a product for the treatment of a specific disease or condition in specified populations in certain clinical circumstances, as described on the approved labeling. The approved use is known as the "indication." After FDA approves a product for the initial indication, further clinical trials may be required to gain approval for the use of the product for additional indications. The FDA may also require post-marketing testing and surveillance to monitor for adverse effects, which could involve significant expense, or may elect to grant only conditional approvals.

*Interaction with FDA During the Application and Review Process.* Generally, early interaction and ongoing communication with FDA can facilitate the testing and approval process by helping to clarify FDA expectations, obtain FDA guidance and directions, and resolve disputed issues. In addition, expectations can be formalized in a "Special Protocol Assessment," in which FDA provides official evaluation and guidance on proposed protocols for pivotal Phase III clinical trials. An SPA documents the FDA's agreement that the design and plan analysis of the Phase III study adequately addresses objectives in support of a regulatory submission such as a BLA.

#### **Ongoing Compliance Requirements**

Even after product approval or licensure, there are a number of ongoing FDA regulatory requirements, including:

- Regulatory submissions relating to changes in an NDA or BLA (such as the manufacturing process or labeling) and annual reports;
- Adverse event reporting;
- Compliance with advertising and promotion restrictions that relate to drugs and biologics;
- Compliance with GMP (subject to FDA inspection of facilities to determine compliance);
- Compliance with "Good Tissue Practice" regulations, as applicable. (As defined by regulation, "human cell, tissue and cellular and tissue-based products" (HCT/P), which are subject to additional regulatory requirement, include stem cells that are progenitors of blood cells; however, the FDA makes no explicit statement in the regulations regarding the inclusion of other types of stem cells.)

#### **Other Regulations**

In addition to safety regulations enforced by the FDA, we are also subject to regulations under the Occupational Safety and Health Act, the Environmental Protection Act, the Toxic Substances Control Act and other present and potential future foreign, Federal, state and local regulations. For instance, Product manufacturing establishments located in certain states also may be subject to separate regulatory and licensing requirements.

Outside the U.S., we will be subject to regulations that govern the import of drug products from the U.S. or other manufacturing sites and foreign regulatory requirements governing human clinical trials and marketing approval for our products. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursements vary widely from country to country. In particular, the European Union is revising its regulatory approach to high tech products, and representatives from the U.S., Japan and the European Union are in the process of harmonizing and making more uniform the regulations for the registration of pharmaceutical products in these three markets.

#### **Employees**

As of December 18, 2007, we had 41 full time employees. We believe that our relations with our employees are good. None of our employees is represented by a union or covered by a collective bargaining agreement.

#### **Legal Proceedings**

We are not currently a party to any legal proceedings.

## MANAGEMENT

The following table sets forth certain information regarding our current directors and executive officers.

Our executive officers are elected by the board of directors and serve at the discretion of the board. All of the current directors serve until the next annual stockholders' meeting or until their successors have been duly elected and qualified.

| Name                | Age | Position                                        |
|---------------------|-----|-------------------------------------------------|
| David B. McWilliams | 64  | President, Chief Executive Officer and Director |
| Jimmy C. Williams   | 64  | Chief Operating Officer                         |
| Lynne Hohlfeld      | 47  | Chief Financial Officer                         |
| Donna R. Rill       | 54  | Vice President, Operations                      |
| Gregory H. Bailey   | 52  | Director                                        |
| David Hung          | 50  | Director                                        |
| Lorin J. Randall    | 64  | Director                                        |
| Michael Richman     | 46  | Director                                        |
| Scott B. Seaman     | 52  | Director                                        |

Biographical information for our directors and executive officers is set forth below:

**David B. McWilliams** was appointed President and Director in August 2004. From December 2003 until August 2004, Mr. McWilliams was a private investor. From June 2003 to December 2003, Mr. McWilliams served as president and chief executive officer of Bacterial Barcodes, Inc., a molecular diagnostics company. From May 2002 to June 2003, Mr. McWilliams served as chief executive officer of Signase, Inc., a cancer therapy company. Mr. McWilliams served as chief executive officer of Encysive Pharmaceuticals Inc., a cardiovascular therapeutics company from June 1992 to March 2002. Prior to June 1992, Mr. McWilliams served as chief executive officer of Zonagen Inc., a human reproductive products company. Prior to that time, Mr. McWilliams was a senior executive with Abbott Laboratories and a management consultant with McKinsey & Co. He currently serves as a director of Novelos Therapeutics, Inc. He also serves on the boards of the Texas Healthcare and Bioscience Institute and the Houston Technology Center. Mr. McWilliams received an MBA in finance from the University of Chicago, and a B.A. in chemistry, Phi Beta Kappa, from Washington and Jefferson College.

**Jim C. Williams** has served as our Chief Operating Officer since November 2004. Dr. Williams served as Vice President of Clinical and Regulatory Affairs and as Chief Operating Officer for Opexa Pharmaceuticals, Inc. from February 2004 to November 2004. From August 2003 to February 2004 he was Senior Vice President, Regulatory Affairs and Operations for OSIRIS Therapeutics, Inc., and from November 2002 to August 2003 Dr. Williams was Vice President US Regulatory Affairs for Powderject Vaccines. From September 2001 to November 2002 Dr. Williams served as Assistant Vice President, Worldwide Regulatory Affairs for Wyeth BioPharma. Prior to this Dr. Williams served as Executive Director Regulatory Affairs for Aventis Pasteur from November 1994 to September 2001. Dr. Williams retired in 1994 as Captain from the U.S. Public Health Service with over twenty years of service in applied research and human-use product development which included assignments with the FDA, Center for Biologics Evaluation and Research as a Director Scientist in the Division of Vaccine and Related Product Applications; the US Army Medical Research Institute of Infectious Diseases as Chief, Intracellular Pathogens branch and the National Institutes of Health, National Institutes of Allergy and Infectious Diseases; and at the U.S. Naval Medical Research Institute as a research microbiologist. He has an extensive research and development background, with over 130 publications and four books in the areas of infectious diseases, vaccinology, and oncology. He received his B.S. degree in animal science, M.S. degree in genetics, and Ph.D. degree in biochemistry from Texas A&M University.

**Lynne Hohlfeld** was appointed Chief Financial Officer and Secretary on June 30, 2006. From April 2006 to June 30, 2006 she served as Vice President, Finance of the Company. From September 2004 until April 2006, she was vice president and chief financial officer of Denota Ventures. From August 2000 until March 2004 she was senior vice president, chief operating and financial officer of Bacterial Barcodes, Inc., a Houston-based molecular diagnostics company spun out of the Baylor College of Medicine. She was also senior vice president and chief financial officer of Spectral Genomics of Houston upon its merger with Bacterial Barcodes in March 2004. Ms. Hohlfeld was also employed by LifeCell Corporation from 1997 to 1999, serving as controller. Ms. Hohlfeld's career includes positions at Dixie Chemical Company, Price Waterhouse Coopers, McKenna & Company, and Arthur Andersen. Ms. Hohlfeld received a B.B.A. in accounting from the University of Wisconsin – Madison and is a certified public accountant.

**Donna R. Rill** has served as our Vice President of Operations since November 2004. Ms. Rill has nearly 30 years of extensive clinical and research laboratory experience in cell and gene therapy research and clinical application, immunological techniques and assessment, microbiology, diagnostic virology, experimental design, and method development and implementation. She has expertise in the areas of laboratory development and operations, FDA CGMP and regulatory compliance, quality control/assurance system development, and clinical Standards of Practice. From April 2003 to November 2004 she was the Director of Quality Systems and Process Development at Opexa Pharmaceuticals, Inc. From November 1997 to April 2003 she was the Director of Translational Research for the Center for Cell & Gene Therapy at Baylor College of Medicine. She has worked to design, and qualify GMP Cell & Gene Therapy Laboratories, GMP Vector Production facilities, and Translational Research Labs at St. Jude Children's Research Hospital, Texas Children's Hospital, and Baylor College of Medicine. Ms. Rill has held the positions of Laboratory Director of Cell and Gene Therapy, Translational Research Center for Cell and Gene Therapy, Baylor College of Medicine; Associate Scientist/Lab Manager of the Bone Marrow Transplant Research Laboratory, and the GMP Cell & Gene Therapy Laboratories, St. Jude Children's Research Hospital; Clinical Infectious Disease Laboratory Manager, Education Coordinator and Clinical Instructor, Department of Clinical Laboratory, LeBonheur Children's Medical Center and University of Tennessee Center for the Health Sciences. She received her B.S. in Medical Technology from the University of Tennessee, Memphis.

**Gregory H. Bailey, M.D.** has served as a Director of the Company since April 2006. In January 2007, Dr. Bailey became the managing partner of Palantir Group, Inc., a biotech merchant bank. Dr. Bailey served as a managing director at MDB Capital Group LLC from May 2004 to January 2007. From June 2003 to May 2004 and from 1998 to June 2002, Dr. Bailey served as a managing director of Knightsford Bank Corp. From June 2002 to June 2003, Dr. Bailey served as a managing director of Gilford Securities, Inc. Since May 2005, he also has served as director of Medivation, Inc., a public company focused on acquiring biomedical technologies. Dr. Bailey was a practicing physician for ten years and holds a M.D. from the University of Western Ontario.

**David Hung, M.D.** has served as a Director since May 2006. Dr. Hung has served as the president, chief executive officer and as a director of Medivation, Inc. since December 2004. Dr. Hung also has served as the president and chief executive officer, and member of the board of directors, of Medivation, Inc.'s subsidiary, Medivation Neurology, Inc. since its inception in September 2003. From 1998 until 2001, Dr. Hung was employed by ProDuct Health, Inc., a privately held medical device company, as Chief Scientific Officer (1998-1999) and as president and chief executive officer (1999-2001). From December 2001 to January 2003, Dr. Hung served as a consultant to Cytoc Health Corporation. Dr. Hung received his M.D. from the University of California at San Francisco, and his A.B. in biology and organic chemistry from Harvard College.

**Lorin J. Randall** has served as a Director of the Company since September 2007. Mr. Randall, a financial consultant, was Senior Vice President and Chief Financial Officer of Eximias Pharmaceutical Corporation, a development-stage drug development company, from 2004 to 2006. From 2002-2004, Mr. Randall served as Senior Vice President and Chief Financial Officer of i-STAT Corporation, a publicly-traded manufacturer of medical diagnostic devices which was acquired by Abbott Laboratories in 2004. From 1995 to 2001, Mr. Randall was Vice President and Chief Financial Officer of CFM Technologies, Inc. a publicly traded manufacturer of semiconductor manufacturing equipment. He currently serves on the boards of drug development companies, Acorda Therapeutics, Inc. and Atherys, Inc. Mr. Randall previously served on the board of Quad Systems Corporation, a publicly-traded manufacturer of electronics manufacturing equipment where he served as Chairman of the Audit Committee. Mr. Randall received a B.S. in accounting from The Pennsylvania State University and an M.B.A. from Northeastern University.

**Michael S. Richman** has served as a Director of the Company since June 2006. Mr. Richman is President of Amplimmune, Inc. From April 2002 to May 2007, Mr. Richman served as executive vice president and chief operating officer of MacroGenics, Inc. He joined MacroGenics, Inc. in 2002 with approximately twenty years experience in corporate business development within the biotechnology industry. From 2000 to 2002, Mr. Richman served as senior vice president, corporate development and administration at MedImmune (now Astra Zeneca), and vice president, business development from 1996 to 2000. From 1985 to 1996 Mr. Richman held several management positions at Chiron (now Novartis). Mr. Richman obtained his B.S. in Genetics/Molecular Biology at the University of California at Davis and his MSBA in International Business at San Francisco State University.

**Scott B. Seaman** has served as a Director of since April, 2006. Mr. Seaman currently serves as the executive director and treasurer of the Albert and Margaret Alkek Foundation of Houston, Texas, a private foundation primarily supporting institutions in the Texas Medical Center in Houston, Texas. Since January 1996 to present, Mr. Seaman has served as the chief financial officer of Chaswil Ltd., an investment management company. Since September 1986, Mr. Seaman has served as secretary and treasurer of M & A Properties Inc., a ranching and real estate concern. Since January 2003, Mr. Seaman has served as chairman and, since July 2004, president of ICT Management Inc., the general partner of Impact Composite Technology Ltd., a composite industry supplier. Since May 2004, Mr. Seaman has served as a Member of the Investment Committee of Global Hedged Equity Fund LP, a hedge fund. Mr. Seaman received a bachelor's degree in business administration from Bowling Green State University.

#### **Committees of the Board of Directors**

We currently have an audit committee, a compensation committee, and a nominating and corporate governance committee.

**Audit Committee.** The audit committee of the Board currently consists of Mr. Randall, Mr. Richman and Mr. Seaman, each of whom are independent, non-employee directors. The audit committee selects, on behalf of our board of directors, an independent public accounting firm to be engaged to audit our financial statements, discuss with the independent auditors their independence, review and discuss the audited financial statements with the independent auditors and management and recommend to our board of directors whether the audited financials should be included in our Annual Reports to be filed with the SEC. The audit committee operates pursuant to a written charter, which was adopted in February 2005. During the last fiscal year, the audit committee held four meetings, and the then members of the Audit Committee attended each meeting.

All of the members of the audit committee are non-employee directors who: (1) met the criteria for independence set forth in Rule 10A-3(b)(1) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"); (2) did not participate in the preparation of our financial statements or the financial statements of Opexa Pharmaceuticals, Inc.; and (3) are able to read and understand fundamental financial statements, including a balance sheet, income statement and cash flow statement. The Board has determined that Mr. Randall and Mr. Seaman individually qualify as an "audit committee financial expert" as defined by Item 401(e) of Regulation S-B of the Exchange Act.

**Compensation Committee.** The compensation committee of the board consists of Dr. Hung, Mr. Richman and Mr. Seaman, who are independent directors, as defined in Rule 10A-3 of the Exchange Act. The compensation Committee reviews and approves (1) the annual salaries and other compensation of our executive officers and (2) individual stock and stock option grants. The compensation Committee also provides assistance and recommendations with respect to our compensation policies and practices and assists with the administration of our compensation plans. During the last fiscal year the compensation committee held one meeting, and the then members of the compensation committee attended that meeting.

In addition, the Board has adopted a written charter for the compensation committee, adopted in August 2004, which is available on our website at [www.opexatherapeutics.com](http://www.opexatherapeutics.com).

**Nominating and Corporate Governance Committee.** The nominating and corporate governance committee of the board currently consists of Dr. Hung, Mr. Richman and Mr. Seaman, each of whom are found by the board of directors to be an "independent director" pursuant to the applicable rules and regulations promulgated by the SEC. The nominating and corporate governance committee assists our board of directors in fulfilling its responsibilities by: identifying and approving individuals qualified to serve as members of our board of directors, selecting director nominees for our annual meetings of shareholders, evaluating the performance of our board of directors, and developing and recommending to our board of directors corporate governance guidelines and oversight with respect to corporate governance and ethical conduct. This committee operates pursuant to a written charter adopted in February 2005, which is available on our website at <http://www.opexatherapeutics.com>. During the last fiscal year the nominating and corporate governance committee held one meeting, and the then members of the compensation committee attended that meeting.

**Compensation Committee Interlocks and Insider Participation.** Our compensation committee is comprised of Dr. Hung, Mr. Richman and Mr. Seaman. None of the committee members has ever been an employee of Opexa Therapeutics, Inc. None of our executive officers serve as a member of the board of directors or compensation committee of any entity that has any executive officer serving as a member of our Board of Directors or compensation committee.

#### Compensation of Directors

Mr. McWilliams who is a director and an officer does not receive any compensation for his services as a member of our board of directors. As director's compensation for the period ending April 13, 2007, we approved the issuance of a ten year option to purchase 35,000 shares of common stock to Dr. Bailey, Mr. Seaman and Dr. Hung at an exercise price of \$5.20 per share. On June 16, 2006 we approved the issuance of a ten year option to purchase 35,000 shares of common stock to Mr. Richman at an exercise price of \$9.80 per share. Each of these options vest 50% on the date of grant, 25% on the first anniversary and the remaining 25% on the second anniversary with ninety day acceleration upon the director's termination. We reimburse our directors for travel and lodging expenses in connection with their attendance at board and committee meetings.

In April 2006, the board approved the accelerated vesting of the options held by Messrs. Boveroux, Wesner, Kamin and Frison (former directors who resigned in April 2006) and extended the term to exercise for three years. As compensation for the directors' prior efforts, the board approved the issuance of three year options to purchase 2,000 shares to each of Messrs. Boveroux, Wesner and Kamin and 2,500 shares to Mr. Frison. These options are exercisable at \$5.20 per share and vest in one year.

### EXECUTIVE COMPENSATION

#### Summary Compensation Table

The following tables set forth certain information regarding our CEO and each of our most highly-compensated executive officers whose total annual salary and bonus for the fiscal years ending December 31, 2006 and 2005 exceeded \$100,000.

| Name and Principal Position | Year | Salary (\$) | Options Awards |            |
|-----------------------------|------|-------------|----------------|------------|
|                             |      |             | (S) (4)        | Total (\$) |
| David B. McWilliams (1)     | 2006 | 264,497     | 497,377        | 761,874    |
| CEO, President, Director    | 2005 | 250,000     | 2,527,022      | 2,777,022  |
| Lynne Hohlfeld (2)          | 2006 | 131,250     | 40,839         | 172,089    |
| CFO and Secretary           | 2005 | -           | -              | -          |
| C.William Rouse (3)         | 2006 | 90,000      | 850,819        | 940,819    |
| CFO and Secretary           | 2005 | 180,000     | 151,493        | 331,493    |

(1) Served as chief executive officer since August 2004.

(2) Served as chief financial officer since June 2006.

(3) Served as chief financial officer from May 2004 through June 2006.

(4) Reflects the dollar amount recognized for financial statement reporting purposes for the year ended December 31, 2006 in accordance with FAS 123(R) (but disregarding forfeiture estimates related to service-based vesting conditions) and, accordingly, includes amounts from options granted prior to 2006. See the information appearing under the heading entitled "Stock Options and Warrants" in footnote number 11 to our consolidated financial statements included as part of our Annual report on Form 10-KSB for the year ended December 31, 2006 for certain assumptions made in the valuation of options granted in the years ended December 31, 2006, 2005 and 2004.

#### Grants of Plan Based Awards in 2006

The following table presents each grant of stock options in 2006 to the individuals named in the summary compensation table above.

| Name                | Grant Date | Number of Securities Underlying Options | Exercise Price of Option Awards | Grant Date Fair Value of Options |
|---------------------|------------|-----------------------------------------|---------------------------------|----------------------------------|
| David B. McWilliams | 05/02/06   | 120,000                                 | \$ 5.00                         | \$ 1,140,000                     |
| Lynne Hohlfeld      | 04/20/06   | 22,500                                  | \$ 5.00                         | \$ 130,500                       |
| Lynne Hohlfeld      | 07/12/06   | 12,500                                  | \$ 8.25                         | \$ 103,125                       |
| C.W. Rouse          | 05/02/06   | 65,000                                  | \$ 5.00                         | \$ 617,499                       |
| C.W. Rouse          | 05/02/06   | 10,000                                  | \$ 5.00                         | \$ 95,000                        |

Each of the options in the foregoing table was granted under the Company's June 2004 Compensatory Stock Option Plan.

#### Outstanding Equity Awards at Fiscal Year-End

| Name                | Option Awards                                                       |                                                                       | Option Exercise Price (\$) | Option Expiration Date |
|---------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------|------------------------|
|                     | Number of Securities Underlying Unexercised Options (#) Exercisable | Number of Securities Underlying Unexercised Options (#) Unexercisable |                            |                        |
| David B. McWilliams | -                                                                   | 120,000                                                               | 5.00                       | 05/02/16               |
|                     | 5,000                                                               | -                                                                     | 30.00                      | 01/21/10               |
|                     | 37,000                                                              | -                                                                     | 30.00                      | 08/31/09               |
| Lynne Hohlfeld      | -                                                                   | 22,500                                                                | 5.00                       | 04/20/16               |
|                     | -                                                                   | 12,500                                                                | 8.25                       | 07/12/16               |
| C. William Rouse    | 21,667                                                              | 43,333                                                                | 5.00                       | 05/02/11               |
|                     | 10,000                                                              | -                                                                     | 5.00                       | 05/02/11               |
|                     | 3,333                                                               | 1,667                                                                 | 30.00                      | 01/21/10               |
|                     | 6,667                                                               | 3,333                                                                 | 30.00                      | 04/28/09               |

# **Compensation of Directors**

The following table presents summary information for the year ended December 31, 2006 regarding the compensation of the non-employee members of our board of directors. Mr. Boveroux, Mr. Kamin and Mr. Wesner resigned from the board on April 16, 2006. Mr. Frison resigned from the board at the end of his term on June 16, 2006. Mr. Seaman and Dr. Bailey were appointed to the board on April 16, 2006. Dr. Hung was appointed to the board on May 2, 2006 and Mr. Richman was appointed to the board on June 16, 2006.

| Name              | Fees Earned<br>or Paid in<br>Cash (\$) | Options<br>Awards<br>(\$)(1) | Total<br>(\$) |
|-------------------|----------------------------------------|------------------------------|---------------|
| Gregory H. Bailey | -                                      | 207,812                      | 207,812       |
| David Hung        | -                                      | 207,812                      | 207,812       |
| Michael Richman   | -                                      | 214,375                      | 214,375       |
| Scott B. Seaman   | -                                      | 207,812                      | 207,812       |
| Brooks Boveroux   | 22,000                                 | 59,523                       | 81,523        |
| Paul Frison       | 8,500                                  | 83,101                       | 91,601        |
| Tony Kamin        | 15,500                                 | 360,204                      | 375,704       |
| Terry Wesner      | 9,000                                  | 115,781                      | 124,781       |

(1) Reflects the dollar amount recognized for financial statement reporting purposes for the year ended December 31, 2006 in accordance with FAS 123R (but disregarding forfeiture estimates related to service-based vesting conditions) and, accordingly, includes amounts from options granted prior to 2006. See the information appearing under the heading entitled "Stock Options and Warrants" in footnote number 11 to our consolidated financial statements included as part of our Annual report on Form 10-KSB for the year ended December 31, 2006 for certain assumptions made in the valuation of options granted in the years ended December 31, 2006, 2005 and 2004.

No options were exercised during the fiscal year ended December 31, 2006.

The following table presents the fair value of each grant of stock options in 2006 to non-employee members of our board of directors, computed in accordance with FAS 123R:

| Name              | Grant Date | Number of<br>Securities<br>Underlying<br>Options | Exercise Price<br>of Option<br>Awards | Grant Date<br>Fair Value of<br>Options |
|-------------------|------------|--------------------------------------------------|---------------------------------------|----------------------------------------|
| Gregory H. Bailey | 05/02/06   | 35,000                                           | \$ 5.20                               | \$ 332,500                             |
| David Hung        | 05/02/06   | 35,000                                           | \$ 5.20                               | \$ 332,500                             |
| Michael Richman   | 06/16/06   | 35,000                                           | \$ 9.80                               | \$ 343,000                             |
| Scott B. Seaman   | 05/02/06   | 35,000                                           | \$ 5.20                               | \$ 332,500                             |
| Brooks Boveroux   | 05/02/06   | 2,000                                            | \$ 5.20                               | \$ 19,200                              |
| Paul Frison       | 05/03/06   | 2,500                                            | \$ 5.20                               | \$ 24,000                              |
| Tony Kamin        | 05/03/06   | 2,000                                            | \$ 5.20                               | \$ 19,200                              |
| Terry Wesner      | 05/03/06   | 2,000                                            | \$ 5.20                               | \$ 19,200                              |
| Terry Wesner      | 06/16/06   | 500                                              | \$ 9.80                               | \$ 4,900                               |

#### Executive Employment Contract

David B. McWilliams is employed by us pursuant to an Amended and Restated Employment Agreement entered into on June 15, 2006. Pursuant to the agreement, Mr. McWilliams is employed as the Chief Executive Officer and a Director of the Company is at an annual salary of \$275,000. The term of employment is through June 15, 2008 and may be extended for periods of one year; however, the employment agreement may be terminated at any time voluntarily by him or without cause by the Board. If employment is terminated by the Board without cause, Mr. McWilliams will receive twelve months base salary. Any and all stock options granted to Mr. McWilliams prior to termination that are scheduled to become vested within a 12 month period after termination will be accelerated to become vested as of the termination date. Mr. McWilliams shall have 90 days from termination to exercise any vested stock options.

# SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth, as of December 18, 2007, the number and percentage of outstanding shares of our common stock owned by: (a) each person who is known by us to be the beneficial owner of more than 5% of our outstanding shares of common stock; (b) each of our directors; (c) the named executive officers as defined in Item 402 of Regulation S-B; and (d) all current directors and executive officers, as a group. As of December 18, 2007, there were 6,696,784 shares of common stock issued and outstanding.

Beneficial ownership has been determined in accordance with Rule 13d-3 under the Exchange Act. Under this rule, certain shares may be deemed to be beneficially owned by more than one person (if, for example, persons share the power to vote or the power to dispose of the shares). In addition, shares are deemed to be beneficially owned by a person if the person has the right to acquire shares (for example, upon exercise of an option or warrant) within 60 days of the date as of which the information is provided. In computing the percentage ownership of any person, the amount of shares is deemed to include the amount of shares beneficially owned by such person by reason of such acquisition rights. As a result, the percentage of outstanding shares of any person as shown in the following table does not necessarily reflect the person's actual voting power at any particular date.

To our knowledge, except as indicated in the footnotes to this table and pursuant to applicable community property laws, the persons named in the table have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them.

| Name and Address of Beneficial Owner (1)                      | Number of Shares Owned |      | Percentage of Class |
|---------------------------------------------------------------|------------------------|------|---------------------|
| <b>Beneficial Owners of more than 5%:</b>                     |                        |      |                     |
| SF Capital Partners Ltd. (2)                                  | 989,550                | (3)  | 14.78%              |
| Victory Park Master Fund, Ltd. (4)                            | 668,315                | (5)  | 9.94%               |
| Austin W. Marx and David M. Greenhouse (6)                    | 1,507,479              | (6)  | 20.95%              |
| Albert and Margaret Alkek Foundation (7)                      | 685,973                | (8)  | 9.99%               |
| Alkek & Williams Ventures Ltd. (9)                            | 406,889                | (10) | 5.95%               |
| DLD Family Investments, LLC (11)                              | 361,111                | (12) | 5.29%               |
| <b>Officers and Directors:</b>                                |                        |      |                     |
| Scott B. Seaman (9)                                           | 469,523                | (13) | 6.82%               |
| David B. McWilliams                                           | 95,593                 | (14) | 1.41%               |
| Lynne Hohlfeld                                                | 11,667                 | (15) | *                   |
| Donna Rill                                                    | 20,403                 | (16) | 0.30%               |
| Jimmy C. Williams                                             | 43,452                 | (17) | 0.65%               |
| Gregory H. Bailey                                             | 85,178                 | (18) | 1.26%               |
| David Hung                                                    | 31,250                 | (19) | *                   |
| Lorin Randall                                                 | 10,000                 | (20) | *                   |
| Michael Richman                                               | 31,250                 | (21) | *                   |
| All directors and executive officers as a group (9 persons)** | 798,316                | (22) | 11.11%              |

\* Indicates less than 1%

(1) Unless otherwise indicated, the mailing address of the beneficial owner is c/o Opexa Therapeutics, Inc., 2635 North Crescent Ridge Drive, The Woodlands, Texas 77381.

- (2) Michael A. Roth and Brian J. Stark exercise joint voting and dispositive power over all of the shares of common stock beneficially owned by SF Capital Partners Ltd., but Messrs Roth and Stark disclaim beneficial ownership of such shares. The information in this footnote is primarily based on a Schedule 13F reported with the SEC on June 30, 2007 and other information provided to us. The mailing address of SF Capital Partners Ltd. is c/o Stark Offshore Management, LLC, 3600 South Lake Drive, St. Francis, WI 53235.
- (3) Excludes 500,000 shares of Company common stock underlying the Warrant (“Warrant”) that SF Capital Partners Ltd. is contractually prohibited from exercising to the extent that it would beneficially own in excess of 9.999% of the total number of issued and outstanding shares of common stock after such exercise. “Warrant” refers, in each case to the Warrants dated April 11, 2006.
- (4) Victory Park Capital Advisors, LLC is the investment advisor of Victory Park Master Fund, Ltd., and consequently has voting control and investment discretion over securities held by Victory Park Master Fund, Ltd. Richard Levy is the sole member of Jacob Capital, L.L.C. and sole manager of Victory Park Capital Advisors, LLC. The number of shares beneficially owned excludes 320,000 shares of Company common stock underlying an April 2006 warrant that Victory Park Master Fund, Ltd. is contractually prohibited from exercising to the extent that it would beneficially own in excess of 9.999% of the total number of issued and outstanding shares of common stock after such exercise. The mailing address of the beneficial owner is 227 West Monroe Street, Suite 3900, Chicago, Illinois 60606.
- (5) Excludes 320,000 shares of Company common stock underlying a Warrant that Victory Park is contractually prohibited from exercising to the extent that it would beneficially own in excess of 9.999% of the total number of issued and outstanding shares of common stock after such exercise.
- (6) Consisting of: (i) 331,000 shares of common stock and 165,500 shares of common stock issuable upon the exercise of a Warrant held by Special Situations Fund III QP, L.P., (ii) 28,400 shares of common stock and 14,200 shares of common stock issuable upon the exercise of a Warrant held by Special Situations Fund III, L.P., (iii) 90,600 shares of common stock and 45,300 shares of common stock issuable upon the exercise of a Warrant held by Special Situations Cayman Fund, L.P., (iv) 400,000 shares of common stock and 200,000 shares of common stock issuable upon the exercise of a Warrant held by Special Situations Private Equity Fund, L.P., and (v) 150,000 shares of common stock and 75,000 shares of common stock issuable upon the exercise of a Warrant held by Special Situations Life Sciences Fund, L.P. MGP Advisors Limited (“MGP”) is the general partner of Special Situations Fund III, QP, L.P. and Special Situations Fund III, L.P. AWM Investment Company, Inc. (“AWM”) is the general partner of MGP and the general partner of and investment adviser to the Special Situations Cayman Fund, L.P. MG Advisers, L.L.C. (“MG”) is the general partner of and investment adviser to the Special Situations Private Equity Fund, L.P. LS Advisers, LLC (“LS”) is the general partner and investment adviser to the Special Situations Life Sciences Fund, L.P. Austin W. Marx and David M. Greenhouse are the principal owners of MGP, AWM, MG and LS. Through their control of MGP, AWM, MG and LS, Messrs. Marx and Greenhouse share voting and investment control over the portfolio securities of each of the funds listed above. The information in this footnote is primarily based on a Form 13F reported with the SEC on June 30, 2007 and other information provided to us. The mailing address of Messrs. Marx and Greenhouse is 527 Madison Avenue, Suite 2600, New York, New York 10022.
- (7) This information is based on the Schedule 13D filed with the SEC on April 24, 2006, as amended, by Albert and Margaret Alkek Foundation (the “Foundation”), Alkek & Williams Ventures, Ltd. (“Ventures”), Scott Seaman, DLD Family Investments, LLC, and the other reporting persons named therein the (“Foundation 13D”). The Foundation acts through an investment committee of its board of directors, which includes Mr. Daniel Arnold, Mr. Joe Bailey, Mr. Scott Seaman and Ms. Randa Duncan Williams. Mr. Seaman is the executive director of the Foundation and chairman of the investment committee. The investment committee has sole voting and investment power over all of the shares of common stock beneficially owned by the Foundation. However, pursuant to the Foundation 13D, neither the executive director nor any member of the investment committee may act individually to vote or sell shares of common stock held by the Foundation; therefore, the Foundation has concluded that no individual committee member is deemed to beneficially own, within the meaning of Rule 13d-3 of the Exchange Act, any shares of common stock held by the Foundation solely by virtue of the fact that he or she is a member of the investment committee. Additionally, pursuant to the Foundation 13D, the Foundation has concluded that because Mr. Seaman, in his capacity as executive director or chairman of the investment committee, cannot act in such capacity to vote or sell shares of common stock held by the Foundation without the approval of the investment committee, he is not deemed to beneficially own, within the meaning of Rule 13d-3 of the Exchange Act, any shares of common stock held by the Foundation by virtue of his position as executive director or chairman of the investment committee. The mailing address of the beneficial owner is 1221 McKinney #4525, Houston, Texas 77010.

- (8) Consisting of: (i) 22,222 shares of common stock underlying Series C Warrants exercisable at \$30.00 per share and (ii) 147,084 shares of common stock underlying a Warrant. Excludes 102,916 shares of Company common stock underlying a Warrant that the Foundation is contractually prohibited from exercising to the extent that it would beneficially own in excess of 9.999% of the total number of issued and outstanding shares of common stock after such exercise. Pursuant to the Foundation 13D, the Foundation and other reporting persons named therein may be deemed to constitute a group for purposes of Section 13(d) or Section 13(g) of the Exchange Act. However, the Foundation, Ventures, Chaswil, Ltd., and Mr. Seaman expressly disclaim (i) that, for purposes of Section 13(d) or Section 13(g) of the Exchange Act, they are a member of a group with respect to securities of the Company held by DLD Family Investments, LLC, Mr. Arnold, Mr. Bailey or Ms. Williams and (ii) that they have agreed to act together with DLD Family Investments, LLC, Mr. Arnold, Mr. Bailey or Ms. Williams as a group other than as described in the Foundation 13D. Therefore, this does not include the following securities: (i) 233,334 shares of common stock held by DLD Family Investments, LLC; (ii) 17,778 shares of common stock underlying Series C warrants exercisable at \$30.00 per share held by DLD Family Investments, LLC; (iii) 110,000 shares of common stock underlying a Warrant held by DLD Family Investments, LLC; (iv) 26,667 shares of common stock held by Mr. Arnold; (v) 8,889 shares of common stock underlying Series C warrants exercisable at \$30.00 per share held by Mr. Arnold; (vi) 10,000 shares of common stock underlying a Warrant held by Mr. Arnold; (vii) 10,000 shares of common stock held by Mr. Bailey; (viii) 5,000 shares of common stock underlying a Warrant held by Mr. Bailey; (ix) 263,667 shares of common stock held by Ventures; (x) 18,223 shares of common stock underlying Series C warrants exercisable at \$30.00 per share held by Ventures; (xi) 125,000 shares of common stock underlying a Warrant held by Ventures; (xii) 18,550 Series of common stock held by Mr. Seaman; (xiii) 5,334 shares of common stock underlying Series C warrants exercisable at \$30.00 per share held by Mr. Seaman; and (xiv) 7,500 shares of common stock underlying a Warrant held by Mr. Seaman. The information in this footnote is primarily based on the Foundation 13D and other information provided to us.
- (9) Chaswil, Ltd. is the investment manager of Ventures and holds voting power and investment power with respect to Company securities held by Ventures pursuant to a written agreement. Scott B. Seaman is a principal of Chaswil, Ltd and has shared voting power and shared investment power over all of the shares of common stock beneficially owned by Ventures. The information in this footnote is primarily based on the Foundation 13D and other information provided to us. The mailing address of the beneficial owner is 1221 McKinney #4525, Houston, Texas 77010.
- (10) Consisting of: (i) 263,667 shares of common stock; (ii) 18,223 shares of common stock underlying Series C warrants exercisable at \$30.00 per share and (iii) 125,000 shares of common stock underlying a Warrant.
- (11) Randa Duncan Williams is the principal of DLD Family Investments, LLC and she may be deemed to exercise voting and investment power with respect to such shares. The information in this footnote is primarily based on the Foundation 13D and other information provided to us. The mailing address of the beneficial owner is P.O. Box 4735, Houston, Texas 77210-4735.
- (12) Consisting of: (i) 233,334 shares of common stock held by DLD Family Investments, LLC; (ii) (ii) 17,778 shares of common stock underlying Series C warrants exercisable at \$30.00 per share held by DLD Family Investments, LLC; and (iii) 110,000 shares of common stock underlying the Warrants held by DLD Family Investments, LLC. Ms. Williams is on the investment committee for the Foundation. Pursuant to the Foundation 13D, the Foundation has concluded that no individual committee member is deemed to beneficially own, within the meaning of Rule 13d-3 of the Exchange Act, any shares of common stock held by the Foundation solely by virtue of the fact that he or she is a member of the investment committee. The information in this footnote is primarily based on the Foundation 13D and other information provided to us. The mailing address of the beneficial owner is P.O. Box 4735, Houston, Texas 77210-4735.

- (13) Consisting of: (i) 31,250 shares underlying stock options; (ii) 263,667 shares of common stock held by Ventures; (iii) 18,223 shares of common stock underlying Series C warrants exercisable at \$30.00 per share held by Ventures; (iv) 125,000 shares of common stock underlying the Warrants held by Ventures; (v) 5,334 shares of common stock underlying Series C warrants exercisable at \$30.00 per share; and (vi) 7,500 shares of common stock underlying the Warrants. (See footnote 8 for additional discussion of the information set forth in clauses (ii) through (iv) of the preceding sentence.) Pursuant to the Foundation 13D, this does not include the following shares which Mr. Seaman has determined he does not have beneficial ownership or disclaimed beneficial ownership: (i) 516,667 shares of common stock held by the Foundation; (ii) 22,223 shares of common stock underlying Series C warrants exercisable at \$30.00 per share held by the Foundation; (iii) 250,000 shares of common stock underlying a Warrant held by the Foundation.. (See footnote 7 for additional discussion of the information set forth in clauses (i) through (iii) of the preceding sentence.) The mailing address of the beneficial owner is 1221 McKinney #4545, Houston, Texas 77010.
- (14) Consisting of: (i) 82,000 shares of common stock underlying stock options and (ii) 6,968 shares of common stock underlying Series C warrants exercisable at \$30.00 per share.
- (15) Consisting of 11,667 shares of common stock underlying options.
- (16) Consisting of 17,793 shares of common stock underlying options.
- (17) Consisting of 35,125 shares of common stock underlying options.
- (18) Consisting of: (i) 31,250 shares underlying stock options; (ii) a warrant to purchase 38,928 shares of common stock exercisable at \$5.00 per share; (iii) 10,000 shares of common stock held by Palantir Group, Inc., an entity in which Dr. Bailey has investment and voting power; and (iv) 5,000 shares of common stock underlying a Warrant held by Palantir Group, Inc.
- (19) Consisting of 31,250 shares of common stock underlying options.
- (20) Consisting of 10,000 shares of common stock underlying options.
- (21) Consisting of 31,250 shares of common stock underlying stock options.
- (22) Consisting of: (a) the following held by Mr. Seaman or which Mr. Seaman may be deemed to have voting and investment power (i) 31,250 shares underlying an option; (ii) 263,667 shares of our common stock held by Ventures; (iii) 18,223 shares of our common stock underlying Series C warrants exercisable at \$30.00 per share held by Ventures; (iv) 125,000 shares of our common stock underlying a Warrant held by Ventures; (v) 5,334 shares of our common stock underlying Series C warrants exercisable at \$30.00 per share; and (vi) 7,500 shares of our common stock underlying a Warrant; (b) the following held by Mr. McWilliams (i) 82,000 shares of common stock underlying stock options and (ii) 6,968 shares of our common stock underlying Series C warrants exercisable at \$30.00 per share; (c) the following held by Dr. Bailey or which Dr. Bailey has voting and investment power; (i) 31,250 shares underlying stock options; (ii) 38,928 shares of common stock underlying a Warrant exercisable at \$5.00 per share; (iii) 10,000 shares of common stock held by Palantir Group, Inc.; and (iv) 5,000 shares of commons underlying a Warrant held by Palantir Group, Inc.; (d) 31,250 shares underlying stock options held by Dr. Hung; and (e) 10,000 shares underlying stock options held by Mr. Randall; and (f) 31,250 shares underlying stock options held by Mr. Richman.

## CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Prior to the April 2006 financing, Mr. Seaman, individually owned 5,050 shares of our common stock, and Series C warrants to purchase 4,000 shares of the our common stock. In addition, Ventures, an entity in which Mr. Seaman may be deemed to have voting power and/or investment power, owned 13,667 shares of our common stock, and Series C warrants to purchase 18,223 shares of our common stock. In connection with the April 2006 financing, (i) Mr. Seaman individually purchased 15,000 shares of our common stock and was issued the April 2006 Warrant to purchase 7,500 shares of our common stock, and (ii) Ventures acquired 250,000 shares of our common stock and the April 2006 Warrant to purchase 125,000 shares of our common stock. Pursuant to the Foundation 13D, Mr. Seaman has concluded that he does not have beneficial ownership of the shares of stock held by the Foundation. Additionally, pursuant to the Foundation 13D, Mr. Seaman and other reporting persons named therein may be deemed to constitute a group for purposes of Section 13(d) or Section 13(g) of the Exchange Act. However, the Foundation, Ventures, Chaswil, Ltd., and Mr. Seaman expressly disclaim (i) that, for purposes of Section 13(d) or Section 13(g) of the Exchange Act, they are a member of a group with respect to our securities held by DLD Family Investments, LLC, Mr. Arnold, Mr. Bailey or Ms. Williams and (ii) that they have agreed to act together with DLD Family Investments, LLC, Mr. Arnold, Mr. Bailey or Ms. Williams as a group other than as described in the Foundation 13D. The reporting persons in the Foundation 13D, other than Mr. Seaman and Ventures, own in the aggregate: (i) 786,667 shares of common stock; (ii) 44,445 shares of common stock underlying Series C warrants exercisable at \$30.00 per share; and (iii) 260,000 shares of common stock underlying April 2006 Warrants.

In connection with the April 2006 financing, (i) Palantir Group, Inc., an entity in which Dr. Bailey has voting power and/or investment power, acquired 10,000 shares of our common stock and the April 2006 Warrant to purchase 5,000 shares of the Company's common stock, (ii) MDB Capital Group LLC, an entity in which Dr. Bailey was a managing director until January 2007, but disclaimed any voting power and/or investment power, acquired 200,000 shares of the Company's common stock and the April 2006 Warrant to purchase 100,000 shares of the Company's common stock, and (iii) MDB Capital Group LLC received \$1,723,300 for its services in the April 2006 financing and a three year warrant to purchase 208,330 shares of our common stock at \$5.00 per share, of which MDB Capital Group LLC assigned the right to purchase 38,928 shares of common stock to Dr. Bailey on April 24, 2006.

None of our executive officers or directors and their family members or affiliates is indebted to us in an amount greater than \$60,000.

## DESCRIPTION OF SECURITIES

### Our Capitalization

#### Common Stock

We are authorized to issue 100,000,000 shares of common stock, par value \$0.50 per share. As of December 10, 2007, there were 6,696,784 shares of common stock issued and outstanding. Each share of common stock is entitled to one vote per share for the election of directors and on all other matters submitted to a vote of stockholders. There are no cumulative voting rights. Common stockholders do not have preemptive rights or other rights to subscribe for additional shares, and the common stock is not subject to conversion or redemption. In the event of liquidation, the holders of common stock will share equally in any balance of corporate assets available for distribution to them. Subject to the rights of holders of the any other securities subsequently issued, holders of the common stock are entitled to receive dividends when and as declared by our Board of Directors out of funds legally available. We have not paid any dividends since our inception and have no intention to pay any dividends in the foreseeable future. Any future dividends would be subject to the discretion of the Board of Directors and would depend on, among other things, our future earnings, the operating and financial condition, our capital requirements, and general business conditions.

## Preferred Stock

We are authorized to issue 10,000,000 shares of preferred stock, no par value per share. As of December 10, 2007, no shares of preferred stock are issued and outstanding. Our Board of Directors can, without approval of our stockholders, issue one or more series of preferred stock. If we issue preferred stock, our Board of Directors will determine the number of shares and the rights, preferences and limitations of each series. These rights, preferences and limitations may include specific designations, number of shares, liquidation value, dividend rights, liquidation and redemption rights and voting rights.

## Warrants and Options

**2004 Stock Incentive Plan** . Pursuant to our 2004 Stock Incentive Plan we may issue to our officers, directors, employees and consultants incentive stock options, non-qualified stock options and shares of restricted stock. The plan provides for us to issue up to 1,200,000 shares of its common stock pursuant to awards under the plan. As of December 10, 2007 we had outstanding options, granted pursuant to the plan, to purchase 1,043,925 shares of common stock. The plan is designed to qualify under the Internal Revenue Code as an incentive stock option plan.

**Series E Warrants.** We are offering 4,500,000 Series E warrants in the offering. Each Series E warrant permits the holder to purchase one share of our common stock at an exercise price of \$\_\_\_\_ (125% of the offering price of a share of common stock). The Series E warrants may be exercised at any time commencing the date of issuance until the five year anniversary of issuance at 5:00 p.m., New York City time, on such date.

We may call the Series E warrants for redemption (excluding any Series E warrants issued or issuable to the underwriters under their warrant purchase option), in whole and not in part, at a price of \$.01 per Series E warrant at any time while the Series E warrants are exercisable, upon not less than 30 days' prior written notice of redemption to each warrant holder, and if, and only if, the average of the last sale prices of the common stock equals or exceeds \$\_\_\_\_ *[200% of the then exercise price of the warrants]* per share, for the consecutive 20 trading days ending within 10 business days prior to the notice of redemption to warrant holders. In addition, we may only call the Series E Warrants for redemption if we have an effective registration statement available for the issuance of the shares on exercise or, if we don't have an effective registration statement, we can issue the shares without legend pursuant to Rule 144. In connection with the call provision on the basis of a cashless exercise, we will determine if we will pursue the redemption without a registration statement, and as part of the call notice, indicate the market price at which a cashless exercise will be calculated. The market price will be the highest price of a share of common stock during the period used to determine if we may call the warrants for redemption.

Under the terms of the warrant agreement, we have agreed to take steps to have a prospectus relating to common stock issuable upon exercise of the Series E warrants is current and the common stock has been registered or qualified or deemed to be exempt under the securities laws of the state of residence of the holder of the warrants and use our best efforts to maintain a current prospectus relating to common stock issuable upon exercise of the Series E warrants until the expiration of the warrants. However, we cannot assure you that we will be able to do so, and if we do not maintain a current prospectus related to the common stock issuable upon exercise of the warrants, holders may be unable to exercise their Series E warrants and we may not be required to settle any such warrant exercise. If the prospectus relating to the common stock issuable upon the exercise of the Series E warrants is not current or if the common stock is not qualified or exempt from qualification in the jurisdictions in which the holders of the Series E warrants reside, then the Series E warrant may only be exercised either through a cashless exercise or by a cash exercise after the warrant holder makes such representations that are required by us to ensure compliance with applicable securities laws.

We are also providing for a cashless exercise of the Series E Warrants prior to a redemption if there is no effective registration statement available for a cash exercise, provided that if the shares of common stock to be issued on exercise cannot be delivered without legend because the holding period for Rule 144 has not passed (currently two years), the holder will be required to make the exercise by obtaining a certificate from the warrant agent, and then presenting the physical certificate and the exercise form to the company. Any shares issued under this aspect of the cashless exercise provision, will be issued with a restrictive legend. Therefore, the shares received on such exercise may not be traded unless there is an exemption from registration available. This exemption may be Rule 144, which currently provides that after a one year holding period of the securities being sold, the holder may effect a market sale, through a broker, within volume limitations, provided there is current information about the company available, a notice filing is made by the holder with the Securities and Exchange Commission. Anyone exercising on a cashless basis will have to bear the risk of holding restricted stock for an indefinite period of time. If the cashless exercise is after the holding period of Rule 144, then it may be effected without presentation of a physical certificate and the shares to be issued on such exercise will be not be issued as restricted stock.

In a “cashless exercise”, holders of Series E warrants would pay the exercise price by surrendering his, her or its Series E warrants for that number of shares of common stock equal to the quotient obtained by dividing (x) the product of the number of shares of common stock underlying the warrants, multiplied by the difference between the exercise price of the Series E warrants and the “market price” (defined below) by (y) the market price. The “market price” shall mean the last sale price of the common stock on the date of exercise unless it is in connection with a redemption of the Series E warrants in which case it will be the highest price of a share of common stock during the period used to determine if we may call the warrants for redemption. A cashless exercise in this manner will reduce the number of shares to be issued and thereby lessen the dilutive effect of a warrant redemption, but we will not receive any cash proceeds.

The Series E warrants will be issued in registered form under a warrant agreement between Continental Stock Transfer & Trust Company, as warrant agent, and us. You should review a copy of the warrant agreement, which has been filed as an exhibit to the registration statement of which this prospectus is a part, for a complete description of the terms and conditions applicable to the warrants.

The exercise price and number of shares of common stock issuable on exercise of the Series E warrants may be adjusted in certain circumstances including in the event of a stock dividend, or our recapitalization, reorganization, merger or consolidation. However, the Series E warrants will not be adjusted for issuances of common stock at a price below their respective exercise prices.

The Series E warrants may be exercised upon surrender of the warrant certificate on or prior to the expiration date at the offices of the warrant agent, with the exercise form on the reverse side of the warrant certificate completed and executed as indicated, accompanied by full payment of the exercise price, by certified or official bank check payable to us, for the number of Series E warrants being exercised. The warrant holders do not have the rights or privileges of holders of common stock and any voting rights until they exercise their Series E warrants and receive shares of common stock. After the issuance of shares of common stock upon exercise of the warrants, each holder will be entitled to one vote for each share held of record on all matters to be voted on by stockholders.

No fractional shares will be issued upon exercise of the warrants. If, upon exercise of the warrants, a holder would be entitled to receive a fractional interest in a share, we will, upon exercise, round up to the nearest whole number the number of shares of common stock to be issued to the warrant holder.

**Series C Warrants** . As of December 10, 2007 we have outstanding Series C Warrants to purchase an aggregate of 1,110,548 of our common shares. The Series C Warrants are exercisable at any time at an exercise price of \$30.00 per share and expire on June 17, 2010. The Series C Warrants are exercisable immediately and are only exercisable by “accredited investors” as defined in Regulation D under the Securities Act of 1933.

**April 2006 Warrants** . In an offering consummated April 17, 2006, we issued warrants to acquire an aggregate of 2,300,000 shares. The April 2006 warrants have an exercise price of \$6.50 per share. We have the right to call the April 2006 warrants at any time if the closing bid price per share of our common stock equals or exceeds \$13.00 for twenty consecutive trading days in which the daily average trading volume of the common stock is at least 20,000 shares.

**Placement Agent Warrants** . In connection with the 15% Convertible Exchangeable Note offering and the common stock offerings closed June 17, 2005, we issued to the placement agent and other brokerage firms in those offerings warrants to purchase an aggregate of 46,085 shares of common stock at an exercise price of \$15.00. These warrants are exercisable immediately and will expire June 17, 2010.

**Restrictions on Sales By Certain Existing Shareholders.** A total of 250,000 shares held by Top Tier Investment, LLC and various other shareholders are subject to a lock-up agreement effective November 5, 2004 that limits sales to an aggregate of 31,250 shares of our common stock per 90-day period. There is no termination provision in this lock-up agreement.

**Purchase Option**

We have agreed to sell to the underwriters an option to purchase up to a total of 450,000 shares of common stock at an exercise price of \$ \_\_\_\_ per share, and an option to purchase up to a total of 450,000 Series E warrants at an exercise price of \$.018 per warrant. The common stock and Series E warrants are identical to those offered by this prospectus.

**Dividends**

We have not paid any cash dividends on our common stock to date and do not intend to pay cash dividends prior to the completion of a business combination. The payment of cash dividends in the future will be dependent upon our revenues and earnings, if any, capital requirements and general financial condition. The payment of any dividends is within the discretion of our then board of directors. It is the present intention of our board of directors to retain all earnings, if any, for use in our business operations and, accordingly, our board does not anticipate declaring any dividends in the foreseeable future.

**Our Transfer Agent and Warrant Agent**

The transfer agent for our securities and warrant agent for our Series E warrants is Continental Stock Transfer & Trust Company, 17 Battery Place, New York, New York 10004.

**UNDERWRITING**

In accordance with the terms and conditions contained in the underwriting agreement, we have agreed to sell to each of the underwriters named below for which MDB Capital Group LLC is acting as the representative, severally, and not jointly, and each has agreed to purchase from us on a firm commitment basis the number of the shares of our common stock and of the Series E Warrants offered in this offering set forth opposite their respective names below:

| Underwriters          | Number of Shares | Number of Warrants |
|-----------------------|------------------|--------------------|
| MDB Capital Group LLC |                  |                    |
|                       |                  |                    |
| Total                 | 4,500,000        | 4,500,000          |

A copy of the underwriting agreement has been filed as an exhibit to the registration statement of which this prospectus forms a part.

We have been advised by the representative of the underwriters that the underwriters propose to offer shares of our common stock and Series E warrants directly to the public at the public offering prices set forth on the cover page of this prospectus. Any securities sold by the underwriters to securities dealers will be sold at the public offering prices less a selling concession not in excess of \$ \_\_\_\_per share and \$ \_\_\_\_per common stock purchase warrant. The underwriters may allow, and these selected dealers may re-allow, a concession of not more than \$ \_\_\_\_per share and \$ \_\_\_\_per common stock purchase warrant to other brokers and dealers.

The underwriting agreement provides that the underwriters' obligations to purchase shares of our common stock and Series E warrants are subject to conditions contained in the underwriting agreement. The underwriters are obligated to purchase and pay for all of the common stock and Series E warrants offered by this prospectus, other than those covered by the over-allotment option, if any of these securities are purchased

No action has been taken by us or the underwriters that would permit a public offering of the shares of our common stock and Series E warrants included in this offering in any jurisdiction where action for that purpose is required. None of our securities included in this offering may be offered or sold, directly or indirectly, nor may this prospectus and any other offering material or advertisements in connection with the offer and sales of any of our common stock and warrants be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons who receive this prospectus are advised to inform themselves about and to observe any restrictions relating to this offering of our common stock and Series E warrants and the distribution of this prospectus. This prospectus is neither an offer to sell nor a solicitation of any offer to buy any of our common stock or Series E warrants included in this offering in any jurisdiction where that would not be permitted or legal.

The underwriters have advised us that they do not intend to confirm sales to any accounts over which they exercise discretionary authority.

**Underwriting discount and expenses**

The following table summarizes the underwriting discount to be paid to the underwriters by us.

|                                                                                      | Without<br>Over-Allotment | With<br>Over-Allotment |
|--------------------------------------------------------------------------------------|---------------------------|------------------------|
| Underwriting discount to be paid to the underwriters by us for the common stock      |                           |                        |
| Underwriting discount to be paid to the underwriters by us for the Series E warrants |                           |                        |

We have agreed to pay to the underwriters a non-accountable expense allowance equal to 1% of the gross proceeds from the sale of the shares of common stock and Series E warrants offered by us (excluding the over-allotment), of which \$25,000 has been paid by us as of the date of this prospectus. We have also agreed to pay all expenses in connection with qualifying the shares offered hereby under the laws of the states designated by the underwriters. We estimate the expenses payable by us for this offering to be \$\_\_\_\_\_, including the underwriting discount, or \$\_\_\_\_ if the underwriters' over-allotment option is exercised in full.

**Over-allotment option**

We have granted to the underwriters an option, exercisable not later than 45 days after the date of this prospectus, to purchase up to an additional 675,000 shares of our common stock and 675,000 Series E warrants at the public offering price, less the underwriting discount, set forth on the cover page of this prospectus. The representative may exercise the option solely to cover over-allotments, if any, made in connection with this offering. If any additional shares of our common stock or Series E warrants are purchased pursuant to the over-allotment option, the underwriters will offer these additional shares and Series E warrants on the same terms as those on which the other shares and Series E warrants are being offered hereby.

**Determination of offering price**

The public offering prices of the common stock and Series E warrants were negotiated between us and the representative of the underwriters, based on the trading prior to the offering, among other things. Other factors considered in determining the price of the securities include the history and prospects of the company, the stage of development of our business, our business plans for the future and the extent to which they have been implemented, an assessment of our management, general conditions of the securities markets at the time of the offering and such other factors as were deemed relevant.

### Lock-Up Agreements

We will agree, for a period of 180 days from the date of this prospectus, subject to certain exceptions, not, to offer, sell, contract to sell, pledge or otherwise dispose of, enter into any transaction which is designed to, or might reasonably be expected to, result in the disposition of (whether by actual disposition or effective economic disposition due to cash settlement or otherwise) or file (or participate in the filing of) a registration statement with the Securities and Exchange Commission, or the SEC, in respect of, any shares of capital stock of the Company or any securities convertible into, or exercisable or exchangeable for such capital stock, for the Company's account, without the prior written consent of MDB Capital Group LLC. Certain of our executive officers and directors will agree to substantially similar terms for a period of 180 days pursuant to individual lock-up agreements. The foregoing restrictions on sales will not apply to our ability to sell securities to the underwriter pursuant to the underwriting agreement. In addition, the foregoing restrictions will not apply to our ability to issue our common stock pursuant to our existing stock option and employee stock purchase plans or under outstanding securities convertible into or exercisable for common stock.

### Indemnification

We will agree to indemnify the underwriter against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the underwriters may be required to make for these liabilities.

### Stabilization, Short Positions and Penalty Bids

The underwriters may engage in over-allotment, stabilizing transactions, syndicate covering transactions, and penalty bids or purchases for the purpose of pegging, fixing or maintaining the price of the common stock, in accordance with Regulation M under the Exchange Act of 1934:

- Over-allotment involves sales by the underwriter of shares and warrants in excess of the number of shares and warrants the underwriter is obligated to purchase, which creates a syndicate short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares and warrants over-allotted by an underwriter is not greater than the number of shares and warrants that it may purchase in the over-allotment option. In a naked short position, the number of shares and warrants involved is greater than the number of shares and warrants in the over-allotment option. The underwriter may close out any short position by either exercising its over-allotment option and/or purchasing shares and warrants in the open market.
- Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum;
- Syndicate covering transactions involve purchases of the common stock and warrants in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares and warrants to close out the short position, the underwriter will consider, among other things, the price of shares and warrants available for purchase in the open market as compared to the price at which it may purchase shares through the over-allotment option. If an underwriter sells more shares and warrants than could be covered by the over-allotment option, a naked short position, the position can only be closed out by buying shares and warrants in the open market. A naked short position is more likely to be created if an underwriter is concerned that there could be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering.
- Penalty bids permit an underwriter to reclaim a selling concession from a syndicate member when the shares and warrants originally sold by the syndicate member are purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock and warrants or preventing or retarding a decline in the market price of the common stock or warrants. As a result, the price of the common stock or warrants may be higher than the price that might otherwise exist in the open market. These transactions may be effected on The NASDAQ Capital Market, in the case of the common stock or of the warrants, or otherwise and, if commenced, may be discontinued at any time.

Neither we nor the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the common stock or warrants. In addition, neither we nor the underwriters make any representation that the underwriters will engage in these stabilizing transactions or that any transaction, once commenced, will not be discontinued without notice.

#### **Passive Market Making**

In connection with the offering, the underwriters and selling group members may engage in passive market making transactions in the common stock and Series E warrants on The NASDAQ Capital Market in accordance with Rule 103 of Regulation M under the Securities Exchange Act of 1934 during the period before the commencement of offers or sales of common stock and Series E warrants and extending through the completion of distribution. A passive market maker must display its bids at a price not in excess of the highest independent bid of the security. However, if all independent bids are lowered below the passive market maker's bid, that bid must be lowered when specified purchase limits are exceeded.

#### **Electronic Distribution**

A prospectus in electronic format may be made available on the Internet sites or through other online services maintained by the underwriters and/or selling group members participating in this offering, or by their affiliates. In those cases, prospective investors may view offering terms online and, depending upon the underwriter or selling group member, prospective investors may be allowed to place orders online. The underwriters may agree with us to allocate a specific number of shares and Series E warrants for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriters on the same basis as other allocations.

Other than the prospectus in electronic format, the information on an underwriter's or a selling group member's website and any information contained in any other website maintained by the underwriter or selling group member is not part of the prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or any underwriter or selling group member in its capacity as underwriter or selling group member and should not be relied upon by investors.

#### **Underwriter's Warrants**

We will agree to issue to the underwriters warrants to purchase up to a total each of 450,000 shares of common stock and of 450,000 Series E warrants. The warrants will be exercisable for a period of four years beginning on the [ *first* ] anniversary of the date of issuance of the shares and warrants offered hereby, at an exercise price of \$\_\_\_\_\_ per share and \$\_\_\_\_\_ per warrant (120% of the public prices). The underwriters' warrants and the shares and Series E warrants underlying the warrants may not be sold, transferred, assigned, pledged or hypothecated for a period of [ *one* ] year from the date of this prospectus except to officers of the underwriters and members of the selling group and/or their officers and partners. The exercise prices and number of shares and Series E warrants issuable upon exercise of the underwriters' warrants may be adjusted in certain circumstances including in the event of a stock dividend, or our recapitalization, reorganization, merger or consolidation.

#### **Relationships**

In October 2005, we engaged MDB Capital Group LLC as placement agent for a private financing. In connection with the financing completed April 2006, MDB Capital Group LLC acquired 200,000 shares of the Company's common stock and a Warrant to purchase 100,000 shares of the Company's common stock, and received \$1,723,300 for its services and a three year warrant to purchase 208,330 shares of our common stock at \$5.00 per share.

The underwriter's compensation in connection with this offering is limited to the fees and expenses described above under "Commissions and Expenses" and to its warrants as described above under "Underwriter's Warrants."

We have no other arrangements with any of the underwriters following completion of this offering. The underwriters may, however, from time to time, engage in transactions with or perform services for us in the ordinary course of its business.

#### **LEGAL MATTERS**

The validity of the common stock offered by this prospectus was passed upon for us by Vinson & Elkins L.L.P., Houston, Texas.

#### **EXPERTS**

The consolidated financial statements for the years ended December 31, 2006 and December 31, 2005 and for the period from January 22, 2003 (date of inception) to December 31, 2006 included in this prospectus have been audited by Malone & Bailey, PC, independent registered public accounting firm, as stated in their report appearing herein.

#### **WHERE YOU CAN FIND MORE INFORMATION**

This prospectus is part of a registration statement we file with the Securities and Exchange Commission. This prospectus does not contain all of the information contained in the registration statement and all of the exhibits and schedules thereto. For further information about Opexa Therapeutics, Inc., please see the complete registration statement. Summaries of agreements or other documents in this prospectus are not necessarily complete. Please refer to the exhibits to the registration statement for complete copies of such documents.

We file annual, quarterly and special reports, proxy statements and other information with the Securities and Exchange Commission under the Securities Exchange Act of 1934. You may read and copy the registration statement, including exhibits and schedules filed with it, at the SEC's public reference facilities at 100 F Street N.W., Washington, D.C. 20549. You may obtain information on the operation of the public reference room in Washington, D.C. by calling the Securities and Exchange Commission at 1-800-SEC-0330.

We file information electronically with the Securities and Exchange Commission. Our Securities and Exchange Commission filings also are available from the Securities and Exchange Commission's Internet site at <http://www.sec.gov>, which contains reports, proxy and information statements and other information regarding issuers that file electronically.

## GLOSSARY OF TERMS

|                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Antigen:                                      | any substance that when introduced into the body can stimulate the production of antibodies and combine specifically with them.                                                                                                                                                                                                                                                                                                         |
| Attenuated:                                   | inactivated, rendered harmless (e.g., killed viruses used to make a vaccine). Some of the ways in which viruses and other pathogens may be attenuated are by heat, chemical, or radiation treatment.                                                                                                                                                                                                                                    |
| Autoreactive:                                 | describes immune cells that mount a response against the body's own cells or tissues.                                                                                                                                                                                                                                                                                                                                                   |
| Beta( $\beta$ ) Cells (Islets of Langerhans): | cells in the pancreas that produce insulin in response to the presence of glucose (sugar) in the bloodstream. The failure of insulin production results in the disease called diabetes                                                                                                                                                                                                                                                  |
| Lymphocyte:                                   | any of various white blood cells, including B cells and T cells, that function in the body's immune system by recognizing and deactivating antigens. B cells act by stimulating the production of antibodies. T cells contain receptors on their cell surfaces that are capable of recognizing and binding to specific antigens. Lymphocytes are found in the lymph nodes and spleen and circulate continuously in the blood and lymph. |
| Myelin:                                       | white, fatty material that sheathes nerves and enhances the transmission of signals between the brain and the body.                                                                                                                                                                                                                                                                                                                     |
| Stem cell:                                    | an unspecified cell that upon division replaces its own numbers and also gives rise to cells that differentiate further into one or more specialized cell type.                                                                                                                                                                                                                                                                         |
| T cell:                                       | any of several closely related lymphocytes, developed in the thymus, which circulate in the blood and lymph and orchestrate the immune system's response to infected or malignant cells.                                                                                                                                                                                                                                                |

## Index To Financial Statements

### Audited Financial Statements for years ended December 31, 2006 and 2005 and the period from January 22, 2003 (Inception) through December 31, 2006

|                                                                                                                                                                            |     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Report of Independent Registered Public Accounting Firm (RESTATED)                                                                                                         | F-2 |
| Consolidated Balance Sheet as of December 31, 2006 (RESTATED)                                                                                                              | F-3 |
| Consolidated Statements of Expenses for the years ended December 31, 2006 and 2005 and the period from January 22, 2003 (Inception) through December 31, 2006 (RESTATED)   | F-4 |
| Consolidated Statement of Changes in Stockholders Equity from January 22, 2003 (Inception) through December 31, 2006 (RESTATED)                                            | F-5 |
| Consolidated Statements of Cash Flows for the years ended December 31, 2006 and 2005 and the period from January 22, 2003 (Inception) through December 31, 2006 (RESTATED) | F-6 |
| Notes to Consolidated Financial Statements                                                                                                                                 | F-7 |

### Unaudited Financial Statements for the three months and nine months ended September 30, 2007

|                                                                                                                                                                           |      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Balance Sheets as of September 30, 2007 and December 31, 2006 (RESTATED)                                                                                                  | F-21 |
| Statements of Expenses for the Three and Nine Months Ended September 30, 2007 and 2006 and the Period from January 22, 2003 (Inception) to September 30, 2007 ( RESTATED) | F-22 |
| Statements of Cash Flows for the Nine Months Ended September 30, 2007 and 2006 and the Period from January 22, 2003 (Inception) to September 30, 2007 (RESTATED)          | F-23 |
| Notes to Financial Statements                                                                                                                                             | F-24 |

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors  
Opexa Therapeutics, Inc.  
(formerly PharmaFrontiers Corp.)  
(a development stage company)  
The Woodlands, Texas

We have audited the accompanying consolidated balance sheet of Opexa Therapeutics, Inc. (a development stage company), as of December 31, 2006 and the related consolidated statements of expenses, changes in stockholders' equity and cash flows for the years ended December 31, 2006 and 2005 and the period from January 22, 2003 (Inception) through December 31, 2006. These consolidated financial statements are the responsibility of Opexa's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall consolidated 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 Opexa as of December 31, 2006 and the consolidated results of its operations and its cash flows for the periods described in conformity with accounting principles generally accepted in the United States of America.

As discussed in Note 2 to the financial statements, the Company has restated its financial statements for the years ended December 31, 2006 and 2005 and the period from January 22, 2003 (Inception) through December 31, 2006 as they relate to the accounting for acquired in process research and development.

As discussed in Note 15 to the consolidated financial statements, the accompanying consolidated financial statements have been prepared assuming that Opexa will continue as a going concern. Opexa requires significant amount of cash in its operations and does not have sufficient cash to fund its operations for the next twelve months, which raises substantial doubt about its ability to continue as a going concern. Management's plans regarding those matters are also described in Note 15. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ MALONE & BAILEY, PC  
www.malone-bailey.com  
Houston, Texas

March 14, 2007  
Except for Note 15 which is dated November 2, 2007  
Except for Notes 2, 4, 6 and 12 which are dated November 29, 2007

OPEXA THERAPEUTICS, INC.  
(a development stage company)  
(formerly PharmaFrontiers Corp.)  
CONSOLIDATED BALANCE SHEET (RESTATED)

| Assets                                                                                                 | Restated<br>December 31,<br>2006 |
|--------------------------------------------------------------------------------------------------------|----------------------------------|
| Current assets:                                                                                        |                                  |
| Cash and cash equivalents                                                                              | \$ 12,019,914                    |
| Investment in marketable securities                                                                    | 2,952,096                        |
| Other current assets                                                                                   | 472,881                          |
| Total current assets                                                                                   | <u>15,444,891</u>                |
| Property & equipment, net accumulated depreciation of \$395,284                                        | 1,361,377                        |
| Total assets                                                                                           | <u><u>\$ 16,806,268</u></u>      |
| <b>Liabilities and Stockholders' Equity</b>                                                            |                                  |
| Current liabilities:                                                                                   |                                  |
| Accounts payable                                                                                       | \$ 868,862                       |
| Stock payable                                                                                          | 112,440                          |
| Accrued expenses                                                                                       | 135,069                          |
| Note payable                                                                                           | 1,500,000                        |
| Current maturity of long term debt                                                                     | 14,080                           |
| Derivative liability                                                                                   | 6,656,677                        |
| Total current liabilities                                                                              | <u>9,287,128</u>                 |
| Long term liabilities:                                                                                 |                                  |
| Loan payable                                                                                           | 96,242                           |
| Total liabilities                                                                                      | <u>9,383,370</u>                 |
| Commitments and contingencies                                                                          | -                                |
| Stockholders' equity:                                                                                  |                                  |
| Convertible preferred stock, no par value, 10,000,000 shares authorized, none issued and outstanding   | -                                |
| Common stock, \$0.50 par value, 100,000,000 shares authorized, 6,696,784 shares issued and outstanding | 3,348,351                        |
| Additional paid in capital                                                                             | 63,118,180                       |
| Deficit accumulated during the development stage                                                       | (59,043,633)                     |
| Total stockholders' equity                                                                             | <u>7,422,898</u>                 |
| Total liabilities and stockholders' equity                                                             | <u><u>\$ 16,806,268</u></u>      |

See accompanying summary of accounting policies  
and notes to consolidated financial statements

OPEXA THERAPEUTICS, INC.  
(a development stage company)  
(formerly PharmaFrontiers Corp.)  
**CONSOLIDATED STATEMENTS OF EXPENSES (RESTATED)**  
Years ended December 31, 2006 and 2005 and the  
Period from January 22, 2003 (Inception) to December 31, 2006

|                                     | Restated<br>2006       | Restated<br>2005       | Restated<br>Inception<br>through<br>2006 |
|-------------------------------------|------------------------|------------------------|------------------------------------------|
| Research and development            | \$ 7,850,373           | \$ 5,159,853           | \$ 40,685,680                            |
| General and administrative          | 5,461,047              | 6,259,075              | 14,206,469                               |
| Depreciation                        | 174,117                | 98,080                 | 285,255                                  |
| Loss on disposal of assets          | 2,376                  | 22,810                 | 482,309                                  |
| Operating loss                      | <u>(13,487,913)</u>    | <u>(11,539,818)</u>    | <u>(55,659,713)</u>                      |
| Interest income                     | 688,299                | 81,930                 | 776,221                                  |
| Other income                        | 46,450                 | 28,174                 | 77,003                                   |
| Gain on derivative liability        | 104,978                | 3,896,841              | 4,001,819                                |
| Interest expense                    | (984)                  | (7,323,851)            | (8,238,963)                              |
| Net loss                            | <u>\$ (12,649,170)</u> | <u>\$ (14,856,724)</u> | <u>\$ (59,043,633)</u>                   |
| Basic and diluted loss per share    | \$ (2.35)              | \$ (9.49)              | N/A                                      |
| Weighted average shares outstanding | 5,390,910              | 1,564,837              | N/A                                      |

See accompanying summary of accounting policies  
and notes to consolidated financial statements

OPEXA THERAPEUTICS, INC  
(a development stage company)  
(formerly PharmaFrontiers Corp.)  
CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY (RESTATED)  
Period from January 22, 2003 (Inception) through December 31, 2006

|                                                                         | Common Stock |              | Additional<br>Paid in<br>Capital | Accumulated<br>Deficit | Total        |
|-------------------------------------------------------------------------|--------------|--------------|----------------------------------|------------------------|--------------|
|                                                                         | Shares       | Par          |                                  |                        |              |
| Shares issued for cash                                                  | 525,000      | \$ 262,500   | \$ (261,500)                     | \$ -                   | \$ 1,000     |
| Shares repurchased and cancelled                                        | (170,625)    | (85,313)     | 84,988                           | -                      | (325)        |
| Discount related to:                                                    |              |              |                                  |                        |              |
| beneficial conversion feature                                           | -            | -            | 28,180                           | -                      | 28,180       |
| warrants attached to debt                                               | -            | -            | 28,180                           | -                      | 28,180       |
| Net loss                                                                | -            | -            | -                                | (126,003)              | (126,003)    |
| Balances at December 31, 2003                                           | 354,375      | 177,187      | (120,152)                        | (126,003)              | (68,968)     |
| Shares issued for:                                                      |              |              |                                  |                        |              |
| cash                                                                    | 2,250        | 1,125        | 7,875                            | -                      | 9,000        |
| services                                                                | 206,500      | 103,250      | 745,750                          | -                      | 849,000      |
| license                                                                 | 24,269       | 12,135       | 414,940                          | -                      | 427,075      |
| reverse merger with Sportan                                             | 99,740       | 49,870       | (197,603)                        | -                      | (147,733)    |
| acquisition of Opexa                                                    | 250,000      | 125,000      | 23,625,000                       | -                      | 23,750,000   |
| additional shares attached to convertible debt                          | 16,100       | 8,050        | 280,316                          | -                      | 288,366      |
| conversion of convertible notes                                         | 60,750       | 30,375       | 217,995                          | -                      | 248,370      |
| Shares cancelled                                                        | (8,000)      | (4,000)      | 4,000                            | -                      | -            |
| Discount related to:                                                    |              |              |                                  |                        |              |
| beneficial conversion feature                                           | -            | -            | 855,849                          | -                      | 855,849      |
| warrants attached to debt                                               | -            | -            | 1,848,502                        | -                      | 1,848,502    |
| Option expense                                                          | -            | -            | 123,333                          | -                      | 123,333      |
| Net loss as restated                                                    | -            | -            | -                                | (31,411,736)           | (31,411,736) |
| Balances at December 31, 2004, restated                                 | 1,005,984    | 502,992      | 27,805,805                       | (31,537,739)           | (3,228,942)  |
| Shares issued for:                                                      |              |              |                                  |                        |              |
| cash, net of offering costs                                             | 389,451      | 194,725      | 5,151,492                        | -                      | 5,346,217    |
| convertible debt                                                        | 611,026      | 305,513      | 7,343,933                        | -                      | 7,649,446    |
| debt                                                                    | 2,300        | 1,150        | 159,850                          | -                      | 161,000      |
| license                                                                 | 29,194       | 14,597       | 1,853,787                        | -                      | 1,868,384    |
| services                                                                | 24,000       | 12,000       | 1,000,400                        | -                      | 1,012,400    |
| Discount related to:                                                    |              |              |                                  |                        |              |
| beneficial conversion feature                                           | -            | -            | 831,944                          | -                      | 831,944      |
| warrants attached to debt                                               | -            | -            | 1,433,108                        | -                      | 1,433,108    |
| Option expense                                                          | -            | -            | 2,487,741                        | -                      | 2,487,741    |
| Warrant expense                                                         | -            | -            | 2,373,888                        | -                      | 2,373,888    |
| Transition of warrants from equity instruments to liability instruments | -            | -            | (10,658,496)                     | -                      | (10,658,496) |
| Net loss as restated                                                    | -            | -            | -                                | (14,856,724)           | (14,856,724) |
| Balances at December 31, 2005, restated                                 | 2,061,955    | 1,030,977    | 39,783,452                       | (46,394,463)           | (5,580,034)  |
| Shares issued for:                                                      |              |              |                                  |                        |              |
| cash, net of offering costs                                             | 4,600,000    | 2,300,000    | 18,853,519                       | -                      | 21,153,519   |
| debt                                                                    | 34,829       | 17,374       | 162,626                          | -                      | 180,000      |
| Option expense                                                          | -            | -            | 2,749,617                        | -                      | 2,749,617    |
| Warrant expense                                                         | -            | -            | 1,568,966                        | -                      | 1,568,966    |
| Net loss as restated                                                    | -            | -            | -                                | (12,649,170)           | (12,649,170) |
| Balances at December 31, 2006, restated                                 | 6,696,784    | \$ 3,348,351 | \$ 63,118,180                    | \$ (59,043,633)        | \$ 7,422,898 |

See accompanying summary of accounting policies  
and notes to consolidated financial statements

OPEXA THERAPEUTICS, INC.  
(a development stage company)  
(formerly PharmaFrontiers Corp.)  
CONSOLIDATED STATEMENTS OF CASH FLOWS (RESTATED)  
Years ended December 31, 2006 and 2005 and the  
Period from January 22, 2003 (Inception) to December 31, 2006

|                                                                                             | Restated<br>2006     | Restated<br>2005    | Restated<br>Inception<br>through<br>2006 |
|---------------------------------------------------------------------------------------------|----------------------|---------------------|------------------------------------------|
| Cash flows from operating activities                                                        |                      |                     |                                          |
| Net loss                                                                                    | \$ (12,649,170)      | \$ (14,856,724)     | \$ (59,043,633)                          |
| Adjustments to reconcile net loss to net cash used in operating activities                  |                      |                     |                                          |
| Stock payable for acquired research and development                                         | 112,440              |                     | 112,440                                  |
| Stock issued for acquired research and development                                          |                      | 1,988,897           | 26,286,589                               |
| Stock issued for services                                                                   |                      |                     | 1,861,400                                |
| Stock issued for debt in excess of principal                                                | -                    | 109,070             | 109,070                                  |
| Amortization of discount on notes payable due to warrants and beneficial conversion feature | -                    | 5,516,638           | 6,313,205                                |
| Unrealized gain on marketable securities                                                    | (25,912)             | -                   | (25,912)                                 |
| (Gain) on derivative liability                                                              | (104,978)            | (3,896,841)         | (4,001,819)                              |
| Depreciation                                                                                | 174,117              | 98,080              | 285,255                                  |
| Debt financing costs                                                                        | -                    | 365,910             | 365,910                                  |
| Option and warrant expense                                                                  | 4,318,583            | 4,861,629           | 9,303,545                                |
| Loss on disposition of fixed assets                                                         | 2,376                | 22,810              | 482,309                                  |
| Changes in:                                                                                 |                      |                     |                                          |
| Accounts payable                                                                            | 359,397              | 26,360              | 444,561                                  |
| Marketable securities                                                                       | (2,926,184)          | -                   | (2,926,184)                              |
| Prepaid expenses                                                                            | (340,876)            | (88,185)            | (468,011)                                |
| Accrued expenses                                                                            | (105,240)            | 23,655              | (50,259)                                 |
| Other assets                                                                                | -                    | (388,210)           | (388,210)                                |
| Net cash used in operating activities                                                       | <u>(11,185,447)</u>  | <u>(6,216,911)</u>  | <u>(21,339,744)</u>                      |
| Cash flows from investing activities                                                        |                      |                     |                                          |
| Purchase of property & equipment                                                            | (619,147)            | (258,903)           | (1,051,054)                              |
| Net cash used in investing activities                                                       | <u>(619,147)</u>     | <u>(258,903)</u>    | <u>(1,051,054)</u>                       |
| Cash flows from financing activities                                                        |                      |                     |                                          |
| Common stock sold for cash, net of offering costs                                           | 21,153,520           | 5,346,217           | 26,509,737                               |
| Common stock repurchased and canceled                                                       |                      | -                   | (325)                                    |
| Proceeds from debt                                                                          | 110,322              | 2,896,885           | 7,964,913                                |
| Repayments on notes payable                                                                 | -                    | (58,614)            | (63,614)                                 |
| Net cash provided by financing activities                                                   | <u>21,263,842</u>    | <u>8,184,488</u>    | <u>34,410,711</u>                        |
| Net change in cash and cash equivalents                                                     | 9,459,248            | 1,708,674           | 12,019,914                               |
| Cash and cash equivalents at beginning of period                                            | 2,560,666            | 851,992             | -                                        |
| Cash and cash equivalents at end of period                                                  | <u>\$ 12,019,914</u> | <u>\$ 2,560,666</u> | <u>\$ 12,019,914</u>                     |
| Cash paid for:                                                                              |                      |                     |                                          |
| Income tax                                                                                  | \$ -                 | \$ -                | \$ -                                     |
| Interest                                                                                    | -                    | -                   | 429                                      |
| NON-CASH TRANSACTIONS                                                                       |                      |                     |                                          |
| Issuance of common stock to Sportan shareholders                                            | -                    | -                   | 147,733                                  |
| Issuance of common stock for accrued interest                                               | -                    | 525,513             | 525,513                                  |
| Conversion of notes payable to common stock                                                 | -                    | 6,159,610           | 6,407,980                                |
| Conversion of accrued liabilities to common stock                                           | 180,000              | 17,176              | 197,176                                  |
| Conversion of accounts payable to note payable                                              | -                    | -                   | 93,364                                   |
| Discount on convertible notes relating to:                                                  |                      |                     |                                          |
| - warrants                                                                                  | -                    | 1,433,108           | 3,309,790                                |
| - beneficial conversion feature                                                             | -                    | 831,944             | 1,715,973                                |
| - stock attached to notes                                                                   | -                    | 999,074             | 1,287,440                                |
| Fair value of derivative instrument                                                         | -                    | 6,761,655           | 6,761,655                                |

See accompanying summary of accounting policies  
and notes to consolidated financial statements

**OPEXA THERAPEUTICS, INC.**  
**(a development stage company)**  
**(formerly PharmaFrontiers Corp.)**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**NOTE 1 – SUMMARY OF ACCOUNTING POLICIES**

Opexa Therapeutics, Inc. ( “ Opexa ” ), was incorporated in Texas in March, 1991 as a bio-pharmaceutical company engaged in developing autologous personalized cell therapies. During the development stage, Opexa acquired the worldwide license to technology developed at Argonne National Laboratory, a U.S. Department of Energy Laboratory Operated by the University of Chicago ( “ Argonne ” ). This is an exclusive license to a stem cell technology in which adult multi-potent stem cells are derived from monocytes obtained from the patient ’ s own blood (the “ License ” ). A patent application was filed in November 2003, with the United States Patent and Trade Office regarding the technology involved in the License.

On October 7, 2004, Opexa acquired all of the outstanding stock of Opexa Pharmaceuticals, Inc., an entity that has the exclusive worldwide license from Baylor College of Medicine to an individualized T-cell therapeutic vaccine, Tovaxin <sup>™</sup> , which is in U.S. FDA Phase IIb human clinical trials to evaluate its safety and effectiveness in treating multiple sclerosis.

**Development Stage Company.** The Company is considered to be in the Development stage as defined in Statement of Financial Accounting Standards No. 7. The Company has no revenues to date.

**Basis of Presentation.** In June 2006, the Company (i) changed its name to Opexa Therapeutics, Inc. from PharmaFrontiers Corp. and (ii) effected a one-for-ten reverse common stock split. All references to number of shares and per share amounts reflect such split as if it occurred on the first day of the first period presented. The consolidated financial statements include the accounts of Opexa Therapeutics, Inc. and its wholly-owned subsidiary, Opexa Pharmaceuticals, Inc. Significant inter-company accounts and transactions have been eliminated.

**Reclassifications.** Certain prior year amounts have been reclassified to conform with the current year presentation .

**Use of Estimates in Financial Statement Preparation.** The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

**Cash, Cash Equivalents and Marketable Securities.** For purposes of the statements of cash flows, cash equivalents include all highly liquid investments with original maturities of three months or less. Marketable securities include investments with maturities greater than three months but less than one year. The primary objectives for the fixed income investment portfolio are liquidity and safety of principal. Investments are made with the objective of achieving the highest rate of return consistent with these two objectives. Opexa's investment policy limits investments to certain types of instruments issued by institutions primarily with investment grade credit ratings and places restrictions on maturities and concentration by type and issuer.

**Long-lived Assets.** Property and equipment are stated on the basis of historical cost less accumulated depreciation. Depreciation is provided using the straight-line method over the estimated useful lives of the assets. Major renewals and improvements are capitalized, while minor replacements, maintenance and repairs are charged to current operations. Impairment losses are recorded on long-lived assets used in operations when indicators of impairment are present and the undiscounted cash flows estimated to be generated by those assets are less than the assets ’ carrying amount.

**Income Taxes.** Income tax expense is based on reported earnings before income taxes. Deferred income taxes reflect the impact of temporary differences between assets and liabilities recognized for consolidated financial reporting purposes and such amounts recognized for tax purposes, and are measured by applying enacted tax rates in effect in years in which the differences are expected to reverse.

**Stock-Based Compensation.** On January 1, 2006, Opexa began recording compensation expense associated with stock options and other forms of equity compensation in accordance with Statement of Financial Accounting Standards No. 123R, *Share-Based Payment*, as interpreted by SEC Staff Accounting Bulletin No. 107. Prior to January 1, 2006, Opexa had accounted for stock options according to the provisions of Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees*, and related interpretations, and therefore no related compensation expense was recorded for awards granted with no intrinsic value. Opexa adopted the modified prospective transition method provided for under SFAS No. 123R, and, consequently, have not retroactively adjusted results from prior periods. Under this transition method, compensation cost associated with stock options recognized in the first quarter of fiscal 2006 includes the quarterly amortization related to the remaining unvested portion of all stock option awards granted prior to January 1, 2006, based on the grant date fair value estimated in accordance with the original provisions of SFAS No. 123.

The following table illustrates the effect on net loss and net loss per share if Opexa had applied the fair value provisions of FASB Statement No. 123 to stock-based employee compensation prior to January 1, 2006:

|                      |                                                                        | 2005            | Inception through 2006 |
|----------------------|------------------------------------------------------------------------|-----------------|------------------------|
| Net loss as reported |                                                                        | \$ (14,856,724) | \$ (59,043,633)        |
| Add:                 | stock based compensation determined under intrinsic value based method | 2,487,741       | 2,611,074              |
| Less:                | stock based compensation determined under fair value based method      | (4,264,013)     | (4,417,377)            |
| Pro forma net loss   |                                                                        | \$ (16,632,996) | \$ (60,849,936)        |
| Basic and diluted    |                                                                        |                 |                        |
|                      | Net loss per common share                                              | \$ (10.63)      | N/A                    |
|                      | As reported                                                            | \$ (9.49)       | N/A                    |

**Research and Development.** Research and development expenses include salaries, related employee expenses, clinical trial expenses, research expenses, consulting fees, and laboratory costs. All costs for research and development activities are expensed as incurred. Opexa expenses the costs of licenses of patents and the prosecution of patents until the issuance of such patents and the commercialization of related products is reasonably assured. Acquired in process research and development that does not have a future alternative use is expensed when acquired. Research and development expense for the year ended December 31, 2006 was 7,850,372, as compared to \$5,159,853 for the year ended December 31, 2005.

**Accounting for Derivative Instruments.** Statement of Financial Accounting Standard ("SFAS") No. 133, "Accounting for Derivative Instruments and Hedging Activities," as amended, requires all derivatives to be recorded on the balance sheet at fair value. Opexa's derivatives are separately valued and accounted for on our balance sheet. Fair values for securities traded in the open market and derivatives are based on quoted market prices. Where market prices are not readily available, fair values are determined using market based pricing models incorporating readily observable market data and requiring judgment and estimates.

The pricing model Opexa used for determining fair values of its derivatives is the Black Scholes Pricing Model. Valuations derived from this model are subject to ongoing internal and external verification and review. The model uses market-sourced inputs such as interest rates, exchange rates and option volatilities. Selection of these inputs involves management's judgment and may impact net income.

In September 2000, the Emerging Issues Task Force ("EITF") issued EITF 00-19, "Accounting for Derivative Financial Instruments Indexed to and Potentially Settled in, a Company's Own Stock," ("EITF 00-19") which Requires freestanding contracts that are settled in a company's own stock, including common stock warrants, to be designated as an equity instrument, asset or a liability. Under the provisions of EITF 00-19, a contract designated as an asset or a liability must be carried at fair value on a company's balance sheet, with any changes in fair value recorded in the company's results of operations. A contract designated as an equity instrument must be included within equity, and no fair value adjustments are required.

In December 2006, the FASB issued FASB Staff Position No. EITF 00-19-2, Accounting for Registration Payment Arrangements (EITF 00-19-2). EITF 00-19-2 addresses an issuer's accounting for registration payment arrangements. It specifies that the contingent obligation to make future payments or otherwise transfer consideration under a registration payment arrangement, whether issued as a separate agreement or included as a provision of a financial instrument or other agreement, should be separately recognized and measured in accordance with FASB Statement No. 5, Accounting for Contingencies. The guidance in EITF 00-19-2 amends FASB Statements No. 133, Accounting for Derivative Instruments and Hedging Activities, and No. 150, Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity, and FASB Interpretation No. 45, Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others, to include scope exceptions for registration payment arrangements. EITF 00-19-2 also requires additional disclosure regarding the nature of any registration payment arrangements, alternative settlement methods, the maximum potential amount of consideration and the current carrying amount of the liability, if any. This EITF is effective immediately for registration payment arrangements and the financial instruments subject to those arrangements that are entered into or modified subsequent to the date of issue of this EITF. For registration payment arrangements and financial instruments subject to those arrangements that were entered into prior to the issuance of this EITF, this is effective for financial statements issued for fiscal years beginning after December 15, 2006, and interim periods within those fiscal years. The impact of implementing EITF 00-19-2 in the fiscal year 2007 will result in a cumulative effect of a change in accounting principle with a credit to beginning retained earnings of \$6,656,677 and a reversal of the same amount to the derivative liability account.

#### **Recently Issued Accounting Pronouncements.**

In February 2006, the FASB issued SFAS 155, "Accounting for Certain Hybrid Financial Instruments," which amends SFAS 133, "Accounting for Derivative Instruments and Hedging Activities" and SFAS 140, "Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities." SFAS 155 simplifies the accounting for certain derivatives embedded in other financial instruments by allowing them to be accounted for as a whole if the holder elects to account for the whole instrument on a fair value basis. SFA 155 also clarifies and amends certain other provisions of SFAS 133 and SFAS 140. SFAS 155 is effective for all financial instruments acquired, issued or subject to a remeasurement event occurring in fiscal years beginning after September 15, 2006 and is therefore required to be adopted by the Company as of October 1, 2006. Management is still evaluating what effect this will have on the Company's financial statements.

In July 2006, the FASB issued Interpretation No. 48 (FIN No. 48), "Accounting for Uncertainty in Income Taxes." This interpretation requires recognition and measurement of uncertain income tax positions using a "more-likely-than-not" approach. FIN No. 48 is effective for fiscal years beginning after December 15, 2006. Management is still evaluating what effect this will have on the Company's financial statements.

In September 2006, the FASB issued SFAS 157, "Fair Value Measurements." This standard defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles, and expands disclosure about fair value measurements. This statement is effective for financial statements issued for fiscal years beginning after November 15, 2007. Early adoption is encouraged. The adoption of SFAS 157 is not expected to have a material impact on the financial statements.

There were various other accounting standards and interpretations issued during 2006 and 2005, none of which are expected to have a material impact on the Company's consolidated financial position, operations or cash flows.

## NOTE 2 – RESTATEMENT OF FINANCIAL STATEMENTS

The Company is restating these financial statements for the 2006, 2005 and 2004 annual periods.

Following is a description of the restatements to the financial statements:

The Company acquired Opexa Pharmaceuticals in October 2004 and originally accounted for the acquired in process research and development of \$23,991,128 as intangible assets. In November 2007, the Company re-evaluated its accounting for acquired research and development and upon further consideration of Paragraph 11(c) of Statement of Financial Accounting Standards No. 2 (SFAS No. 2) and accounting guidance from Financial Accounting Standards Board Interpretation No. 4 “Applicability of FASB Statement No. 2 to Business Combinations Accounted for by the Purchase Method” (FIN 4), the Company determined that these assets did not have an alternative future use at the date of acquisition. Thus, they had no separate economic value and should be accordingly expensed to research and development in the period acquired.

In February 2004, the Company obtained a license from the University of Chicago for an adult stem cell technology. Costs associated with the acquisition of this license were originally accounted for as an intangible asset. The amounts originally capitalized as intangible assets were \$3,051,706, \$976,497 and \$112,440 for the years ended December 31, 2004, 2005 and 2006 respectively. Upon further consideration of Paragraph 11(c) of SFAS No. 2, the Company determined that these assets had not reached technological feasibility at the date of acquisition and had no alternative future use. Therefore, the intangible asset should have been expensed to in process research and development in the period acquired.

In March 2006, the Company obtained an exclusive worldwide license for the intellectual property rights and research results of an autologous T cell vaccine for rheumatoid arthritis from the Shanghai Institutes for Biological Sciences (SIBS), Chinese Academy of Sciences of the People's Republic of China. The Company made a \$125,000 license payment and accounted for the license as an intangible asset. Upon further consideration of Paragraph 11(c) of SFAS No. 2, the Company determined that this asset had not reached technological feasibility at the date of acquisition and had no alternative future use. Therefore, the intangible asset should have been expensed to in process research and development in the period acquired.

In the Consolidated Statements of Expenses, the effect of the adjustments on operating expenses, loss from operations and net loss for each of the years ended December 31, 2006 and 2005 and January 22, 2003(Inception) to December 31, 2006 was as follows:

|                                     | Year Ended December 31, |                 |                 |                 |                 |                 |
|-------------------------------------|-------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
|                                     | 2006                    |                 |                 | 2005            |                 |                 |
|                                     | As Reported             | Adjustment      | As Restated     | As Reported     | Adjustment      | As Restated     |
| Research and development            | \$ 7,612,932            | \$ 237,441 (1)  | \$ 7,850,373    | \$ 4,183,356    | \$ 976,497 (1)  | \$ 5,159,853    |
| General and administrative          | 5,461,047               | -               | 5,461,047       | 6,259,075       | -               | 6,259,075       |
| Depreciation and amortization       | 1,818,795               | (1,644,678) (2) | 174,117         | 1,735,209       | (1,637,129) (2) | 98,080          |
| Loss on disposal of assets          | 2,376                   | -               | 2,376           | 22,810          | -               | 22,810          |
| Operating loss                      | (14,895,150)            | 1,407,237       | (13,487,913)    | (12,200,450)    | 660,632         | (11,539,818)    |
| Interest income                     | 688,299                 | -               | 688,299         | 81,930          | -               | 81,930          |
| Other income                        | 46,450                  | -               | 46,450          | 28,174          | -               | 28,174          |
| Gain (loss) on derivative liability | 104,978                 | -               | 104,978         | 3,896,841       | -               | 3,896,841       |
| Interest expense                    | (984)                   | -               | (984)           | (7,323,851)     | -               | (7,323,851)     |
| Net loss                            | \$ (14,056,407)         | \$ 1,407,237    | \$ (12,649,170) | \$ (15,517,356) | \$ 660,632      | \$ (14,856,724) |
| Basic and diluted loss per share    | \$ (2.61)               | \$ 0.26         | \$ (2.35)       | \$ (9.92)       | \$ 0.42         | \$ (9.49)       |

|                                     | January 22, 2003 (Inception) to<br>December 31, 2006 |                        |                        |
|-------------------------------------|------------------------------------------------------|------------------------|------------------------|
|                                     | As Reported                                          | Adjustment             | As Restated            |
| Research and development            | \$ 12,428,909                                        | \$ 28,256,771 (1)      | \$ 40,685,680          |
| General and administrative          | 14,206,469                                           | -                      | 14,206,469             |
| Depreciation and amortization       | 3,818,823                                            | (3,533,568) (2)        | 285,255                |
| Loss on disposal of assets          | 482,309                                              | -                      | 482,309                |
| Operating loss                      | (30,936,510)                                         | (24,723,203)           | (55,659,713)           |
| Interest income                     | 776,221                                              | -                      | 776,221                |
| Other income                        | 77,003                                               | -                      | 77,003                 |
| Gain (loss) on derivative liability | 4,001,819                                            | -                      | 4,001,819              |
| Interest expense                    | (8,238,963)                                          | -                      | (8,238,963)            |
| Net loss                            | <u>\$ (34,320,430)</u>                               | <u>\$ (24,723,203)</u> | <u>\$ (59,043,633)</u> |
| Basic and diluted loss per share    | <u>N/A</u>                                           | <u>N/A</u>             | <u>N/A</u>             |

- (1) Adjustment for capitalizing acquired research and development to intangible assets that should have been expensed to research and development (i) for the year ended 12/31/2006 in the amount of \$237,440, (ii) for the year ended 12/31/2005 in the amount of \$976,497 and (iii) inception to 12/31/2006 in the amount of \$28,256,771.
- (2) Reversal of amortization of intangible assets that should have been expensed to research and development (i) for the year ended 12/31/2006 in the amount of \$1,644,678, (ii) for the year ended 12/31/2005 in the amount of \$1,637,129 and (iii) inception to 12/31/2006 in the amount of \$3,533,568.

In the Balance Sheet, the effect of the adjustments on Intangible Assets and Accumulated Deficit as of December 31, 2006 was as follows:

|                             | As Reported     | Adjustment          | As Restated     |
|-----------------------------|-----------------|---------------------|-----------------|
| <b>Assets</b>               |                 |                     |                 |
| Intangible Assets           | \$ 24,723,203   | \$ (24,723,203) (1) | \$ -            |
| <b>Stockholders' Equity</b> |                 |                     |                 |
| Accumulated Deficit         | \$ (34,320,430) | \$ (24,723,203) (1) | \$ (59,043,633) |

- (1) Adjustment for capitalizing acquired research and development to intangible assets that should have been expensed to research and development and reversal of amortization of intangible assets that should have been expensed to research and development. Adjustment for capitalizing acquired research and development to intangible assets that should have been expensed to research and development (i) for the year ended 12/31/2006 in the amount of \$237,440, (ii) for the year ended 12/31/2005 in the amount of \$976,497 and (iii) inception to 12/31/2006 in the amount of \$28,256,771. Reversal of amortization of intangible assets that should have been expensed to research and development (i) for the year ended 12/31/2006 in the amount of \$1,644,678, (ii) for the year ended 12/31/2005 in the amount of \$1,637,129 and (iii) inception to 12/31/2006 in the amount of \$3,533,568.

### NOTE 3 – MARKETABLE SECURITIES

At December 31, 2006, Opexa invested \$10.9 million in A-1/P-1 commercial paper, of which \$2.9 million is invested in marketable securities, and \$3.9 million is invested in a money market account with an average market yield of 5.33% and average time to maturity of 1.32 months. Interest income of \$688,299 was recognized for the twelve months ended December 31, 2006 in the consolidated statements of expenses.

#### NOTE 4 – LICENSE AGREEMENTS

##### ***University of Chicago License Agreement***

In 2004 Opexa entered into an agreement with the University of Chicago (“University”) for the worldwide license to technology developed at Argonne National Laboratory, a U.S. Department of Energy Laboratory Operated by the University. In consideration for the license, Opexa paid the University \$57,742 and issued 237,188 shares valued at \$1,199,706. In December 2004, the License Agreement was amended granting Opexa an exclusive, non-transferable worldwide license to the University’s stem cell technology. In consideration for the amendment, Opexa paid the University an additional \$175,000, issued the University 5,500 shares of common stock valued at \$352,000, agreed to pay the University \$1,500,000 on October 30, 2005 and agreed to issue the University shares of Opexa common stock, including the shares already issued, equal to 2.6% of the total outstanding number of shares after conversion of the 15% exchangeable convertible subordinated promissory notes. In June 2005, 27,484 shares of common stock were issued to the University of Chicago per the terms of a license agreement. These shares were recorded at \$867,064. In August 2005, 1,710 shares of common stock were issued to the University of Chicago per the terms of a license agreement. These shares were recorded at \$109,434. In October 2006, the \$1,500,000 cash payment obligation was extended until April 30, 2007 and (ii) the obligation to issue 21,623 shares of Opexa’s common stock issuable was extended until April 30, 2007, with \$112,440 accrued at December 31, 2006. The Company determined that these assets had not reached technological feasibility at the date of acquisition and had no alternative future use. Therefore, the costs were expensed to research and development in the period incurred.

##### ***Shanghai Institute for Biological Science License Agreement***

In January 2006, Opexa acquired an exclusive worldwide license for the intellectual property rights and research results of an autologous T cell vaccine for rheumatoid arthritis from the Shanghai Institute for Biological Science, China Academy of Science of the People’s Republic of China. In exchange for a payment of \$125,000 and an agreed running royalty from the sale of commercialized products, Opexa receives all information and data related to all clinical trials on all patient controls and patients with rheumatoid arthritis with the T cell vaccine. This includes all clinical, cell procurement and manufacturing protocols, complete patient data sheets, all laboratory materials, methods and results and manufacturing records and documents and any other data related to the intellectual property. The first payment under the license occurred in April 2006 upon the delivery of materials pursuant to the terms of the licensing agreement. The Company determined that these assets had not reached technological feasibility at the date of acquisition and had no alternative future use. Therefore, the costs were expensed to research and development in the period incurred.

#### NOTE 5 – PROPERTY AND EQUIPMENT

Property and equipment consisted of the following at December 31, 2006:

| Description                    | Life       | Amount       |
|--------------------------------|------------|--------------|
| Computer equipment             | 3 years    | \$ 134,023   |
| Office furniture and equipment | 3-10 years | 220,113      |
| Software                       | 3-5 years  | 46,089       |
| Laboratory equipment           | 3-10 years | 912,709      |
| Leasehold improvements         | 10 years   | 443,727      |
| Subtotal                       |            | 1,756,661    |
| Less: accumulated depreciation |            | (395,284)    |
| Property and equipment, net    |            | \$ 1,361,377 |

Property and equipment is carried at cost less accumulated depreciation. Depreciation is calculated by the straight-line method over the estimated useful life of three to ten years, depending upon the type of equipment, except for leasehold improvements which are amortized using the straight-line method over the remaining lease term or the life of the asset, whichever is shorter. The cost of repairs and maintenance is charged as an expense as incurred. Depreciation expense totaled \$174,117 and \$98,080 in fiscal 2006 and 2005, respectively.

**NOTE 6 – INCOME TAXES**

Opexa uses the liability method, where deferred tax assets and liabilities are determined based on the expected future tax consequences of temporary differences between the carrying amounts of assets and liabilities for financial and income tax reporting purposes.

At December 31, 2006, for federal income tax and alternative minimum tax reporting purposes, the Company had approximately \$56,106,251 of unused net operating losses available for carryforward to future years. The benefit from carryforward of such net operating losses will expire in various years through 2026. Under the provisions of Section 382 of the Internal Revenue Code, the benefit from utilization of approximately \$5,650,429 of net operating losses incurred prior to October 7, 2004 was significantly limited as a result of the change of control that occurred in connection with the Company's acquisition of Opexa. The benefit could be subject to further limitations if significant future ownership changes occur in the Company.

At December 31, 2006, deferred tax assets consisted of the following:

|                        |    |              |
|------------------------|----|--------------|
| NOL @ 12/31/05         | \$ | (47,670,687) |
| Net loss - 2006        |    | (12,649,170) |
| Subtotal               |    | (60,319,857) |
| Derivative (gain) loss |    | (104,978)    |
| Option expense         |    | 2,749,617    |
| Warrant expense        |    | 1,568,966    |
| NOL @ 12/31/06         |    | (56,106,251) |
| Estimated tax rate     |    | X 34%        |
| Deferred tax asset     |    | (19,076,125) |
| Valuation allowance    |    | 19,076,125   |
| Net deferred tax asset | \$ | -            |

**NOTE 7 – THIRD PARTY CONVERTIBLE NOTES**

Between September 2004 and February 2005, Opexa issued convertible notes to investors totaling \$6,124,859. In March 2005, 45,169 shares of common stock with a relative fair value of \$999,074 were issued to note holders as their additional shares for their subscription investment in Opexa. In June 2005, a total of \$6,650,372 comprised of the principal of the notes of \$6,124,859 and accumulated interest of \$525,513, which accrued at a rate of 15% per annum, was exchanged for 443,360 shares of common stock, Class A and Class B warrants that expired in 2006, and Class C warrants to purchase 1,110,548 shares at an exercise price of \$30 per share.

Opexa analyzed the convertible notes and the warrants for derivative accounting consideration under SFAS 133 and EITF 00-19. Opexa determined the embedded conversion option in the convertible notes met the criteria for classification in stockholders equity under SFAS 133 and EITF 00-19. Therefore, derivative accounting was not applicable for these convertible notes payable. See Note 13 for a discussion of the accounting for the warrants.

**NOTE 8 – NOTE PAYABLE**

Note payable consists of a note in the amount of \$1,500,000 payable to the University of Chicago, secured by license, no interest and due April 30, 2007. See Note 4 for details.

Loan payable consists of an equipment line of up to \$250,000 with Wells Fargo of which \$110,322 was outstanding as of December 31, 2006. This loan has an interest rate of 7.61% per annum, matures in May 2011 and is secured by Opexa's furniture and equipment purchased with the loan proceeds.

## NOTE 9 – COMMITMENTS AND CONTINGENCIES

### *Office Lease*

In October 2005, Opexa entered into a ten-year lease for its office and research facilities. There is 2,500 sq. ft. of space still available for future build-out. The facility including the property is leased for a term of ten years with two options for an additional five years each at the then prevailing market rate. Future minimum lease payments under the non-cancellable operating lease are \$117,774 for 2007, \$137,196 for 2008, \$139,782 for 2009, \$147,540 for 2010, \$147,540 for 2011 and \$584,343 for years 2012 to 2015. Rent expense for 2006 was \$136,153 and \$178,963 for 2005.

### *Contract Research Organization Agreement*

In September 2006, Opexa engaged PharmaNet, LLC, a contract research organization focused on managing central nervous system trials to provide it with services in connection with its Phase IIb clinical trial. An initial pre-payment of \$400,000 was made to PharmaNet, LLC in April 2006, of which \$133,334 remains as a prepaid balance as of December 31, 2006. An additional \$235,000 payment was made in October representing an advance for investigator grant expenses, of which \$191,329 remains a prepaid balance as of December 31, 2006.

## NOTE 10 – EQUITY

During 2003, equity related transactions were as follows:

- 525,000 shares of common stock were sold for \$1,000.
- 170,625 shares were reacquired for \$325 and canceled.
- Additional contributions to capital of \$56,360 resulted from the discounted value to notes payable due to warrants and beneficial conversion features attached to convertible notes was issued in 2003.

During 2004, equity related transactions were as follows:

- 2,250 shares of common stock were sold for \$9,000.
- 206,500 shares of common stock valued at their then fair value of \$849,000 were issued to employees and consultants for their services.
- 24,269 shares of common stock valued at their then fair value of \$427,075 were issued to the University of Chicago per the terms of a license agreement. See Note 2 for details.
- 99,740 shares of common stock were issued for net liabilities of \$147,733 pursuant to the 2004 reorganization.
- 250,000 shares of common stock valued at their then fair value of \$23,750,000 were issued to Opexa Pharmaceuticals, Inc., shareholders. See Note 12 for details.
- 16,100 shares of common stock with a relative fair value of \$288,366 were issued to note holders as their additional shares for their subscription investment.
- 60,750 shares of common stock were issued to note holders for the conversion of \$248,370 of principal and interest from convertible notes.
- 8,000 shares of common stock were cancelled pursuant to the terms of an employment separation agreement.
- Additional contributions to capital of \$2,704,351 resulted from the discounted value to notes payable from warrants, beneficial conversion features attached to convertible notes.
- Employee stock option expense was \$123,333 for 2004.

During 2005, equity related transactions were as follows:

- 389,451 shares of common stock with warrants to purchase 1,070,993 shares were sold for \$5,841,769. The relative fair value of the common stock is \$1,103,714 and the relative fair value of the warrants is \$4,748,055. Offering costs of \$495,552 related to shares issued were charged to additional paid in capital.
- 45,168 shares of common stock with a relative fair value of \$999,074 were issued to note holders as their additional shares for their subscription investment.
- 565,858 shares of common stock were issued to note holders for the conversion of \$6,124,859 of principal and \$525,513 interest from convertible notes.
- 2,300 shares of common stock valued at their fair value of \$161,000 were issued to note holders for the conversion of \$51,930 of principal and interest from the notes.
- 29,194 shares of common stock were issued to the University of Chicago per the terms of a license agreement. These shares were recorded at \$1,868,384.
- 24,000 shares of common stock valued at their fair value of \$1,012,400 were issued to consultants for their services.
- Additional contributions to capital of \$2,265,052 relating to the discounted value to notes payable from warrants, beneficial conversion features attached to convertible notes.
- Employee stock option expense was \$2,487,741 for 2005.
- Warrant expense was \$2,373,888 for 2005.
- Transition of warrants from equity instruments to liability instruments in the amount of \$10,658,496 was recorded. See Note 13 for details.

During 2006, equity related transactions were as follows:

- In March 2006, 34,829 shares of common stock were issued to settle an outstanding accounts payable in the amount of \$180,000.
- In April 2006, Opexa sold 4,600,000 shares of its common stock and warrants to purchase 2,300,000 shares of Opexa's common stock for \$23,000,000. Opexa paid \$1,846,481 for the commissions and fees related to this offering and granted to its brokers warrants to purchase 213,720 shares of common stock at an exercise price of \$5.00 per share. These warrants are not callable and have a cashless exercise option.
- Employee stock option expense was \$2,749,617 for 2006.
- Warrant expense was \$1,568,966 for 2006.

#### NOTE 11 – STOCK OPTIONS AND WARRANTS

In 2004, Opexa adopted the 2004 Stock Option Plan (“the Plan”) for the granting of stock options to employees and consultants of Opexa. Options granted under the Plan may be either incentive stock options or nonqualified stock options. The Board of Directors has discretion to determine the number, term, exercise price and vesting of all grants.

##### ***Employee Stock Options:***

During 2004, options to purchase 96,500 shares were granted to employees at exercise prices ranging from \$30.00 to \$50.00. These options have terms of five years and vest from one to three years. Fair value of \$5,623,186 was recorded using the Black-Scholes method of calculation with a volatility of 75.05% and a discount rate of 2%.

During 2005, options to purchase 63,050 shares were granted to employees, at exercise prices of \$7.00. These options have terms of ten years and vest in four years. Fair value of \$261,879 was recorded using the Black-Scholes method of calculation with a volatility range of 175.4% and a discount rate of 2%.

During 2005, options to purchase 4,167 shares were forfeited and cancelled.

During 2006, options to purchase 389,160 shares of common stock were granted by Opexa to its employees at exercise prices ranging from \$5.00 to \$9.40. These options have terms from five to ten years, vest from one to three years and have a fair value of \$3,126,168. Using the Black-Scholes method, stock compensation for 2006 was \$1,066,451 with a volatility range of 401.34% to 429.86% and a discount rate range of 4.72% - 5.22%.

Opexa recorded \$2,749,617 stock-based compensation expense to the management and employees during 2006.

During 2006, options to purchase 14,133 shares were forfeited.

##### ***Consultant Warrants:***

During 2004, warrants to purchase 20,000 shares were granted to consultants at exercise prices ranging from \$30.00 to \$50.00. These options have terms of five years and vest from one to three years. Fair value of \$1,011,770 was recorded using the Black-Scholes method with a volatility range of 75.05% and a discount rate of 2%.

During 2005, warrants to purchase 71,060 shares were granted to consultants. Using the Black-Scholes method, fair value for 2005 was \$1,552,936 with a volatility range of 175.4% and a discount rate of 2%.

During 2005, warrants to purchase 46,085 shares of Common Stock were issued to several brokerage firms as the offering costs and commissions for Opexa's financing activities at an exercise price of \$1.50 per share. These warrants have a fair value of \$2,197,162 and vest immediately.

During 2005, warrants to purchase 9,914 shares were forfeited and cancelled.

In April 2006, warrants to purchase 213,720 shares of common stock were granted by Opexa to the brokers in connection with the \$23,000,000 equity financing, at an exercise price of \$5.20. These warrants have a term of three years, vest immediately and have a fair value of \$1,077,778.

During 2006, warrants to purchase 156,500 shares of common stock were granted by Opexa to its consultants, directors and exiting directors at the exercise prices ranging from \$5.20 to \$9.80. These warrants have a term of ten years, vest from one to three years and have a fair value of \$1,496,375. Using the Black-Scholes method, stock compensation for 2006 was \$931,597 with a volatility range of 401.34% to 429.86% and a discount rate range of 4.72% - 5.22%.

Opexa recorded \$1,568,966 stock-based compensation expense to the consultants, directors and exiting directors during 2006.

During 2006, warrants to purchase 5,000 shares were expired.

***Investor Warrants:***

During 2003, warrants to purchase 15,000 shares were granted to investors related to the convertible notes.

During 2004, warrants to purchase 142,800 shares were granted to investors related to the convertible notes.

During 2005, warrants to purchase 2,386,984 shares were granted to investors related to the convertible notes and warrants to purchase 254,363 shares were forfeited and cancelled.

During 2006, warrants to purchase 2,765,043 shares were granted to investors related to the April 2006 financing and warrants to purchase 1,645,002 shares were forfeited and cancelled.

Summary information regarding options and warrants is as follows:

Summary of options and warrants outstanding and exercisable as of December 31, 2006 is as follows:

|                                  | Options        | Weighted<br>Average<br>Exercise<br>Price | Warrants         | Weighted<br>Average<br>Exercise<br>Price |
|----------------------------------|----------------|------------------------------------------|------------------|------------------------------------------|
| Year ended December 31, 2003:    |                |                                          |                  |                                          |
| Granted                          | -              | \$ -                                     | 15,000           | \$ 1.00                                  |
| Outstanding at December 31, 2003 | -              | -                                        | 15,000           | 1.00                                     |
| Year ended December 31, 2004:    |                |                                          |                  |                                          |
| Granted                          | 96,500         | 31.70                                    | 162,800          | 22.30                                    |
| Outstanding at December 31, 2004 | 96,500         | 31.70                                    | 177,800          | 22.40                                    |
| Year ended December 31, 2005:    |                |                                          |                  |                                          |
| Granted                          | 63,050         | 15.70                                    | 2,504,129        | 28.60                                    |
| Forfeited and canceled           | (4,167)        | 42.80                                    | (264,277)        | 24.50                                    |
| Outstanding at December 31, 2005 | 155,383        | 24.90                                    | 2,417,652        | 23.51                                    |
| Year ended December 31, 2006:    |                |                                          |                  |                                          |
| Granted                          | 389,160        | 5.48                                     | 3,135,264        | 9.28                                     |
| Forfeited and canceled           | (14,133)       | 34.79                                    | (1,649,995)      | 12.77                                    |
| Outstanding at December 31, 2006 | <u>530,410</u> | <u>\$ 10.38</u>                          | <u>3,902,921</u> | <u>\$ 13.52</u>                          |

Summary of options and warrants outstanding and exercisable as of December 31, 2006 is as follows:

| Exercise Price | Remaining Life | Options Outstanding | Options Exercisable | Warrants Outstanding | Warrants Exercisable |
|----------------|----------------|---------------------|---------------------|----------------------|----------------------|
| \$ 40.00       | 3 - 4 years    | -                   | -                   | 17,500               | 8,375                |
| \$ 30.00       | 2 - 3 years    | 84,500              | 58,667              | 5,000                | 3,333                |
| \$ 30.00       | 3 - 4 years    | 18,850              | 8,950               | 1,125,056            | 1,116,389            |
| \$ 15.00       | 3 - 4 years    | -                   | -                   | 46,895               | 46,895               |
| \$ 11.90       | 3 - 4 years    | -                   | -                   | 21,500               | 3,000                |
| \$ 11.50       | 2 - 3 years    | -                   | -                   | 16,750               | -                    |
| \$ 11.40       | 2 - 3 years    | 2,000               | -                   | -                    | -                    |
| \$ 9.80        | 9 - 10 years   | -                   | -                   | -                    | -                    |
| \$ 9.40        | 9 - 10 years   | 30,900              | -                   | 37,000               | 17,500               |
| \$ 8.25        | 9 - 10 years   | 12,500              | -                   | 4,500                | 500                  |
| \$ 7.09        | 9 - 10 years   | 3,300               | -                   | 1,500                | -                    |
| \$ 7.00        | 9 - 10 years   | 37,000              | 9,250               | -                    | -                    |
| \$ 6.50        | 4 - 5 years    | -                   | -                   | 2,300,000            | 2,300,000            |
| \$ 5.20        | 2 - 3 years    | -                   | -                   | 8,500                | -                    |
| \$ 5.20        | 9 - 10 years   | -                   | -                   | 105,000              | 52,500               |
| \$ 5.00        | 3 - 4 years    | -                   | -                   | 213,720              | 213,720              |
| \$ 5.00        | 4 - 5 years    | 75,000              | 32,100              | -                    | -                    |
| \$ 5.00        | 9 - 10 years   | 266,360             | -                   | -                    | -                    |
|                |                | 530,410             | 108,967             | 3,902,921            | 3,762,213            |

## NOTE 12 – PURCHASE OF OPEXA PHARMACEUTICALS

In October 2004, Opexa acquired all of the outstanding stock of Opexa Pharmaceuticals, Inc. The acquisition was accounted for under the purchase method, where all of Opexa Pharmaceuticals, Inc.'s assets are restated to their fair market value on the acquisition date. The 250,000 shares of Opexa were valued at their then fair value of \$23,750,000 or \$95.00 per share. The results of operations for Opexa from November 6, 2004 through December 31, 2005 are included in the Statements of Operations and the Statements of Cash Flows.

The following table summarizes the estimated fair values of the assets acquired and the liabilities assumed at the date of acquisition:

|                                              |    |            |
|----------------------------------------------|----|------------|
| Current assets                               | \$ | 55,387     |
| Property, plant and equipment, net           |    | 639,160    |
| Acquired in process research and development |    | 23,991,128 |
| Current liabilities assumed                  |    | (935,675)  |
| Total allocation of purchase price           | \$ | 23,750,000 |

The estimated fair value of acquired in process research and development of \$23,991,128 was determined by our management. Management considered a number of factors in determining the value of the acquired in process research and development, including the results of an independent valuation performed by a third-party valuation specialist. The purchased represents Opexa Pharmaceuticals' incomplete research and development programs that had not yet reached technological feasibility and had no alternative future uses as of the acquisition date and, therefore, was expensed upon acquisition within our Consolidated Statements of Expenses.

## NOTE 13 – DERIVATIVE INSTRUMENTS

For the years ended December 31, 2006 and 2005, Opexa evaluated the application of SFAS 133 and EITF 00-19 for all of its financial instruments and identified the following financial instruments as derivatives:

- (1) Series A Warrants issued in conjunction with the bridge note exchange and private placement offerings in June and July 2005, which expired on February 17, 2006;
- (2) Series B Warrants issued in conjunction with the bridge note exchange and private placement offerings in June and July 2005, which expired on October 17, 2006; and
- (3) Series C Warrants issued in conjunction with the bridge note exchange and private placement offerings in June and July 2005.

These three series of warrants are derivatives because the liquidated damage provision in the registration rights agreement covering each warrant resulted in the conclusion that it was more economic to issue registered shares than to issue unregistered shares and pay the penalty. Because issuing registered shares is outside of Opexa's control, Opexa concluded the warrants should be accounted for as derivative liabilities under SFAS 133 and EITF 00-19.

As a result, Opexa reports the value of these derivatives as current liabilities in its balance sheet and report changes in the value of these derivatives as non-operating gains or losses in its statements of operations. The value of the derivatives is required to be remeasured on a quarterly basis, and is based on the Black Scholes Pricing Model.

Variables used in the Black-Scholes option-pricing model include (1) risk free interest rate, (2) expected warrant life is the actual remaining life of the warrants as of each period end, (3) expected volatility and (4) zero expected dividends as further detailed in the table as follows:

|                         | As of 12/31/2005 | As of 12/31/2006 |
|-------------------------|------------------|------------------|
| Risk-free rate for term |                  |                  |
| A Warrant               | 4.08%            | -                |
| B Warrant               | 4.37%            | -                |
| C Warrant               | 4.35%            | 501%             |
| Expected volatility     |                  |                  |
| A Warrant               | 30%              | -                |
| B Warrant               | 112%             | -                |
| C Warrant               | 475%             | 487%             |

The impact of the application of SFAS 133 and EITF 00-19 on the balance sheets as of December 31, 2006 and 2005 and the statements of operations and for the years ended December 31, 2006 and 2005 and the period from inception through December 31, 2006 is as follows:

|                   | As of 12/31/2005 | As of 12/31/2006 | Gain(Loss) Year Ended<br>12/31/2005 | Gain(Loss) Year Ended<br>12/31/2006 | Gain(Loss) Inception Through<br>12/31/2006 |
|-------------------|------------------|------------------|-------------------------------------|-------------------------------------|--------------------------------------------|
| Series A Warrants | \$ -             | \$ -             | \$ 332,440                          | \$ -                                | \$ 332,440                                 |
| Series B Warrants | 264,957          | -                | 640,882                             | 264,957                             | 905,839                                    |
| Series C Warrants | 6,496,698        | 6,656,677        | 2,923,519                           | (159,979)                           | 2,763,540                                  |
| Totals            | \$ 6,761,655     | \$ 6,656,677     | \$ 3,896,841                        | \$ 104,978                          | \$ 4,001,819                               |

The warrants granted during the April 2006 financing were determined to qualify as for equity treatment under SFAS 133 and EITF 00-19. Nothing in the warrant agreements required cash settlement or allowed for the possibility of cash settlement including the impact of the liquidated damages penalty under the registration rights agreement. It was determined on the date of grant and at December 31, 2006 that it was more economic to issue unregistered shares and pay the penalty than to issue registered shares.

In December 2006, the FASB issued FASB Staff Position No. EITF 00-19-2, Accounting for Registration Payment Arrangements (EITF 00-19-2). EITF 00-19-2 addresses an issuer's accounting for registration payment arrangements. It specifies that the contingent obligation to make future payments or otherwise transfer consideration under a registration payment arrangement, whether issued as a separate agreement or included as a provision of a financial instrument or other agreement, should be separately recognized and measured in accordance with FASB Statement No. 5, Accounting for Contingencies. The guidance in EITF 00-19-2 amends FASB Statements No. 133, Accounting for Derivative Instruments and Hedging Activities, and No. 150, Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity, and FASB Interpretation No. 45, Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others, to include scope exceptions for registration payment arrangements. EITF 00-19-2 also requires additional disclosure regarding the nature of any registration payment arrangements, alternative settlement methods, the maximum potential amount of consideration and the current carrying amount of the liability, if any. This EITF is effective immediately for registration payment arrangements and the financial instruments subject to those arrangements that are entered into or modified subsequent to the date of issue of this EITF. For registration payment arrangements and financial instruments subject to those arrangements that were entered into prior to the issuance of this EITF, this is effective for financial statements issued for fiscal years beginning after December 15, 2006, and interim periods within those fiscal years. The impact of implementing EITF 00-19-2 in the fiscal year 2007 will result in a cumulative effect of a change in accounting principle with a credit to beginning retained earnings of \$6,656,677 and a reversal of the same amount to the derivative liability account.

#### **NOTE 14 – STOCK PURCHASE AGREEMENT**

In June 2004, Pharma was acquired by Sportan United Industries, Inc. in a transaction accounted for as a reverse acquisition. Pharma's shareholders were issued 6,386,439 Sportan shares in exchange for 100 percent of the outstanding common shares of Pharma. Immediately following this transaction, Sportan changed its name to Pharma and 7,383,838 shares were outstanding.

#### **NOTE 15 - GOING CONCERN**

On November 2, 2007, Opexa filed its quarterly report for the period ended September 30, 2007. As shown in its financial statements, Opexa has negative cash flows provided by its operating activities and has a cash balance of \$5.8 million as of September 30, 2007 which is not sufficient to fund its operations for the next twelve months. These conditions raise substantial doubt as to Opexa's ability to continue as a going concern. Management will seek to raise additional capital through sales of convertible debt and/or equity. The financial statements do not include any adjustments that might be necessary if Opexa is unable to continue as a going concern.

OPEXA THERAPEUTICS, INC.  
(a development stage company)  
BALANCE SHEETS (RESTATED) BALANCE SHEET  
(unaudited)

|                                                                                                        | Restated<br>September 30,<br>2007 | Restated<br>December 31,<br>2006 |
|--------------------------------------------------------------------------------------------------------|-----------------------------------|----------------------------------|
| <b>Assets</b>                                                                                          |                                   |                                  |
| Current assets:                                                                                        |                                   |                                  |
| Cash and cash equivalents                                                                              | \$ 5,844,299                      | \$ 12,019,914                    |
| Investment in marketable securities                                                                    | -                                 | 2,952,096                        |
| Other current assets                                                                                   | 385,717                           | 472,881                          |
| Total current assets                                                                                   | 6,230,016                         | 15,444,891                       |
| Property & equipment, net accumulated depreciation of \$532,585 and \$395,284, respectively            | 1,355,753                         | 1,361,377                        |
| Total assets                                                                                           | \$ 7,585,769                      | \$ 16,806,268                    |
| <b>Liabilities and Stockholders' Equity</b>                                                            |                                   |                                  |
| Current liabilities:                                                                                   |                                   |                                  |
| Accounts payable                                                                                       | \$ 1,226,879                      | \$ 868,862                       |
| Stock payable                                                                                          | -                                 | 112,440                          |
| Accrued expenses                                                                                       | 791,134                           | 135,069                          |
| Note payable                                                                                           | -                                 | 1,500,000                        |
| Current maturity of loan payable                                                                       | 59,224                            | 14,080                           |
| Derivative liability                                                                                   | -                                 | 6,656,677                        |
| Total current liabilities                                                                              | 2,077,237                         | 9,287,128                        |
| Long term liabilities:                                                                                 |                                   |                                  |
| Loan payable                                                                                           | 177,339                           | 96,242                           |
| Total liabilities                                                                                      | 2,254,576                         | 9,383,370                        |
| Commitments and contingencies                                                                          | -                                 | -                                |
| Stockholders' equity:                                                                                  |                                   |                                  |
| Convertible preferred stock, no par value, 10,000,000 shares authorized, none issued and outstanding   | -                                 | -                                |
| Common stock, \$0.50 par value, 100,000,000 shares authorized, 6,696,784 shares issued and outstanding | 3,348,351                         | 3,348,351                        |
| Additional paid in capital                                                                             | 75,863,587                        | 63,118,180                       |
| Deficit accumulated during the development stage                                                       | (73,880,745)                      | (59,043,633)                     |
| Total stockholders' equity                                                                             | 5,331,193                         | 7,422,898                        |
| Total liabilities and stockholders' equity                                                             | \$ 7,585,769                      | \$ 16,806,268                    |

OPEXA THERAPEUTICS, INC.  
(a development stage company)  
STATEMENTS OF EXPENSES (RE-STATED)  
Three and Nine Months ended September 30, 2007 and 2006 and the  
Period from January 22, 2003 (Inception) to September 30, 2007  
(unaudited)

|                                     | Restated<br>Three Months<br>Ended<br>September 30,<br>2007 | Restated<br>Three Months<br>Ended<br>September 30,<br>2006 | Restated<br>Nine Months<br>Ended<br>September 30,<br>2007 | Restated<br>Nine Months<br>Ended<br>September 30,<br>2006 | Restated<br>Inception<br>through<br>September 30,<br>2007 |
|-------------------------------------|------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|
| Research and development            | \$ 3,189,256                                               | \$ 2,113,878                                               | \$ 10,148,930                                             | \$ 4,532,240                                              | \$ 50,834,610                                             |
| General and administrative          | 842,079                                                    | 1,430,507                                                  | 2,557,609                                                 | 5,676,221                                                 | 16,764,078                                                |
| Depreciation                        | 50,446                                                     | 49,824                                                     | 149,371                                                   | 122,469                                                   | 434,627                                                   |
| Loss on disposal of assets          | -                                                          | 2,015                                                      | 4,034                                                     | 2,377                                                     | 486,343                                                   |
| Operating loss                      | (4,081,781)                                                | (3,596,224)                                                | (12,859,944)                                              | (10,333,307)                                              | (68,519,658)                                              |
| Interest income                     | 102,292                                                    | 259,141                                                    | 423,086                                                   | 477,547                                                   | 1,199,307                                                 |
| Other income                        | -                                                          | -                                                          | -                                                         | 46,450                                                    | 77,003                                                    |
| Gain on extinguishment of debt      | 1,612,440                                                  | -                                                          | 1,612,440                                                 | -                                                         | 1,612,440                                                 |
| Gain (loss) on derivative liability | -                                                          | 2,418,078                                                  | -                                                         | (860,130)                                                 | -                                                         |
| Interest expense                    | (4,731)                                                    | (278)                                                      | (10,875)                                                  | (891)                                                     | (8,249,838)                                               |
| Net loss                            | \$ (2,371,780)                                             | \$ (919,283)                                               | \$ (10,835,293)                                           | \$ (10,670,331)                                           | \$ (73,880,745)                                           |
| Basic and diluted loss per share    | \$ (0.35)                                                  | \$ (0.14)                                                  | \$ (1.62)                                                 | \$ (2.16)                                                 | N/A                                                       |
| Weighted average shares outstanding | 6,696,784                                                  | 6,696,784                                                  | 6,696,784                                                 | 4,950,862                                                 | N/A                                                       |

OPEXA THERAPEUTICS, INC.  
(a development stage company)  
STATEMENTS OF CASH FLOWS (RESTATED)  
Nine Months Ended September 30, 2007 and 2006 and the  
Period from January 22, 2003 (Inception) to September 30, 2007  
(unaudited)

|                                                                                             | Restated<br>Nine Months<br>Ended<br>September 30,<br>2007 | Restated<br>Nine Months<br>Ended<br>September 30,<br>2006 | Restated<br>Inception<br>through<br>September 30,<br>2007 |
|---------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|
| Cash flows from operating activities                                                        |                                                           |                                                           |                                                           |
| Net loss                                                                                    | \$ (10,835,293)                                           | \$ (10,670,331)                                           | \$ (73,880,745)                                           |
| Adjustments to reconcile net loss to net cash used in operating activities                  |                                                           |                                                           |                                                           |
| Stock payable for services                                                                  | -                                                         | -                                                         | 112,440                                                   |
| Stock issued for acquired research and development                                          | -                                                         | -                                                         | 26,286,589                                                |
| Stock issued for services                                                                   | -                                                         | 180,000                                                   | 1,861,400                                                 |
| Stock issued for debt in excess of principal                                                | -                                                         | -                                                         | 109,070                                                   |
| Amortization of discount on notes payable due to warrants and beneficial conversion feature | -                                                         | -                                                         | 6,313,205                                                 |
| Realized gain on marketable securities                                                      | 25,912                                                    | -                                                         | -                                                         |
| Loss on derivative liability                                                                | -                                                         | 860,130                                                   | -                                                         |
| (Gain) on extinguishment of debt                                                            | (1,612,440)                                               | -                                                         | (1,612,440)                                               |
| Depreciation                                                                                | 149,371                                                   | 122,469                                                   | 434,627                                                   |
| Debt financing costs                                                                        | -                                                         | -                                                         | 365,910                                                   |
| Option and warrant expense                                                                  | 2,086,911                                                 | 3,649,583                                                 | 11,390,455                                                |
| Loss on disposition of fixed assets                                                         | 4,034                                                     | 2,377                                                     | 486,343                                                   |
| Changes in:                                                                                 |                                                           |                                                           |                                                           |
| Accounts payable                                                                            | 358,018                                                   | 381,109                                                   | 802,580                                                   |
| Marketable securities                                                                       | 2,926,184                                                 | -                                                         | -                                                         |
| Prepaid expenses                                                                            | 87,164                                                    | (387,217)                                                 | (380,847)                                                 |
| Accrued expenses                                                                            | 656,065                                                   | (37,419)                                                  | 605,806                                                   |
| Other assets                                                                                | -                                                         | -                                                         | (388,210)                                                 |
| Net cash used in operating activities                                                       | (6,154,074)                                               | (5,899,299)                                               | (27,493,817)                                              |
| Cash flows from investing activities                                                        |                                                           |                                                           |                                                           |
| Purchase of property & equipment                                                            | (147,782)                                                 | (487,567)                                                 | (1,198,836)                                               |
| Net cash used in investing activities                                                       | (147,782)                                                 | (487,567)                                                 | (1,198,836)                                               |
| Cash flows from financing activities                                                        |                                                           |                                                           |                                                           |
| Common stock sold for cash, net of offering costs                                           | -                                                         | 21,153,520                                                | 26,509,412                                                |
| Proceeds from debt                                                                          | 137,286                                                   | -                                                         | 8,102,199                                                 |
| Repayments on notes payable                                                                 | (11,045)                                                  | -                                                         | (74,659)                                                  |
| Net cash provided by financing activities                                                   | 126,241                                                   | 21,153,520                                                | 34,536,952                                                |
| Net change in cash and cash equivalents                                                     | (6,175,615)                                               | 14,766,654                                                | 5,844,299                                                 |
| Cash and cash equivalents at beginning of period                                            | 12,019,914                                                | 2,560,666                                                 | -                                                         |
| Cash and cash equivalents at end of period                                                  | \$ 5,844,299                                              | \$ 17,327,320                                             | \$ 5,844,299                                              |
| Cash paid for:                                                                              |                                                           |                                                           |                                                           |
| Income tax                                                                                  | \$ -                                                      | \$ -                                                      | \$ -                                                      |
| Interest                                                                                    | -                                                         | -                                                         | 429                                                       |
| NON-CASH TRANSACTIONS                                                                       |                                                           |                                                           |                                                           |
| Issuance of common stock to Sportan shareholders                                            | -                                                         | -                                                         | 147,733                                                   |
| Issuance of common stock for accrued interest                                               | -                                                         | -                                                         | 525,513                                                   |
| Conversion of notes payable to common stock                                                 | -                                                         | -                                                         | 6,407,980                                                 |
| Conversion of accrued liabilities to common stock                                           | -                                                         | -                                                         | 197,176                                                   |
| Conversion of accounts payable to note payable                                              | -                                                         | -                                                         | 93,364                                                    |
| Discount on convertible notes relating to:                                                  |                                                           |                                                           |                                                           |
| - warrants                                                                                  | -                                                         | -                                                         | 3,309,790                                                 |
| - beneficial conversion feature                                                             | -                                                         | -                                                         | 1,715,973                                                 |
| - stock attached to notes                                                                   | -                                                         | -                                                         | 1,287,440                                                 |
| Reclassification of derivative liabilities                                                  | 6,656,677                                                 | -                                                         | 6,656,677                                                 |

**OPEXA THERAPEUTICS, INC.**  
**(a development stage company)**  
**NOTES TO FINANCIAL STATEMENTS**  
**(unaudited)**

**NOTE 1 – BASIS OF PRESENTATION**

The accompanying unaudited interim financial statements of Opexa 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 Opexa's latest Annual Report filed with the SEC on Form 10-KSB. 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-KSB, have been omitted.

**NOTE 2 - GOING CONCERN**

Opexa incurred a net loss of approximately \$10.7 million for the nine months ended September 30, 2007 and has an accumulated deficit of approximately \$73.9 million. Cash balance of \$5.8 million as of September 30, 2007 is not sufficient to fund our operations for the next twelve months with a current burn rate of approximately \$1 million per month. These conditions raise substantial doubt as to Opexa's ability to continue as a going concern. Management will seek to raise additional capital through sales of convertible debt and/or equity. The financial statements do not include any adjustments that might be necessary if Opexa is unable to continue as a going concern.

**NOTE 3 – RESTATEMENT OF FINANCIAL STATEMENTS**

The Company is restating these financial statements for the three months and nine months ended September 30, 2006 and 2007 and the period January 22, 2003 (Inception) to September 30, 2007.

Following is a description of the restatements:

The Company acquired Opexa Pharmaceuticals in October 2004 and originally accounted for the acquired in process research and development of \$23,991,128 as intangible assets. In November 2007 the Company re-evaluated its accounting for acquired research and development and upon further consideration of Paragraph 11(c) of Statement of Financial Accounting Standards No. 2 (SFAS No. 2) and accounting guidance from Financial Accounting Standards Board Interpretation No. 4 "Applicability of FASB Statement No. 2 to Business Combinations Accounted for by the Purchase Method" (FIN 4), the Company determined that these assets did not have an alternative future use at the date of acquisition. Thus, they had no separate economic value and should be accordingly expensed to research and development in the period acquired.

In February 2004, the Company obtained a license from the University of Chicago for an adult stem cell technology. Costs associated with the acquisition of this license were originally accounted for as an intangible asset. The amounts originally capitalized as intangible assets were \$3,051,706, \$976,497 and \$112,440 for the years ended December 31, 2004, 2005 and 2006 respectively. Upon further consideration of Paragraph 11(c) of SFAS No. 2, the Company determined that these assets had not reached technological feasibility at the date of acquisition and had no alternative future use. Therefore, the intangible asset should have been expensed to in process research and development in the period acquired.

In March 2006, the Company obtained an exclusive worldwide license for the intellectual property rights and research results of an autologous T cell vaccine for rheumatoid arthritis from the Shanghai Institutes for Biological Sciences (SIBS), Chinese Academy of Sciences of the People's Republic of China. The Company made a \$125,000 license payment and accounted for the license as an intangible asset. Upon further consideration of Paragraph 11(c) of SFAS No. 2, the Company determined that this asset had not reached technological feasibility at the date of acquisition and had no alternative future use. Therefore, the intangible asset should have been expensed to in process research and development in the period acquired.

In the Consolidated Statements of Expenses, the effect of the adjustments on operating expenses, loss from operations and net loss for each of the three months and nine months ended September 30, 2006 and 2007 and the period January 22, 2003 (Inception) to September 30, 2007 was as follows:

|                                        | Three Months Ended September 30, |              |                  |                |            |                  |
|----------------------------------------|----------------------------------|--------------|------------------|----------------|------------|------------------|
|                                        | 2007                             |              |                  | 2006           |            |                  |
|                                        | As Reported                      | Adjustment   | As Restated      | As Reported    | Adjustment | As Restated      |
| Research and development               | \$ 3,189,256                     | \$ -         | (1) \$ 3,189,256 | \$ 2,113,878   | \$ -       | (1) \$ 2,113,878 |
| General and administrative             | 842,079                          | -            | 842,079          | 1,430,507      | -          | 1,430,507        |
| Depreciation and amortization          | 463,630                          | (413,184)    | (2) 50,446       | 462,098        | (412,274)  | (2) 49,824       |
| Loss on impairment of intangible asset | 1,139,677                        | (1,139,677)  | (3) -            | -              | -          | -                |
| Loss on disposal of assets             | -                                | -            | -                | 2,015          | -          | (3) 2,015        |
| Operating loss                         | (5,634,642)                      | 1,552,861    | (4,081,781)      | (4,008,498)    | 412,274    | (3,596,224)      |
| Interest income                        | 102,292                          | -            | 102,292          | 259,141        | -          | 259,141          |
| Other income                           | -                                | -            | -                | -              | -          | -                |
| Gain on extinguishment of debt         | 1,612,440                        | -            | 1,612,440        | -              | -          | -                |
| Gain (loss) on derivative liability    | -                                | -            | -                | 2,418,078      | -          | 2,418,078        |
| Interest expense                       | (4,731)                          | -            | (4,731)          | (278)          | -          | (278)            |
| Net loss                               | \$ (3,924,641)                   | \$ 1,552,861 | \$ (2,371,780)   | \$ (1,331,557) | \$ 412,274 | \$ (919,283)     |
| Basic and diluted loss per share       | \$ (0.59)                        | \$ 0.23      | \$ (0.35)        | \$ (0.20)      | \$ 0.06    | \$ (0.14)        |

|                                        | Nine Months Ended September 30, |              |                   |                 |              |                  |
|----------------------------------------|---------------------------------|--------------|-------------------|-----------------|--------------|------------------|
|                                        | 2007                            |              |                   | 2006            |              |                  |
|                                        | As Reported                     | Adjustment   | As Restated       | As Reported     | Adjustment   | As Restated      |
| Research and development               | \$ 10,148,930                   | \$ -         | (1) \$ 10,148,930 | \$ 4,407,240    | \$ 125,000   | (1) \$ 4,532,240 |
| General and administrative             | 2,557,609                       | -            | 2,557,609         | 5,676,221       | -            | 5,676,221        |
| Depreciation and amortization          | 1,387,106                       | (1,237,735)  | (2) 149,371       | 1,354,873       | (1,232,404)  | (2) 122,469      |
| Loss on impairment of intangible asset | 1,139,677                       | (1,139,677)  | (3) -             | -               | -            | (3) -            |
| Loss on disposal of assets             | 4,034                           | -            | 4,034             | 2,377           | -            | 2,377            |
| Operating loss                         | (15,237,356)                    | 2,377,412    | (12,859,944)      | (11,440,711)    | 1,107,404    | (10,333,307)     |
| Interest income                        | 423,086                         | -            | 423,086           | 477,547         | -            | 477,547          |
| Other income                           | -                               | -            | -                 | 46,450          | -            | 46,450           |
| Gain on extinguishment of debt         | 1,612,440                       | -            | 1,612,440         | -               | -            | -                |
| Gain (loss) on derivative liability    | -                               | -            | -                 | (860,130)       | -            | (860,130)        |
| Interest expense                       | (10,875)                        | -            | (10,875)          | (891)           | -            | (891)            |
| Net loss                               | \$ (13,212,705)                 | \$ 2,377,412 | \$ (10,835,293)   | \$ (11,777,735) | \$ 1,107,404 | \$ (10,670,331)  |
| Basic and diluted loss per share       | \$ (1.97)                       | \$ 0.36      | \$ (1.62)         | \$ (2.38)       | \$ 0.22      | \$ (2.16)        |

|                                        | January 22, 2003 (Inception) to<br>September 30, 2007 |                        |           |                     |
|----------------------------------------|-------------------------------------------------------|------------------------|-----------|---------------------|
|                                        | As Reported                                           | Adjustment             |           | As Restated         |
| Research and development               | \$ 22,577,839                                         | \$ 28,256,771 (1)      | \$        | 50,834,610          |
| General and administrative             | 16,764,078                                            | -                      |           | 16,764,078          |
| Depreciation and amortization          | 5,205,929                                             | (4,771,302) (2)        |           | 434,627             |
| Loss on impairment of intangible asset | 1,139,677                                             | (1,139,677) (3)        |           | -                   |
| Loss on disposal of assets             | 486,343                                               | -                      |           | 486,343             |
| Operating loss                         | (46,173,866)                                          | (22,345,792)           |           | (68,519,658)        |
| Interest income                        | 1,199,307                                             | -                      |           | 1,199,307           |
| Other income                           | 77,003                                                | -                      |           | 77,003              |
| Gain on extinguishment of debt         | 1,612,440                                             | -                      |           | 1,612,440           |
| Gain (loss) on derivative liability    | -                                                     | -                      |           | -                   |
| Interest expense                       | (8,249,838)                                           | -                      |           | (8,249,838)         |
| Net loss                               | <u>\$ (51,534,954)</u>                                | <u>\$ (22,345,792)</u> | <u>\$</u> | <u>(73,880,745)</u> |
| Basic and diluted loss per share       | <u>N/A</u>                                            | <u>N/A</u>             |           | <u>N/A</u>          |

(1) Adjustment for capitalizing acquired research and development to intangible assets that should have been expensed to research and development (i) for the three months ended 9/30/2007 and 9/30/2006 in the amount of \$-0-, (ii) for the nine months ended 9/30/2007 in the amount of \$-0- and for the nine months ended 9/30/2006 in the amount of \$125,000 and (iii) for the period inception to 9/30/2007 in the amount of \$28,256,771.

(2) Reversal of amortization of intangible assets that should have been expensed to research and development (i) for the three months ended 9/30/2007 \$413,184 and for the three months ended 9/30/2006 in the amount of \$412,274 (ii) for the nine months ended 9/30/2007 in the amount of \$1,237,735 and for the nine months ended 9/30/2006 in the amount of \$1,232,404 and (iii) for the period inception to 9/30/2007 in the amount of \$4,771,302.

(3) Reversal of impairment of intangible assets that should have been expensed to research and development (i) for the three months ended 9/30/2007 \$1,139,677 and for the three months ended 9/30/2006 in the amount of \$-0-, (ii) for the nine months ended 9/30/2007 in the amount of \$1,139,677 and for the nine months ended 9/30/2006 in the amount of \$-0- and (iii) for the period inception to 9/30/2007 in the amount of \$1,139,677.

In the Balance Sheet, the effect of the adjustments on Intangible Assets and Accumulated Deficit as of September 30, 2007 and December 31, 2006 was as follows:

|                             | September 30, 2007 |                     |                 | December 31, 2006 |                     |                 |
|-----------------------------|--------------------|---------------------|-----------------|-------------------|---------------------|-----------------|
|                             | As Reported        | Adjustment          | As Restated     | As Reported       | Adjustment          | As Restated     |
| <b>Assets</b>               |                    |                     |                 |                   |                     |                 |
| Intangible Assets           | \$ 22,345,791      | \$ (22,345,791) (1) | \$ -            | \$ 24,723,203     | \$ (24,723,203) (1) | \$ -            |
| <b>Stockholders' Equity</b> |                    |                     |                 |                   |                     |                 |
| Accumulated Deficit         | \$ (51,534,954)    | \$ (22,345,791) (1) | \$ (73,880,745) | \$ (34,320,430)   | \$ (24,723,203) (1) | \$ (59,043,633) |

(1) Adjustment for capitalizing acquired research and development to intangible assets that should have been expensed to research and development, reversal of amortization of intangible assets that should have been expensed to research and development and reversal of impairment of intangible assets that should have been expensed to research and development. Adjustments include:

- Adjustment for capitalizing acquired research and development to intangible assets that should have been expensed to research and development as of 9/30/2007 in the amount of \$28,256,771 and as of December 31, 2006 in the amount of \$28,256,771.
- Reversal of amortization of intangible assets that should have been expensed to research and development as of 9/30/2007 in the amount of \$4,771,302 and as of December 31, 2006 in the amount of \$3,533,568.
- Reversal of impairment of intangible assets that should have been expensed to research and development for the period inception to 9/30/2007 in the amount of \$1,139,677 and as of December 31, 2006 in the amount of \$-0-.

#### NOTE 4 – CASH AND CASH EQUIVALENTS

Opexa considers all highly liquid investments with an original maturity of three months or less, when purchased, to be cash equivalents. Investments with maturities in excess of three months but less than one year are classified as short-term investments and are stated at fair market value.

The primary objectives for our fixed income investment portfolio are liquidity and safety of principal. Investments are made with the objective of achieving the highest rate of return consistent with these two objectives. Opexa's investment policy limits investments to certain types of instruments issued by institutions primarily with investment grade credit ratings and places restrictions on maturities and concentration by type and issuer.

At September 30, 2007, Opexa invested approximately \$4.0 million in A-1/P-1 commercial paper with an average market yield of 5.24% and average time to maturity of less than one month. At September 30, 2007, approximately \$1.9 million was invested in a money market account with an average yield of 5.29%. Interest income of \$423,086 was recognized for the nine months ended September 30, 2007 in the statement of expenses.

#### NOTE 5 – COMMITMENTS AND CONTINGENCIES

In September 2006, Opexa entered into an Individual Project Agreement (IPA) with PharmaNet, LLC, a contract research organization focused on managing central nervous system trials. Pursuant to such IPA, PharmaNet, LLC will provide Opexa with services in connection with its Phase IIb clinical trial. Under the terms of the IPA, Opexa is required to advance funds in the amount of (i) \$400,000 for professional fees, (ii) \$60,000 for out of pocket expenses and (iii) \$175,000 for investigator grants. The professional fee advance is applied 1/12<sup>th</sup> per month to invoices and replenished once 75% depleted. The out of pocket advance will be held and applied to the final invoice. The investigator grant advance is used as a draw down advance and replenished once 75% depleted. This process will continue until the end of the study. At the conclusion of the program, advance balances remaining will be applied to outstanding invoices. These advances are treated as prepaid items and included in the other current assets section of the balance sheet. As of September 30, 2007, the advance balance to PharmaNet, LLC was \$293,336.

In July 2007, Opexa entered into a seconded amended and restated license agreement with the University of Chicago that requires Opexa to make milestone payments of up to \$1,350,000 if certain late stage clinical trial and FDA approval milestones are achieved. Opexa has determined that these payments are not probable at this time and thus no liability has been recorded as of September 30, 2007.

#### NOTE 6 – LOAN PAYABLE

Loan payable consists of an equipment line of \$250,000 with Wells Fargo of which \$236,563 was outstanding as of September 30, 2007. This loan has an interest rate of 7.61% per annum, matures in May 2011 and is secured by Opexa's furniture and equipment purchased with the loan proceeds. Payments are due and payable monthly on the same day of each month until maturity.

#### NOTE 7 – OPTIONS AND WARRANTS

During the first quarter of 2007, Opexa issued options to purchase 9,900 shares of common stock of Opexa to its new employees. These options are for a term of ten years, have an exercise price of \$4.04 and vest over three years. Fair value of \$32,914 was calculated using the Black-Scholes model. Variables used in the Black-Scholes option-pricing model during the three months ended March 31, 2007, include (1) 4.52% discount rate, (2) option life is the expected term of 6 years, (3) expected volatility of 103.91%, and (4) zero expected dividends. Option expense of \$4,141 was recorded during the nine months ended September 30, 2007.

During the second quarter of 2007, Opexa issued options to purchase 209,000 shares of common stock of Opexa to its management and employees. These options are for a term of ten years, have an exercise price of \$5.47 and vest over three years. Fair value of \$907,968 was calculated using the Black-Scholes option-pricing model. Variables used in the Black-Scholes option-pricing model for options issued during the three months ended June 30, 2007, include (1) 5.07% discount rate, (2) option life is the expected term of 6 years, (3) expected volatility of 95.88%, and (4) zero expected dividends. Option expense of \$86,473 was recorded during the nine months ended September 30, 2007.

During the second quarter of 2007, Opexa issued options to purchase 48,000 shares of common stock of Opexa to consultants and directors. These options are for a term of ten years, have an exercise price of \$5.47 and have vesting dates that vary from either full or partial vesting at date of grant to full vesting at the one year anniversary of the date of grant. Fair value of \$202,937 was calculated using the Black-Scholes option-pricing model. Variables used in the Black-Scholes option-pricing model for options issued during the three months ended June 30, 2007, include (1) 5.07% discount rate, (2) option life is the expected term ranging from 5 to 5.5 years, (3) expected volatility of 95.88%, and (4) zero expected dividends. Option expense of \$122,828 was recorded during the nine months ended September 30, 2007.

During the third quarter of 2007, Opexa issued options to purchase 5,500 shares of common stock of Opexa to its new employees. These options are for a term of ten years, have an exercise price of \$3.96 and vest over three years. Fair value of \$17,129 was calculated using the Black-Scholes model. Variables used in the Black-Scholes option-pricing model during the three months ended September 30, 2007, include (1) 4.22% discount rate, (2) option life is the expected term of 6 years, (3) expected volatility of 95.36%, and (4) zero expected dividends. Option expense of \$279 was recorded during the three months ended September 30, 2007.

During the third quarter of 2007, Opexa issued an option to purchase 1,500 shares of common stock of Opexa to a consultant. These options are for a term of ten years, have an exercise price of \$3.96 and vest at date of grant. Fair value of \$4,412 was calculated using the Black-Scholes option-pricing model. Variables used in the Black-Scholes option-pricing model for options issued during the three months ended September 30, 2007, include (1) 4.22% discount rate, (2) option life is the expected term of 5 years, (3) expected volatility of 95.36%, and (4) zero expected dividends. Option expense of \$4,412 was recorded during the three months ended September 30, 2007.

During the third quarter of 2007, Opexa issued options to purchase 20,000 shares of common stock of Opexa to a new director. These options are for a term of ten years, have an exercise price of \$3.95 and vest 50% at date of grant and 25% vest on the first and second year anniversary of date of grant. Fair value of \$61,326 was calculated using the Black-Scholes option-pricing model. Variables used in the Black-Scholes option-pricing model for options issued during the three months ended September 30, 2007, include (1) 4.20% discount rate, (2) option life is the expected term of 5.75 years, (3) expected volatility of 95.36%, and (4) zero expected dividends. Option expense of \$31,210 was recorded during the three months ended September 30, 2007.

#### NOTE 8 – DERIVATIVE INSTRUMENTS

In June 2006, Opexa evaluated the application of SFAS 133 and EITF 00-19 for all of its financial instruments and it was determined that certain of the warrants to purchase common stock issued by Opexa associated with the bridge note exchange and private placement offerings in June 2005 and July 2005 were derivatives that Opexa was required to account for as free-standing derivative instruments under GAAP. These three series of warrants were considered at the time to be derivatives because the liquidated damage provision in the registration rights agreement covering each warrant resulted in the conclusion that it was more economic to issue registered shares than to issue unregistered shares and pay the penalty. Because issuing registered shares is outside of Opexa's control, Opexa concluded the warrants should be accounted for as derivative liabilities under SFAS 133 and EITF 00-19. As a result, Opexa reported the value of these derivatives as current liabilities on its balance sheet and reported changes in the value of these derivatives as non-operating gains or losses on its statements of operations in the consolidated financial statements beginning with the year ended December 31, 2005 and re-measured and reported on a quarterly basis thereafter based on the Black Scholes Pricing Model.

In December 2006, the FASB issued FASB Staff Position No. EITF 00-19-2, Accounting for Registration Payment Arrangements (EITF 00-19-2). EITF 00-19-2 addresses an issuer's accounting for registration payment arrangements. It specifies that the contingent obligation to make future payments or otherwise transfer consideration under a registration payment arrangement, whether issued as a separate agreement or included as a provision of a financial instrument or other agreement, should be separately recognized and measured in accordance with FASB Statement No. 5, Accounting for Contingencies. The guidance in EITF 00-19-2 amends FASB Statements No. 133, Accounting for Derivative Instruments and Hedging Activities, and No. 150, Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity, and FASB Interpretation No. 45, Guarantor's Accounting and Disclosure Requirements for Guarantees, including Indirect Guarantees of Indebtedness of Others, to include scope exceptions for registration payment arrangements. EITF 00-19-2 also requires additional disclosure regarding the nature of any registration payment arrangements, alternative settlement methods, the maximum potential amount of consideration and the current carrying amount of the liability, if any. This EITF is effective immediately for registration payment arrangements and the financial instruments subject to those arrangements that are entered into or modified subsequent to the date of issue of this EITF. For registration payment arrangements and financial instruments subject to those arrangements that were entered into prior to the issuance of this EITF, this is effective for financial statements issued for fiscal years beginning after December 15, 2006, and interim periods within those fiscal years.

Opexa evaluated the application of EITF 00-19-2 for all its financial instruments and determined that certain warrants to purchase common stock issued by Opexa associated with the bridge note exchange and private placement offerings in June 2005 and July 2005 no longer qualified to be classified as derivative liabilities. In addition, Opexa accounts for registration rights agreement penalties as contingent liabilities, applying the accounting guidance of Financial Accounting Standard No. 5, "Accounting for Contingencies" ("FAS 5"). This accounting is consistent with views established by the FASB Staff Positions FSP EITF 00-19-2 "Accounting for Registration Payment Arrangements", which was issued December 21, 2006. Accordingly, Opexa recognizes the damages when it becomes probable that they will be incurred and amounts are reasonably estimable.

4,600,000 shares of common stock and 2,513,720 warrants to purchase common stock are subject to a registration payment arrangement that provides if a resale registration statement is not effective for any period after April 13, 2007, the warrant holders may exercise their warrants on a cashless basis during the period the resale registration statement is not effective. If Opexa fails to register, achieve effectiveness of registration or maintain effectiveness of registration of shares underlying the warrants and shares, they are required to make certain liquidated damage payments of 1.5% of the aggregate amount of proceeds of the offering per month for every month in default with a maximum of 24%. Opexa does not believe these payments are probable and thus no contingent liability has been recorded.

1,272,356 shares of common stock and 1,714,410 shares of common stock issuable upon the exercise of common stock purchase warrants issued in June 2005 and July 2005 are subject to a registration payment arrangement that provides if a resale registration statement is not effective for any period after the first anniversary of the warrant, the warrant holders may exercise their warrants on a cashless basis during the period the resale registration statement is not effective. If Opexa fails to register, achieve effectiveness of registration or maintain effectiveness of registration of shares underlying the warrants and shares, they are required to make certain liquidated damage payments of 1.0% of the aggregate amount of proceeds of the offering per month for the first calendar month of registration default and 2% for every month in default after the first month. Opexa does not believe these payments are probable and thus no contingent liability has been recorded.

The impact of implementing EITF 00-19-2 for the nine months ended September 30, 2007 resulted in a cumulative effect of a change in accounting principle with a decrease in the derivative liability of \$6,656,677 and a decrease to beginning retained earnings of \$4,001,819 reversing gains posted to date and a reclassification of the original value of the warrants from liability to equity of \$10,658,496.

#### **NOTE 9 – LICENSES AND GAIN ON EXTINGUISHMENT OF DEBT**

##### ***University of Chicago License Agreement***

In 2004, Opexa entered into an agreement with the University of Chicago ("University") for the worldwide license to technology developed at Argonne National Laboratory, a U.S. Department of Energy Laboratory operated by the University. The license was later amended granting Opexa an exclusive, non-transferable worldwide license to the University's stem cell technology. In consideration for the license and amendment, Opexa paid the University a total of \$232,742 and issued the University 53,462 shares of common stock valued at \$2,295,461. Opexa also agreed to pay the University \$1.5 million and to issue the University 21,623 shares of Opexa common stock. In April 2007, the \$1.5 million cash payment obligation was extended until July 31, 2007 and the obligation to issue shares of Opexa's common stock was extended until July 31, 2007, with \$112,440 accrued as of June 30, 2007. The Company determined that these assets had not reached technological feasibility at the date of acquisition and had no alternative future use. Therefore, the costs were expensed to research and development in the period incurred.

On July 31, 2007, Opexa entered into a second amended and restated license agreement with the University of Chicago that eliminated the obligations under the prior agreement for the payment of \$1.5 million due July 31, 2007 and the obligation to issue 21,623 shares of Opexa common stock. These obligations were recorded as an intangible asset, with the liabilities recorded as a notes payable - current portion of \$1.5 million and a stock payable of \$112,440. As a result of the amendment and restatement of the license agreement with the University of Chicago \$1,612,440 was reported as a gain on extinguishment of liability. Opexa applied the accounting guidance of Financial Accounting Standard No. 140, "Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities" ("FAS 140") and EITF 96-19 "Debtor's Accounting for a Modification or Exchange of Debt Instruments".



OPEXA THERAPEUTICS

Opexa Therapeutics, Inc.

Common Stock

Series E Warrants

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PROSPECTUS

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, 2007

Until \_\_\_\_\_, 2007 (25 days after the date of this prospectus), all dealers that buy, sell or trade these securities, whether or not participating in the offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

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## PART II

### INFORMATION NOT REQUIRED IN PROSPECTUS

#### Item 24. Indemnification of Directors and Officers.

Opexa Therapeutics, Inc. (the “Company”) has the authority under Articles 2.02a(16) and 2.02-1 of the Texas Business Corporation Act (“TBCA”) to indemnify its directors and officers to the extent provided for in such statute. The TBCA provides, in part, that a corporation may indemnify a director or officer or other person who was, is or is threatened to be made a named defendant or respondent in a proceeding because such person is or was a director, officer, employee or agent of the corporation, if it is determined that such person: (1) conducted himself in good faith; (2) reasonably believed, in the case of conduct in his official capacity as a director or officer of the corporation, that his conduct was in the corporation’s best interest and, in all other cases, that his conduct was at least not opposed to the corporation’s best interests; and (3) in the case of any criminal proceeding, had no reasonable cause to believe that his conduct was unlawful.

A corporation may indemnify a person under the TBCA against judgments, penalties, including excise and similar taxes, fines, settlement, unreasonable expenses actually incurred by the person in connection with the proceeding. If the person is found liable to the corporation or is found liable on the basis that personal benefit was improperly received by the person, the indemnification is limited to reasonable expenses actually incurred by the person in connection with the proceeding, and shall not be made in respect of any proceeding in which the person shall have been found liable for willful or intentional misconduct in the performance of his duty to the corporation. The corporation may also pay or reimburse expenses incurred by a person in connection with his appearance as a witness or other participation in a proceeding at a time when he is not a named defendant or respondent in the proceeding.

The Company’s Articles of Incorporation provide that none of its directors shall be personally liable to the Company or its shareholders for monetary damages for an act or omission in such director’s capacity as a director; provided, however, that the liability of such director is not limited to the extent that such director is found liable for (1) a breach of the director’s duty of loyalty to the Company or its shareholders, (2) an act or omission not in good faith that constitutes a breach of duty of the director to the Company or an act or omission that involves intentional misconduct or a knowing violation of the law, (3) a transaction from which the director received an improper benefit, whether or not the benefit resulted from an action taken within the scope of the director’s office, or (4) an act or omission for which the liability of the director is expressly provided by an applicable statute.

The Company believes that these provisions will assist it in attracting and retaining qualified individuals to serve as executive officers and directors. The inclusion of these provisions in the Company’s Articles of Incorporation may have the effect of reducing the likelihood of derivative litigation against the Company’s directors and may discourage or deter shareholders or management from bringing a lawsuit against directors for breach of their duty of care, even though such an action, if successful, might otherwise have benefited us or our shareholders.

The Company’s Articles of Incorporation and By-laws provide that the Company may indemnify its officers, directors, agents and any other persons to the fullest extent permitted by the TBCA.

Additionally, under their employment agreements with Opexa Therapeutics Inc. Mr. McWilliams, Dr. Williams, Ms. Hohlfeld and Ms. Rill are entitled to indemnification in their capacity as officers of the Company to the fullest extent permitted by the TBCA.

#### Item 25. Other Expenses of Issuance and Distribution.

The following table sets forth the costs and expenses, other than the underwriting discounts and commissions, payable by the registrant in connection with the sale of the securities being registered. All amounts are estimates except the Securities and Exchange Commission (SEC) registration fee.

|                                   |    |         |
|-----------------------------------|----|---------|
| SEC Registration Fee              | \$ | 1,346   |
| NASD Filing Fee                   |    | 4,884   |
| Nasdaq Listing Fee                |    | 5,000   |
| Printing Costs                    |    | 100,000 |
| Legal Fees and Expenses           |    | 180,000 |
| Accounting Fees and Expenses      |    | 80,000  |
| Transfer Agent and Registrar Fees |    | 5,000   |
| Miscellaneous                     |    | 20,000  |
| Total                             | \$ | 396,230 |

**Item 26. Recent Sales of Unregistered Securities.**

**Acquisition of PharmaFrontiers Corp.**

On June 4, 2004, when the Company was named “Sportan United Industries, Inc.,” it issued 638,644 shares of common stock to the shareholders of PharmaFrontiers Corp., a Texas corporation (“PharmaFrontiers”) in exchange for all the outstanding capital stock of PharmaFrontiers. The shares of common stock issued in the acquisition were offered and sold pursuant to the exemption from registration afforded by Rule 506 under the Securities Act of 1933 (the “Securities Act”) and/or Section 4(2) of the Securities Act. The Company subsequently changed its name to “PharmaFrontiers Corp.” On June 19, 2006 PharmaFrontiers changed its name to Opexa Therapeutics, Inc.

**Acquisition of Opexa Pharmaceuticals, Inc.**

In connection with the closing of the Company's acquisition of Opexa Pharmaceuticals, Inc., a Delaware corporation (“Opexa Pharmaceuticals”), on November 5, 2004, we issued 250,000 shares of our common stock to the former holders of common stock of Opexa Pharmaceuticals in exchange for their Opexa Pharmaceuticals common stock. The shares of common stock issued in the acquisition were offered and sold pursuant to the exemption from registration afforded by Rule 506 under the Securities Act and/or Section 4(2) of the Securities Act. On June 9, 2005 we issued 20,000 shares of common stock to Sanders Morris Harris, Inc. in exchange for advisory services provided in connection with the acquisition of Opexa Pharmaceuticals. The shares were sold pursuant to the exemption from registration afforded by Rule 504 under the Securities Act of 1933 (the “Securities Act”) and/or Section 4(2) of the Securities Act.

**15% Exchangeable Convertible Subordinated Note Private Placement Financing and Subsequent Exchange - 2005**

During the six months ended February 15, 2005, the Company issued to accredited investors in a private placement: (i) 15% Exchangeable Subordinated Convertible Notes with a principal amount of \$6.1 million, (ii) an aggregate of 61,269 shares of common stock, and (iii) a right to receive a warrant to purchase common stock. The Company received gross proceeds of \$6.1 million from this private placement. These securities were offered and sold pursuant to the exemption from registration afforded by Rule 506 under the Securities Act and/or Section 4(2) of the Securities Act. In connection with this private placement, the Company entered into Registration Rights Agreements with the purchasers requiring that, among other things, the Company register the shares issued, those shares issuable on conversion of the notes and those shares issuable upon exercise of the warrant, for resale under the Securities Act.

In addition, the Company issued to the placement agents who assisted with the sale of the notes, warrants to purchase 21,688 shares of common stock at a price of \$15.00 per share. These warrants expire on February 14, 2010. The Company agreed to register for resale the shares of common stock issuable upon exercise of the warrants.

On June 30, 2005 the Company, in exchange for all outstanding 15% Exchangeable Convertible Subordinated Notes and the associated rights to warrants, issued to the accredited investors holding the notes: (i) an aggregate of 565,858 shares of our common stock, (ii) Series A Warrants to purchase an aggregate of 554,200 shares of our common stock, (iii) Series B Warrants to purchase an aggregate of 221,680 shares of our common stock, and (iv) Series C Warrants to purchase an aggregate of 443,360 shares of our common stock. In connection with this exchange offering, the Company entered into a Registration Rights Agreement dated June 17, 2005 with the participants in the exchange offer requiring that, among other things, the Company register the shares issued in the exchange offer and issuable upon exercise of the warrants, for resale under the Securities Act.

The notes and shares of common stock and warrants described above were offered and sold pursuant to the exemption from registration afforded by Rule 506 under the Securities Act, Section 3(a)(9) of the Securities Act and/or Section 4(2) of the Securities Act.

#### **Sale of Common Stock, Series A Warrants, Series B Warrants and Series C Warrants – July 2005**

In the month ended July 15, 2005, the Company completed a private placement to accredited investors of (i) an aggregate of 383,451 shares of common stock at a per share price of \$15.00 pursuant to the terms of Securities Purchase Agreements dated June 17, 2005 and July 15, 2005 by and among the Company and each of the purchasers. In connection with this private placement, the Company entered into a Registration Rights Agreement dated June 17, 2005 and July 15, 2005 with the purchasers requiring that, among other things, the Company register the shares for resale under the Securities Act.

In addition, the Company issued to the placement agents assisting with the private placement, warrants (the “Placement Agent Warrants”) to purchase 22,900 shares of common stock at an exercise price of \$15.00 per share. The Placement Agent Warrants are exercisable until June 17, 2010. The Company agreed to register for resale the shares of common stock issuable upon exercise of the Placement Agent Warrants.

The shares of common stock and warrants described above were offered and sold pursuant to the exemption from registration afforded by Rule 506 under the Securities Act and/or Section 4(2) of the Securities Act.

#### **Shares of Common Stock Issued To the University of Chicago**

Pursuant to the terms of a First Amended and Restated License Agreement (the “License Agreement”) dated December 30, 2004 with the University of Chicago, the Company has issued 53,462 shares of common stock in consideration of the license granted to the Company. The shares of common stock were offered and sold pursuant to the exemption from registration afforded by Section 4(2) under the Securities Act. In connection with the License Agreement, the Company agreed to register the shares issued thereunder for resale under the Securities Act.

#### **Sale of Common Stock and Warrants – April 2006**

On April 13, 2006, the Company issued (i) 4,600,000 shares of Company common stock and warrants to purchase a total of 2,300,000 shares of Company common stock to 41 accredited investors and (ii) warrants to purchase 213,720 shares of Company common stock to MDB Capital Group LLC and another broker dealer. The Company received gross proceeds of \$23,000,000 (\$21,245,900 in proceeds after the deduction of sales commissions) from the private placement. The offers and sales were made without registration under the Act, or the securities laws of certain states, in reliance on the exemptions provided by Section 4(2) of Act and Regulation D under the Act and in reliance on similar exemptions under applicable state laws.

#### **Item 27. Exhibits and Financial Statement Schedules.**

**(a) Exhibits** . The following exhibits of the Company are included herein.

|               |                                                                                                                                                              |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Exhibit 1.1 * | Form of Underwriting Agreement                                                                                                                               |
| Exhibit 2.1   | Stock Purchase Agreement effective as of May 5, 2004 (incorporated by reference to Exhibit 2.1 to the Company's Current Report on Form K filed June 4, 2004) |

|                |                                                                                                                                                                                                                            |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Exhibit 2.2    | Agreement (incorporated by reference to Exhibit 2.1 to the Company's Current Report on 8-K filed October 8, 2004)                                                                                                          |
| Exhibit 3.1    | Articles of Amendment and Restatement of the Articles of Incorporation (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on June 19, 2006)                                       |
| Exhibit 3.3    | Amended and Restated By-laws (incorporated by reference to Exhibit 2.2 to the Company's Registration Statement on Form 10-SB (File No. 000-25513), initially filed March 8, 1999)                                          |
| Exhibit 4.1    | Form of Common Stock Certificate (incorporated by reference to Exhibit 2.3 to the Company's Registration Statement on Form 10-SB (File No. 000-25513), initially filed March 8, 1999)                                      |
| Exhibit 4.2 *  | Form of Series E Warrant                                                                                                                                                                                                   |
| Exhibit 4.3 *  | Warrant Agent Agreement for Series E Warrant                                                                                                                                                                               |
| Exhibit 4.4 *  | Form of Underwriters' Warrant Agreement                                                                                                                                                                                    |
| Exhibit 4.5 *  | Form of Underwriters' Warrant to Acquire Warrants Agreement                                                                                                                                                                |
| Exhibit 5.1 ** | Opinion of Vinson & Elkins L.L.P.                                                                                                                                                                                          |
| Exhibit 10.1   | June 2004 Compensatory Stock Option Plan (incorporated by reference to Exhibit B to the Company's Definitive Information Statement filed on June 29, 2004)                                                                 |
| Exhibit 10.2   | Amended and Restated Employment Agreement dated June 15, 2006, between the Company and David McWilliams (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-QSB filed August 14, 2006) |
| Exhibit 10.5   | Director's Agreement dated August 23, 2004 between the Company and David McWilliams (incorporated by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-QSB filed November 16, 2004)                   |
| Exhibit 10.12  | Form of Warrant Agreement (incorporated by reference to Exhibit 10.13 to the Company's Annual Report on Form 10-KSB filed April 15, 2005)                                                                                  |
| Exhibit 10.13  | License Agreement dated September 5, 2001 between the Company and Baylor College of Medicine (incorporated by reference to Exhibit 10.14 to the Company's Annual Report on Form 10-KSB filed April 15, 2005)               |
| Exhibit 10.14  | Second Amended and Restated License Agreement with University of Chicago (incorporated by reference to Exhibit 10.1 to the Company's Company's Current Report on Form 8-K filed August 3, 2007)                            |
| Exhibit 10.17  | Form of Series C Common Stock Purchase Warrant (incorporated by reference to Exhibit 10.17 to Form SB-2 filed July 19, 2005)                                                                                               |
| Exhibit 10.18  | Securities Purchase Agreement dated June 17, 2005 by and among the Company and the Investors named therein (incorporated by reference to Exhibit 10.18 to Form SB-2 filed July 19, 2005)                                   |
| Exhibit 10.19  | Registration Rights Agreement dated June 17, 2005 by and among the purchasers of common stock named therein (incorporated by reference to Exhibit 10.19 to Form SB-2 filed July 19, 2005)                                  |
| Exhibit 10.20  | Securities Purchase Agreement dated June 30, 2005 by and among the Company and the purchasers of common stock named therein (incorporated by reference to Exhibit 10.20 to Form SB-2 filed July 19, 2005)                  |

|                 |                                                                                                                                                                                                                                               |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Exhibit 10.21   | Securities Purchase Agreement dated July 15, 2005 by and among the Company and the Investors named therein (incorporated by reference to Exhibit 10.21 to Form SB-2 filed July 19, 2005)                                                      |
| Exhibit 10.22   | Registration Rights Agreement dated July 15, 2005 by and among the Company and the Investors named therein (incorporated by reference to Exhibit 10.22 to Form SB-2 filed July 19, 2005)                                                      |
| Exhibit 10.23   | License Agreement dated January 13, 2006 by the Company and Shanghai Institute for Biological Services (incorporated by reference to Exhibit 10.23 to Amendment No. 1 to Form SB-2 filed February 9, 2006)                                    |
| Exhibit 10.24   | Lease dated August 19, 2005 by the Company and Dirk D. Laukien (incorporated by reference to Exhibit 10.13 to the Company's Annual Report on Form 10-KSB filed March 31, 2006)                                                                |
| Exhibit 10.25   | Form of Warrant Agreement issued to brokers in connection with 2005 offerings (incorporated by reference to Exhibit 10.25 to Amendment No. 2 to Form SB-2 filed April 11, 2006)                                                               |
| Exhibit 10.26   | Purchase Agreement dated April 11, 2006 by and among the Company and the Investors named herein (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed April 18, 2006)                                  |
| Exhibit 10.27   | Registration Rights Agreement dated April 11, 2006 by and among the Company and the Investors named herein (incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed April 18, 2006)                       |
| Exhibit 10.28   | Form of Warrant issued in connection with April 2006 financing (incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed April 18, 2006)                                                                   |
| Exhibit 10.29   | Form of Broker Stock Purchase Warrant issued to MDB Capital Group LLC (incorporated by reference to Exhibit 10.5 of the Company's Current Report on Form 8-K filed April 18, 2006)                                                            |
| Exhibit 10.30   | Third Amendment to the Amended and Restated License Agreement dated October 27, 2006 between the Company and the University of Chicago (incorporated by reference to Exhibit 10.4 of the Company's Report on Form 8-K filed November 1, 2006) |
| Exhibit 23.1 *  | Consent of Malone & Bailey, PC                                                                                                                                                                                                                |
| Exhibit 23.2 ** | Consent of Vinson & Elkins L.L.P. (included in Exhibit 5.1)                                                                                                                                                                                   |

\* Filed herewith

\*\* To be filed by amendment

**(b) Financial Statement Schedules.**

All schedules are omitted because they are inapplicable or the requested information is shown in the consolidated financial statements of the registrant or related notes thereto.

**Item 28. Undertakings.**

- (a) 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 of 1933;
- (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, represents a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in 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 Securities and Exchange Commission 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 the registration statement or any material change to such information in the registration statement.
- (2) That, for the purpose of determining any liability under the Securities Act of 1933, 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.
- (b) Insofar as indemnification for liabilities arising under the Securities Act of 1933 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 Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 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 of 1933 and will be governed by the final adjudication of such issue.

## SIGNATURES

In accordance with the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements of filing on Form SB-2 and authorized this Registration Statement to be signed on its behalf by the undersigned, in the City of Houston, State of Texas, on the 19th day of December, 2007.

### OPEXA THERAPEUTICS, INC.

By: /s/ David B. McWilliams  
Name: David B. McWilliams  
Title: Chief Executive Officer

By: /s/ Lynne Hohlfeld  
Name: Lynne Hohlfeld  
Title: Chief Financial Officer and  
Principal Accounting Officer

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints David B. McWilliams his true and lawful attorney-in-fact and agent, with full power of substitution and revocation, for him and in his name, place and stead, in any and all capacities (until revoked in writing), to sign any and all amendments (including post-effective amendments) to this Registration Statement and to file the same with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done as fully for all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or is substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed below by the following persons in the capacities and on the dates indicated.

| <u>Signature</u>                                      | <u>Title</u>                                                                     | <u>Date</u>       |
|-------------------------------------------------------|----------------------------------------------------------------------------------|-------------------|
| <u>/s/ David B. McWilliams</u><br>David B. McWilliams | President, Chief Executive Officer and<br>Director (principal executive officer) | December 19, 2007 |
| <u>/s/ Lynne Hohlfeld</u><br>Lynne Hohlfeld           | Chief Financial Officer<br>(principal financial and accounting officer)          | December 19, 2007 |
| <u>/s/ *<br/>Gregory H. Bailey</u>                    | Director                                                                         | December 19, 2007 |
| <u>/s/ *<br/>David Hung</u>                           | Director                                                                         | December 19, 2007 |
| <u>/s/ *<br/>Lorin J. Randall</u>                     | Director                                                                         | December 19, 2007 |
| <u>/s/ *<br/>Michael Richman</u>                      | Director                                                                         | December 19, 2007 |
| <u>/s/ *<br/>Scott B. Seaman</u>                      | Director                                                                         | December 19, 2007 |

\*By: /s/ David B. McWilliams

4,500,000 Shares and 4,500,000 Warrants

OPEXA THERAPEUTICS, Inc.

Common Stock and Common Stock Purchase Warrants

UNDERWRITING AGREEMENT

\_\_\_\_\_, 2008

MDB Capital Group LLC  
As Representative of the Several Underwriters named in Schedule I hereto  
401 Wilshire Boulevard  
Santa Monica, CA 90401

Ladies and Gentlemen:

Opexa Therapeutics, Inc., a Texas corporation (“ **Company** ”), proposes to issue and sell to the several Underwriters (as defined below) an aggregate of 4,500,000 shares of its common stock, \$0.50 par value per share (the “ **Common Stock** ”) and an aggregate of 4,500,000 common stock purchase warrants, each warrant to purchase one share of common stock for an exercise period of five years commencing the date of issuance (the “ **Public Series E Warrants** ”).

It is understood that, subject to the conditions hereinafter stated, an aggregate of 4,500,000 shares of the Common Stock (the “ **Firm Shares** ”) and an aggregate of 4,500,000 Public Series E Warrants (the “ **Firm Warrants** ”) (together the Firm Shares and the Firm Warrants are referred to as the “ **Firm Securities** ”) will be sold to the several Underwriters named in Schedule I hereto (the “ **Underwriters** ”) in connection with the offering (the “ **Offering** ”) and sale of such Firm Securities. MDB Capital Group LLC shall act as the representative (the “ **Representative** ”) of the several Underwriters. In addition, as set forth below the Company proposes to issue and sell to the Underwriters, upon the terms and conditions set forth in Section 2, an aggregate of up to 675,000 additional shares of the Common Stock (the “ **Optional Shares** ”) and an aggregate of up to 675,000 additional Series E Warrants (the “ **Optional Warrants** ”) (together the Optional Shares and Optional Warrants are referred to as the “ **Optional Securities** ”). The Firm Securities and the Optional Securities are hereinafter called the “ **Securities** .”

This is to confirm the agreement concerning the purchase of the Securities from the Company by the Underwriters.

**1. Representations and Warranties.** The Company represents and warrants to, and agrees with, each Underwriter that:

(a) The Company has prepared and filed with the Securities and Exchange Commission (the “ **Commission** ”) a registration statement on Form SB-2 (File No. 333-147167), which contains a form of prospectus to be used in connection with the public offering and sale of the Securities. Such registration statement, as amended, including the financial statements, exhibits and schedules thereto, in the form in which it was declared effective by the Commission under the Securities Act of 1933, as amended (the “ **Securities Act** ”) and the rules and regulations promulgated thereunder (the “ **Rules and Regulations** ”), including any required information deemed to be a part thereof at the time of effectiveness pursuant to Rule 430A under the Securities Act, is called the “ **Registration Statement** .” Any registration statement filed by the Company pursuant to Rule 462(b) under the Securities Act is called the “ **Rule 462(b) Registration Statement** ”, and from and after the date and time of filing of the Rule 462(b) Registration Statement the term “ **Registration Statement** ” shall include the Rule 462(b) Registration Statement. Any preliminary prospectus included in the Registration Statement is hereinafter called a “ **preliminary prospectus** .” The term “ **Prospectus** ” shall mean the final prospectus relating to the Securities that is first filed pursuant to Rule 424(b) after the date and time that this Agreement is executed and delivered by the parties hereto (the “ **Execution Time** ”) or, if no filing pursuant to Rule 424(b) is required, shall mean the form of final prospectus relating to the Securities included in the Registration Statement at the time it became effective. All references in this Agreement to the Registration Statement, the Rule 462(b) Registration Statement, a preliminary prospectus, the Prospectus, or any amendments or supplements to any of the foregoing, shall include any copy thereof filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval System (“ **EDGAR** ”).

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(b) The Registration Statement and any Rule 462(b) Registration Statement have been declared effective by the Commission under the Securities Act. The Company has complied, to the Commission's satisfaction, with all requests of the Commission for additional or supplemental information. No stop order suspending the effectiveness of the Registration Statement or any Rule 462(b) Registration Statement is in effect and no proceedings for such purpose have been instituted or are pending or, to the best knowledge of the Company, are contemplated or threatened by the Commission.

The final preliminary prospectus included in the Disclosure Package (as defined below) and the Prospectus when filed complied in all material respects with the Securities Act and the rules thereunder and, if filed by electronic transmission pursuant to EDGAR (except as may be permitted by Regulation S-T under the Securities Act), was identical to the copy thereof delivered to the Underwriters for use in connection with the offer and sale of the Securities. Each of the Registration Statement, any Rule 462(b) Registration Statement and any post-effective amendment thereto, at the time it became effective and at the date hereof, the Closing Date and any Subsequent Closing Date, complied and will comply in all material respects with the Securities Act and did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. The Prospectus (including any Prospectus wrapper), as amended or supplemented, as of its date and at the date hereof, the Closing Date and any Option Closing Date, did not and will not contain any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the two immediately preceding sentences do not apply to statements in or omissions from the Registration Statement, any Rule 462(b) Registration Statement, or any post-effective amendment thereto, or the Prospectus, or any amendments or supplements thereto, made in reliance upon and in conformity with information relating to any Underwriter furnished to the Company in writing by the Representative expressly for use therein, it being understood and agreed that the only such information furnished by the Representative consists of the information described as such in Section 11 hereof. There are no contracts or other documents required to be described in the Prospectus or to be filed as exhibits to the Registration Statement which have not been described or filed as required.

(c) The term “**Disclosure Package**” shall mean, collectively, (i) the preliminary prospectus that is included in the Registration Statement immediately prior to the Initial Sale Time (as defined below), if any, as amended or supplemented, (ii) the issuer free writing prospectuses as defined in Rule 433 of the Securities Act (each, an “**Issuer Free Writing Prospectus**”) identified in Schedule III hereto, and (iii) any other free writing prospectus that the parties hereto shall hereafter expressly agree in writing to treat as part of the Disclosure Package. As of \_\_\_\_\_ (Eastern time) on the date of this Agreement (the “**Initial Sale Time**”), the Disclosure Package did not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The preceding sentence does not apply to statements in or omissions from the Disclosure Package based upon and in conformity with written information furnished to the Company by the Representative specifically for use therein, it being understood and agreed that the only such information furnished by or on behalf of any Underwriter consists of the information described as such in Section 11 hereof.

(d) Each Issuer Free Writing Prospectus, as of its issue date and at all subsequent times through the completion of the Offering or until any earlier date that the Company notified or notifies the Representative as described in the next sentence, did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement. The foregoing sentence does not apply to statements in or omissions from any Issuer Free Writing Prospectus based upon and in conformity with written information furnished to the Company by the Representative specifically for use therein, it being understood and agreed that the only such information furnished by any Underwriter consists of the information described as such in Section 11 hereof.

(e) The Company has delivered to the Representative one complete manually signed copy of the Registration Statement and of each consent and certificate of experts filed as a part thereof, and conformed copies of the Registration Statement (without exhibits) and preliminary prospectuses and the Prospectus, as amended or supplemented, in such quantities and at such places as the Representative have reasonably requested for each of the Underwriters.

(f) The Company has not distributed and will not distribute, prior to the later of the Option Closing Date (as defined in Section 3 below) and the completion of the Underwriters' distribution of the Securities, any offering material in connection with the offering and sale of the Securities other than any preliminary prospectus, the Prospectus, any Issuer Free Writing Prospectus reviewed and consented to by the Representative or included in Schedule III hereto or the Registration Statement.

(g) Malone & Bailey, PC, whose report appears in the Registration Statement, and included in the Disclosure Package and the Prospectus, are independent certified public accountants as required by the Securities Act and the Rules and Regulations. The financial statements and schedules (including the related notes) included in the Registration Statement, and included in the Disclosure Package and the Prospectus, present fairly the financial condition, the results of the operations and changes in financial condition of the entities purported to be shown thereby at the dates or for the periods indicated and have been prepared in accordance with generally accepted accounting principles applied on a consistent basis throughout the periods indicated. All adjustments necessary for a fair presentation of results for such periods have been made. The selected financial, operating and statistical data set forth in any preliminary prospectus included in the Disclosure Package and the Prospectus under the captions “Prospectus Summary,” “Selected Consolidated Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” fairly present, when read in conjunction with the Company’s financial statements and the related notes and schedules and on the basis stated in the Registration Statement, the information set forth therein.

(h) Each of the Company and its Subsidiaries (as defined in Section 13 hereof) has been duly incorporated and is validly existing as a corporation in good standing under the laws of the jurisdiction of its organization, with full power and authority (corporate and other) to own or lease its properties and conduct its business as described in the Disclosure Package and Prospectus, and is duly qualified to do business and is in good standing as a foreign corporation in each jurisdiction in which the character of the business conducted by it or the location of the properties owned or leased by it makes such qualification necessary; each of the Company and its Subsidiaries is in possession of and operating in compliance with all franchises, grants, authorizations, licenses, permits, easements, consents, certificates and orders required for the conduct of its business, all of which are valid and in full force and effect (except with respect to each of the foregoing representations, where any failure to do so would not result in a material adverse change in the condition (financial or otherwise), business, prospects, properties or results of operations of the Company and its subsidiaries considered as a whole) (“**Material Adverse Effect**”); and neither the Company nor any of its Subsidiaries has received any notice of proceedings relating to the revocation or modification of any such franchise, grant, authorization, license, permit, easement, consent, certificate or order which, individually or in the aggregate, if the subject of an unfavorable decision, would result, individually or in the aggregate, in having a Material Adverse Effect.

(i) The capitalization of the Company is as set forth in the Disclosure Package and Prospectus, and the Common Stock and Warrants conform to the descriptions thereof contained under the caption “Description of Securities” in the Disclosure Package and Prospectus; the outstanding shares of capital stock have been duly authorized, validly issued, fully paid and nonassessable and have been issued in compliance with federal and state securities laws. There are no preemptive rights or other rights to subscribe for or to purchase, or any restriction upon the voting or transfer of, any shares of capital stock pursuant to the Company’s certificate of incorporation, by-laws or other governing documents or any agreement or other instrument to which the Company or any of its Subsidiaries is a party or by which any of them may be bound. None of the outstanding shares of capital stock were issued in violation of any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase securities of the Company. There are no authorized or outstanding options, warrants, preemptive rights, rights of first refusal or other rights to purchase, or equity or debt securities convertible into or exchangeable or exercisable for, any capital stock of the Company other than those accurately described in the Disclosure Package and the Prospectus. The description of the Company’s stock option, stock bonus and other stock plans or arrangements, and the options or other rights granted thereunder, set forth in the Disclosure Package and the Prospectus accurately and fairly presents the information required to be shown with respect to such plans, arrangements, options and rights. Neither the filing of the Registration Statement nor the offering or sale of the Securities as contemplated by this Agreement gives rise to any rights, other than those which have been waived or satisfied, for or relating to the registration of any shares of Common Stock. All of the outstanding shares of capital stock of each Subsidiary of the Company have been duly authorized and validly issued, are fully paid and nonassessable and are owned directly or indirectly by the Company, free and clear of any claim, lien, encumbrance or security interest. Except as disclosed in the Disclosure Package, there are no authorized or outstanding options, warrants, preemptive rights, rights of first refusal or other rights to purchase, or equity or debt securities convertible into or exchangeable or exercisable for, any capital stock of any Subsidiary.

(j) Subsequent to the respective dates as of which information is given in the Disclosure Package and the Prospectus, and except as described or contemplated in the Disclosure Package and the Prospectus: neither the Company nor any of its Subsidiaries has incurred any liabilities or obligations, direct or contingent, nor entered into any transactions not in the ordinary course of business, which in either case are material to the Company or such Subsidiary, as the case may be; there has not been any Material Adverse Effect; and there has been no dividend or distribution of any kind declared, paid or made by the Company on any class of its capital stock.

(k) Neither the Company nor any of its Subsidiaries is, or with the giving of notice or lapse of time or both would be, in violation of or in default under, nor will the execution or delivery hereof or consummation of the transactions contemplated hereby result in a violation of, or constitute a default under, the certificate of incorporation, bylaws or other governing documents of the Company or any of its Subsidiaries, or any agreement, contract, mortgage, deed of trust, loan agreement, note, lease, indenture or other instrument, to which the Company or any of its Subsidiaries is a party or by which any of them is bound, or to which any of their properties is subject, nor will the performance by the Company of its obligations hereunder violate any law, rule, administrative regulation or decree of any court, or any governmental agency or body having jurisdiction over the Company, its Subsidiaries or any of their properties, or result in the creation or imposition of any lien, charge, claim or encumbrance upon any property or asset of the Company or any of its Subsidiaries (except with respect to each of the foregoing, where any such default or violation would not result in a Material Adverse Effect). Except for permits and similar authorizations required under the Securities Act and the securities or “Blue Sky” laws of certain jurisdictions and for such permits and authorizations which have been obtained, no consent, approval, authorization or order of any court, governmental agency or body or financial institution is required in connection with the consummation of the transactions contemplated by this Agreement (except where such failure would not have a Material Adverse Effect).

(l) This Agreement has been duly authorized, executed and delivered by the Company and constitutes a legal, valid and binding obligation of the Company and is enforceable against the Company in accordance with its terms.

(m) The Securities to be purchased by the Underwriters from the Company have been duly authorized for issuance and sale pursuant to this Agreement and, when issued and delivered by the Company pursuant to this Agreement, will be validly issued, fully paid and nonassessable. The issuance of the Securities pursuant to this Agreement will not be subject to any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase securities of the Company. There are no restrictions upon the voting or transfer of the Securities under the Company’s certificate of incorporation or by laws or any agreement or other instrument to which the Company is a party or otherwise filed as an exhibit to the Registration Statement.

(n) The warrants to purchase Common Stock and warrants to purchase Series E Warrants to be issued to the Underwriters (the “**Underwriter Warrants**”) pursuant to Section 4(k) have been duly authorized for issuance. The Company has reserved [900,000] shares of its Common Stock for issuance upon exercise of the Underwriter Warrants and when issued and paid for in accordance with the terms of the Underwriter Warrants and the underlying Series E Warrants, such Common Stock issuable thereunder will be validly issued, fully paid and nonassessable. The issuance of the Common Stock pursuant to the Underwriter Warrants and the underlying Series E Warrants will not be subject to any preemptive rights, rights of first refusal or other similar rights to subscribe for or purchase securities of the Company. There will be no restrictions upon the voting or transfer of the Common Stock issuable pursuant to the Underwriter Warrants and the underlying Series E Warrants under the Company’s certificate of incorporation or bylaws or any agreement or other instrument to which the Company is a party or otherwise filed as an exhibit to the Registration Statement.

(o) The Company and its Subsidiaries have good and marketable title in fee simple to all items of real property and good and marketable title to all personal property owned by them, in each case clear of all liens, encumbrances and defects except such as are described or referred to in the Disclosure Package and Prospectus or such as do not materially affect the value of such property and do not interfere with the use made or proposed to be made of such property by the Company or such Subsidiaries; and any real property and buildings held under lease by the Company and its Subsidiaries are held by them under valid, existing and enforceable leases with such exceptions as are not material and do not interfere with the use made or proposed to be made of such property and buildings by the Company or such Subsidiaries.

(p) Except as described in the Disclosure Package and the Prospectus, there is no litigation or governmental proceeding to which the Company or any of its Subsidiaries is a party or to which any property of the Company or any of its Subsidiaries is subject or which is pending or, to the knowledge of the Company, threatened against the Company which individually or in the aggregate might result in any Material Adverse Effect, which would materially and adversely affect the consummation of this Agreement or the transactions contemplated hereby or which is required to be disclosed in the Disclosure Package and the Prospectus.

(q) Neither the Company nor any Subsidiary is in violation of any law, ordinance, governmental rule or regulation or court decree to which it may be subject which violation might have a Material Adverse Effect.

(r) The Company has not taken and may not take, directly or indirectly, any action designed to cause or result in, or which has constituted or which might reasonably be expected to constitute, the stabilization or manipulation of the price of the shares of Common Stock to facilitate the sale or resale of the Securities.

(s) The Company and its Subsidiaries have filed all necessary federal, state and foreign income and franchise tax returns, and all such tax returns are complete and correct in all material respects, and the Company and its Subsidiaries have not failed to pay any taxes which were payable pursuant to said returns or any assessments with respect thereto. The Company has no knowledge of any tax deficiency which has been or is likely to be threatened or asserted against the Company or its Subsidiaries.

(t) The Company maintains a system of internal accounting controls sufficient to provide reasonable assurances that (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles in the United States and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Except as disclosed in the Registration Statement, the Disclosure Package and the Prospectus, since the date of the most recent evaluation of such system of internal accounting controls, there has been no material change in internal control over financial reporting, including any corrective actions with regard to significant deficiencies or material weaknesses.

(u) The Company and its Subsidiaries maintain insurance of the types and in the amounts its Board of Director has determined reasonable for its business, including, but not limited to, directors' and officers' insurance, insurance covering real and personal property owned or leased by the Company and its Subsidiaries against theft, damage, destruction, acts of vandalism and all other risks customarily insured against by companies of similar size and stage of development, all of which insurance is in full force and effect. The Company has not been refused any insurance coverage sought or applied for, and the Company has no reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business at a cost that would not have a Material Adverse Effect.

(v) Neither the Company nor any of its Subsidiaries nor, to the best of the Company's knowledge, any of its employees or agents has at any time during the last five years (i) made any unlawful contribution to any candidate for foreign office, or failed to disclose fully any contribution in violation of law, or (ii) made any payment to any foreign, federal or state governmental officer or official or other person charged with similar public or quasi-public duties, other than payments required or permitted by the laws of the United States or any jurisdiction thereof.

(w) The Company is not and, after giving effect to the offering and sale of the Securities and the application of the proceeds thereof as described under the caption "Use of Proceeds" in the Disclosure Package or the Prospectus, will not be an "investment company" as defined in the Investment Company Act of 1940, as amended.

(x) Except as disclosed in the Disclosure Package or the Prospectus, there are no contracts, agreements or understandings between the Company and any person that would give rise to a valid claim against the Company or any Underwriter for a brokerage commission, finder's fee or other like payment in connection with the Offering.

(y) Except as disclosed in the Company's reports under the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), there are no contracts, agreements or understandings between the Company and any person granting such person the right to require the Company to file a registration statement under the Securities Act with respect to any securities of the Company owned or to be owned by such person or to require the Company to include such securities in the securities registered pursuant to a Registration Statement or in any securities being registered pursuant to any other registration statement filed by the Company under the Securities Act.

(z) The Securities and the Common Stock and Series E Warrants reserved for issuance under the Underwriter Warrants and Common Stock reserved for issuance under the underlying Series E Warrants have been approved for listing on The Nasdaq Global Market subject only to official notice of issuance. The Common Stock and the Series E Warrants of the Company have been registered under Section 12(b) of the Exchange Act.

(aa) The Company is in material compliance with all applicable provisions of the Sarbanes-Oxley Act of 2002 that are currently effective and the rules and regulations promulgated in connection therewith.

(bb) No consent, approval, authorization, or order of, or filing with, any governmental agency or body or any court is required for the consummation of the transactions contemplated by this Agreement in connection with the issuance and sale of the Securities by the Company, except such as have been obtained and made under the Securities Act and such as may be required by the National Association of Securities Dealers, Inc. (the “**NASD**”) or under state securities laws or the laws of any foreign jurisdiction.

(cc) The execution, delivery and performance of this Agreement, and the issuance and sale of the Securities will not result in a breach or violation of any of the terms and provisions of, or constitute a default under, (i) any statute, any rule, regulation or order of any governmental agency or body or any court, domestic or foreign, having jurisdiction over the Company, except in the case of this clause (i) for such breaches, violations or defaults which would not, individually or in the aggregate, have a Material Adverse Effect or (ii) any agreement or instrument to which the Company is a party or by which the Company is bound, except in the case of this clause (ii) for such breaches, violations or defaults which would not, individually or in the aggregate, have a Material Adverse Effect, or (iii) the charter or by-laws of the Company, and the Company has full power and authority to authorize, issue and sell the Securities as contemplated by this Agreement.

(dd) The Company is not presently doing business with the government of Cuba or with any person or affiliate located in Cuba.

(ee) No labor dispute with the employees of the Company or any subsidiary exists or, to the knowledge of the Company, is imminent that might have a Material Adverse Effect.

(ff) To the Company’s knowledge, the Company and its Subsidiaries own or possess the right to use sufficient trademarks, trade names, patent rights, copyrights, domain names, licenses, approvals, trade secrets, inventions, technology, know-how and other similar rights (collectively, “**Intellectual Property Rights**”) as are (i) necessary or material to conduct its business as now conducted and as described in the Disclosure Package and the Prospectus and as are (ii) necessary or material for the commercialization of the products described in the Disclosure Package and the Prospectus as being under development. Except as set forth in the Disclosure Package and the Prospectus, (a) there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding, or claim by others challenging the rights of the Company or any of its Subsidiaries in or to any such Intellectual Property Rights that, if decided adversely to the Company would, individually or in the aggregate, have a Material Adverse Effect, and the Company is unaware of any facts which would form a reasonable basis for any such claim; (b) there is no pending, or to the Company’s knowledge, threatened action, suit, proceeding, or claim by others that the Company or any of its Subsidiaries infringes, misappropriates, or otherwise violates any Intellectual Property Rights, of others that, if decided adversely to the Company would, individually or in the aggregate, have a Material Adverse Effect, and the Company is unaware of any facts which would form a reasonable basis for any such claim; (c) there is no pending or, to the Company’s knowledge, threatened action, suit, proceeding, or claim by others challenging the validity, scope, or enforceability of any such Intellectual Property Rights owned by the Company or its Subsidiaries and the Company is unaware of any facts which would form a reasonable basis for any such claim; (d) to the Company’s knowledge, the operation of the business of the Company and its Subsidiaries as now conducted, and as described in the Disclosure Package and the Prospectus, and in connection with the development and commercialization of the products described in the Disclosure Package and the Prospectus does not infringe any claim of any patent or published patent application; (e) there is no prior art of which the Company is aware that may render any patent owned or licensed by the Company or its Subsidiaries invalid or any patent application owned or licensed by the Company unpatentable which has not been disclosed to the applicable government patent office; and (f) the Company’s granted or issued patents, registered trademarks, and registered copyrights have been duly maintained and are in full force and in effect, and none of the patents, trademarks and copyrights have been adjudged invalid or unenforceable in whole or in part. Neither the Company nor any of its Subsidiaries is a party to or bound by any options, licenses or agreements with respect to the Intellectual Property Rights of any other person or entity that are required to be set forth in the Disclosure Package and the Prospectus and are not described therein in all material respects. None of the technology or intellectual property used by the Company and its Subsidiaries in its business has been obtained or is being used by the Company or its Subsidiaries in violation of any contractual obligation binding on the Company or its Subsidiaries, or, to the Company’s knowledge, any of its officers, directors, or employees or otherwise in violation of the rights of any persons. No third party has been granted by the Company or its Subsidiaries rights to the Intellectual Property Rights of the Company or its Subsidiaries that, if exercised, could enable such party to develop products competitive to those of the Company as described in the Disclosure Package and the Prospectus.

(gg) The Company has duly and properly filed or caused to be filed with the U.S. Patent and Trademark Office (the “**PTO**”) and applicable foreign and international patent authorities all patent applications owned by the Company and its Subsidiaries (the “**Company Patent Applications**”). To the knowledge of the Company, the Company has complied with the PTO's duty of candor and disclosure for the Company Patent Applications and has made no material misrepresentation in the Company Patent Applications. To the Company's knowledge, the Company Patent Applications disclose patentable subject matters. The Company has not been notified of any inventorship challenges nor has any interference been declared or provoked nor is any material fact known by the Company that would preclude the issuance of patents with respect to the Company Patent Applications or would render such patents, if issued, invalid or unenforceable.

(hh) Neither the Company or any of its Subsidiaries has breached and is currently in breach of any provision of any license, contract or other agreement governing the use by the Company or its Subsidiaries of Intellectual Property Rights owned by third parties (collectively, the “**Licenses**”) and, except as described in the Disclosure Package and the Prospectus, no third party has alleged any such breach and the Company is unaware of any facts that would form a reasonable basis for such a claim. To the Company's knowledge, no other party to the Licenses has breached or is currently in breach of any provision of the Licenses. Each of the Licenses is in full force and effect and constitutes a valid and binding agreement between the parties thereto, enforceable in accordance with its terms, and there has not occurred any breach or default under any such Licenses or any event that with the giving of notice or lapse of time would constitute a breach or default thereunder. Except as would not have a Material Adverse Effect, neither the Company nor any of its Subsidiaries has been and is currently involved in any disputes regarding the Licenses. To the Company's knowledge, all patents licensed to the Company pursuant to the Licenses are valid, enforceable and being duly maintained. To the Company's knowledge, all patent applications licensed to the Company pursuant to the Licenses are being duly prosecuted.

(ii) The studies that are referred to in the Disclosure Package and the Prospectus and their protocols were, to the Company's knowledge, independently developed, analyzed and reported by the persons or entities conducting the clinical studies. The prospective studies that are referred to in the Disclosure Package and the Prospectus were, to the Company's knowledge, conducted in all material respects in accordance with experimental protocols, procedures and controls consistent with the standards applied in other studies in the industry. The retrospective studies that are referred to in the Disclosure Package and the Prospectus were, to the Company's knowledge, statistically analyzed to ensure the results presented therein are accurate in all material respects. The descriptions of such clinical studies contained in the Disclosure Package and the Prospectus are accurate in all material respects. The Company has not received any notices or correspondence from the U.S. Food and Drug Administration (the "FDA") or any foreign, state or local governmental or self-regulatory body exercising comparable authority requiring the termination, suspension or material modification of any such clinical studies, which termination, suspension or material modification would reasonably be expected to result in a Material Adverse Effect.

(jj) The Company and its Subsidiaries are in compliance in all material respects with all applicable rules and regulations of the FDA, or any foreign, state or local governmental or self-regulatory body exercising comparable authority, and all related applicable laws, statutes, ordinances, rules or regulations (including, without limitation, the Federal Food, Drug and Cosmetic Act, as amended, the Good Manufacturing Practice regulations and similar foreign laws and regulations), the enforcement of which, individually or in the aggregate, would be expected to result in a Material Adverse Effect.

(kk) To the Company's knowledge, there are no rulemaking or similar proceedings before the FDA, PTO, or any foreign, state or local governmental or self-regulatory body exercising comparable authority, which affect or involve the Company, its Subsidiaries, or any of the products that the Company has developed, is developing or proposes to develop or uses or proposes to use which, if the subject of an action unfavorable to the Company, would result in a Material Adverse Effect.

(ll) The Company and each Subsidiary possess such valid and current certificates, authorizations, approvals or permits issued by the appropriate state, federal, foreign regulatory agencies or bodies necessary to conduct their respective businesses as currently conducted and neither the Company nor any Subsidiary has received any notice of proceedings relating to the revocation or modification of, or non-compliance with, any such certificate, authorization or permit which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, could result in a Material Adverse Effect.

(mm) There are no business relationships or related-party transactions involving the Company or any Subsidiary or any other person required to be described in the Disclosure Package and the Prospectus that have not been described as required.

(nn) Except as would not, individually or in the aggregate, result in a Material Adverse Effect (i) neither the Company nor any of its Subsidiaries is in violation of any federal, state, local or foreign law or regulation relating to pollution or protection of human health or the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including without limitation, laws and regulations relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum and petroleum products (collectively, “ **Materials of Environmental Concern** ”), or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Materials of Environmental Concern (collectively, “ **Environmental Laws** ”), which violation includes, but is not limited to, noncompliance with any permits or other governmental authorizations required for the operation of the business of the Company under applicable Environmental Laws, or noncompliance with the terms and conditions thereof, nor has the Company or any of its Subsidiaries received any written communication, whether from a governmental authority, citizens group, employee or otherwise, that alleges that the Company or any of its Subsidiaries is in violation of any Environmental Law; (ii) there is no claim, action or cause of action filed with a court or governmental authority, no investigation with respect to which the Company or any of its Subsidiaries has received written notice, and no written notice by any person or entity alleging potential liability for investigatory costs, cleanup costs, governmental responses costs, natural resources damages, property damages, personal injuries, attorneys’ fees or penalties arising out of, based on or resulting from the presence, or release into the environment, of any Material of Environmental Concern at any location owned, leased or operated by the Company or any of its Subsidiaries, now or in the past (collectively, “ **Environmental Claims** ”), pending or, to the best of the Company’s knowledge, threatened against the Company, any of its Subsidiaries, or any person or entity whose liability for any Environmental Claim the Company or any of its Subsidiaries has retained or assumed either contractually or by operation of law; and (iii) to the Company’s knowledge, there are no past or present actions, activities, circumstances, conditions, events or incidents, including, without limitation, the release, emission, discharge, presence or disposal of any Material of Environmental Concern, that reasonably could result in a violation of any Environmental Law or form the basis of a potential Environmental Claim against the Company, any of its Subsidiaries, or against any person or entity whose liability for any Environmental Claim the Company or any of its Subsidiaries has retained or assumed either contractually or by operation of law.

(oo) The Company and any “employee benefit plan” (as defined under the Employee Retirement Income Security Act of 1974, as amended, and the regulations and published interpretations thereunder (collectively, “ **ERISA** ”)) established or maintained by the Company, or its “ERISA Affiliates” (as defined below) are in compliance in all material respects with ERISA. “ **ERISA Affiliates** ” means, with respect to the Company, any member of any group of organizations described in Sections 414(b), (c),(m) or (o) of the Internal Revenue Code of 1986, as amended, and the regulations and published interpretations thereunder (the “ **Code** ”) of which the Company is a member. No “reportable event” (as defined under ERISA) has occurred or is reasonably expected to occur with respect to any “employee benefit plan” established or maintained by the Company, or any of its ERISA Affiliates. No “employee benefit plan” established or maintained by the Company or any of its ERISA Affiliates, if such “employee benefit plan” were terminated, would have any “amount of unfunded benefit liabilities” (as defined under ERISA). Neither the Company, nor any of its ERISA Affiliates has incurred or reasonably expects to incur any liability under (i) Title IV of ERISA with respect to termination of, or withdrawal from, any “employee benefit plan” or (ii) Sections 412, 4971, 4975 or 4980B of the Code. Each “employee benefit plan” established or maintained by the Company or any of its ERISA Affiliates that is intended to be qualified under Section 401(a) of the Code is so qualified and nothing has occurred, whether by action or failure to act, which would cause the loss of such qualification.

(pp) There are no outstanding loans, advances (except normal advances for business expenses in the ordinary course of business) or guarantees or indebtedness by the Company to or for the benefit of any of the officers or directors of the Company or any of the members of any of them, except as disclosed in the Disclosure Package and the Prospectus.

(qq) The market data and industry forecasts included in the Registration Statement and the Disclosure Package and the Prospectus were obtained or derived from industry publications that are and were not at any time under the Company's control which the Company reasonably and in good faith believes are reliable and accurate, and such data agree with the sources from which they are derived.

(rr) Except as disclosed in the Disclosure Package and the Prospectus, since the date of the latest audited financial statements included in the Disclosure Package and the Prospectus there has been no Material Adverse Effect, nor any development or event involving a prospective Material Adverse Effect, in the condition (financial or other), business, properties or results of operations of the Company and its Subsidiaries taken as a whole.

Any certificate signed by an officer of the Company and delivered to the Representative or to counsel for the Underwriters shall be deemed to be a representation and warranty by the Company to each Underwriter as to the matters set forth therein.

The Company acknowledges that the Underwriters and, for purposes of the opinions to be delivered pursuant to Section 5 hereof, counsels to the Company and counsel to the Underwriters, will rely upon the accuracy and truthfulness of the foregoing representations and hereby consents to such reliance.

## **2. Purchase of the Securities by the Underwriters.**

(a) Subject to the terms and conditions and upon the basis of the representations, warranties and agreements herein set forth, the Company agrees to issue and sell to the Underwriters, and each of the Underwriters agrees, severally and not jointly, to purchase at a price of \$\_\_\_\_\_ per share and \$.15 per Public Warrant, the number of Firm Securities set forth opposite such Underwriter's name in Schedule I hereto, subject to adjustment in accordance with Section 7 hereof. The Underwriters agree to offer the Firm Securities to the public as set forth in the Prospectus.

(b) The Company hereby grants to the Underwriters an option to purchase from the Company, solely for the purpose of covering over-allotments in connection with the distribution and sale of the Firm Securities, all or any portion of the Optional Securities for a period of forty five (45) days from the date hereof at the purchase price per Share set forth above. The Optional Securities shall be purchased from the Company, severally and not jointly, for the accounts of the several Underwriters in proportion to the number of Firm Securities set forth opposite such Underwriter's name in Schedule I hereto, except that the respective purchase obligations of each Underwriter shall be adjusted by the Representative so that no Underwriter shall be obligated to purchase fractional Optional Securities. No Optional Securities shall be sold and delivered unless the Firm Securities previously have been, or simultaneously are, sold and delivered.

**3. Delivery of and Payment for Securities.** Delivery of certificates for the Firm Securities to be purchased by the Underwriters from the Company and payments therefor shall be made at the offices of MDB Capital Group LLC (or such other place as mutually may be agreed upon), on the third full Business Day following the date hereof or, if the pricing of the Firm Securities occurs after 4:30 p.m., New York City time, on the fourth full Business Day thereafter, or at such other date as shall be determined by the Representative and the Company (the "**First Closing Date**").

The option to purchase the Optional Securities granted in Section 2 hereof may be exercised during the term thereof by written notice to the Company from the Representative. Such notice shall set forth the aggregate number of Optional Securities as to which the option is being exercised and the time and date, not earlier than either the First Closing Date or the second Business Day after the date on which the option shall have been exercised nor later than the fifth Business Day after the date of such exercise, as determined by the Representative, when the Optional Securities are to be delivered (the " **Option Closing Date** "). Delivery and payment for such Optional Securities is to be at the offices set forth above for delivery and payment of the Firm Securities. (The First Closing Date and the Option Closing Date are herein individually referred to as the " **Closing Date** " and collectively referred to as the " **Closing Dates** ".)

Delivery of certificates for the Securities shall be made by or on behalf of the Company to the Representative, for the respective accounts of the Underwriters, against payment by the Representative, for the several accounts of the Underwriters, of the purchase price therefor by (i) Federal funds wire transfer or (ii) certified or official bank check payable in next day funds to the order of the Company. The certificates for the Securities shall be registered in such names and denominations as the Representative shall have requested at least two full Business Days prior to the applicable Closing Date, and shall be made available for checking and packaging at a location in New York, New York as may be designated by the Representative at least one full Business Day prior to such Closing Date. Time shall be of the essence and delivery at the time and place specified in this Agreement is a further condition to the obligations of each Underwriter.

**4. Covenants.** The Company covenants and agrees with each Underwriter that:

(a) During such period beginning on the Initial Sale Time and ending on the later of the Closing Date or such date, as in the opinion of counsel for the Underwriters, the Prospectus is no longer required by law to be delivered in connection with sales as contemplated by this Agreement by an Underwriter or dealer, including in circumstances where such requirement may be satisfied pursuant to Rule 172 (the " **Prospectus Delivery Period** "), prior to amending or supplementing the Registration Statement (including any registration statement filed under Rule 462(b) under the Securities Act), the Disclosure Package or the Prospectus, the Company shall furnish to the Representative for review a copy of each such proposed amendment or supplement and the Company shall not file any such proposed amendment or supplement to which the Representative reasonably objects.

(b) After the date of this Agreement, the Company shall promptly advise the Representative in writing (i) when the Registration Statement, if not effective at the Execution Time, shall have become effective, (ii) of the receipt of any comments of, or requests for additional or supplemental information from, the Commission, (iii) of the time and date of any filing of any post-effective amendment to the Registration Statement or any amendment or supplement to any preliminary prospectus or the Prospectus, (iv) of the time and date that any post-effective amendment to the Registration Statement becomes effective and (v) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto or of any order or notice preventing or suspending the use of the Registration Statement, any preliminary prospectus or the Prospectus, or of any proceedings to remove, suspend or terminate from listing or quotation the Common Stock from any securities exchange upon which it is listed for trading or included or designated for quotation, or of the threatening or initiation of any proceedings for any of such purposes. The Company shall use its best efforts to prevent the issuance of any such stop order or prevention or suspension of such use. If the Commission shall enter any such stop order or order or notice of prevention or suspension at any time, the Company will use its best efforts to obtain the lifting of such order at the earliest possible moment, or will file a new registration statement and use its best efforts to have such new registration statement declared effective as soon as practicable. Additionally, the Company agrees that it shall comply with the provisions of Rules 424(b) and 434, as applicable, under the Securities Act, including with respect to the timely filing of documents thereunder, and will use its reasonable efforts to confirm that any filings made by the Company under such Rule 424(b) were received in a timely manner by the Commission.

(c) (i) If the preliminary prospectus included in the Disclosure Package is being used to solicit offers to buy the Securities and any event or development shall occur or condition exist as a result of which it is necessary to amend or supplement the Disclosure Package in order to make the statements therein, in the light of the circumstances under which they were made or then prevailing, as the case may be, not misleading (in which case the Company agrees to notify the Representative of any such event or condition), or if in the reasonable opinion of the Representative it is otherwise necessary to amend or supplement the Disclosure Package to comply with law, the Company agrees to promptly prepare, file with the Commission and furnish to the Underwriters and to dealers, at its own expense, amendments or supplements to the Disclosure Package so that the statements in the Disclosure Package as so amended or supplemented will not be, in the light of the circumstances under which they were made or then prevailing, as the case may be, misleading or so that the Disclosure Package, as amended or supplemented, will comply with law; (ii) if, during the Prospectus Delivery Period, any event or development shall occur or condition exist as a result of which it is necessary to amend or supplement the Registration Statement or the Prospectus in order to make the statements therein, in the light of the circumstances under which they were made or then prevailing, as the case may be, not misleading (in which case the Company agrees to notify the Representative of any such event or condition), or if in the reasonable opinion of the Representative it is otherwise necessary to amend or supplement the Registration Statement or the Prospectus to comply with law, including in connection with the delivery of the Prospectus, the Company agrees to promptly prepare, file with the Commission (and use its best efforts to have any amendment to the Registration Statement or any new registration statement to be declared effective) and furnish to the Underwriters and to dealers, amendments or supplements to the Registration Statement or the Prospectus, or any new registration statement so that the statements in the Registration Statement or the Prospectus as so amended or supplemented will not be, in the light of the circumstances under which they were made or then prevailing, as the case may be, misleading or so that the Registration Statement or the Prospectus, as amended or supplemented, will comply with law.

(d) The Company agrees that, unless it obtains the prior written consent of the Representative, it will not make any offer relating to the Common Stock that would constitute an Issuer Free Writing Prospectus or that would otherwise constitute a “free writing prospectus” (as defined in Rule 405 of the Securities Act) required to be filed by the Company with the Commission or retained by the Company under Rule 433 of the Securities Act; provided that the prior written consent of the Representative hereto shall be deemed to have been given in respect of the Free Writing Prospectuses included in Schedule III hereto. Any such free writing prospectus consented to by the Representative is hereinafter referred to as a “ **Permitted Free Writing Prospectus** ”. The Company agrees that (i) it has treated and will treat, as the case may be, each Permitted Free Writing Prospectus as an Issuer Free Writing Prospectus, and (ii) has complied and will comply, as the case may be, with the requirements of Rules 164 and 433 of the Securities Act applicable to any Permitted Free Writing Prospectus, including in respect of timely filing with the Commission, legending and record keeping.

(e) The Company shall furnish to the Underwriters, from time to time and without charge, copies of the Registration Statement of which three shall be signed and shall include exhibits and all amendments and supplements to any of such Registration Statement, in each case as soon as available and in such quantities as the Representative may from time to time reasonably request.

(f) The Company shall take or cause to be taken all necessary action and furnish to whomever the Representative may direct such information as may be required in qualifying the Securities for sale under the laws of such jurisdictions which the Representative shall designate and to continue such qualifications in effect for as long as may be necessary for the distribution of the Securities; except that in no event shall the Company be obligated in connection therewith to qualify as a foreign corporation, or to execute a general consent for service of process.

(g) The Company shall make generally available to its securityholders, in the manner contemplated by Rule 158(b) under the Securities Act, as soon as practicable but in any event not later than 60 days after the end of its fiscal quarter in which the first anniversary date of the effective date of the Registration Statement occurs, an earning statement which will comply with Section 11(a) of the Securities Act covering a period of at least 12 consecutive months beginning after the effective date of the Registration Statement.

(h) The Company will not, without the prior written consent of the Representative (which consent may be withheld in the Representative's sole discretion), directly or indirectly, issue, sell, offer, agree to sell, contract or grant any option to sell (including, without limitation, pursuant to any short sale), pledge, make any short sale of, maintain any short position with respect to, transfer, establish or maintain an open "put equivalent position" within the meaning of Rule 16a-1(h) under the Exchange Act, enter into any swap, derivative transaction or other arrangement (whether such transaction is to be settled by delivery of common stock, other securities, cash or other consideration) that transfers to another, in whole or in part, any of the economic consequences of ownership, or otherwise dispose of any shares of Common Stock, options or warrants to acquire shares of Common Stock, or securities exchangeable or exercisable for or convertible into shares of Common Stock, or publicly announce an intention to do any of the foregoing, for a period commencing on the date hereof and continuing through the close of trading on the date 180 days after the date of the Prospectus (the "**Lock-Up Period**").

Notwithstanding the foregoing, for the purpose of allowing the Underwriters to comply with NASD Rule 2711(f)(4), if (1) during the last 17 days of the initial Lock-Up Period, the Company releases earnings results or material news or a material event relating to us occurs or (2) prior to the expiration of the initial Lock-Up Period, the Company announces that it will release earnings results during the 16-day period beginning on the last day of the initial Lock-Up Period, then in each case the Lock-Up Period will be extended until the expiration of the 18-day period beginning on the date of release of the earnings results or material news, as applicable, unless the Representative waives, in writing, such extension.

(i) The Company shall cause each officer and director of the Company holding shares of Common Stock or any securities convertible into, or exercisable or exchangeable for, shares of Common Stock, to furnish to the Representative, on or prior to the date of this Agreement, a letter or letters, in form and substance satisfactory to counsel for the Underwriters, pursuant to which each such person shall agree not to offer for sale, contract to sell, sell, distribute, grant any option, right or warrant to purchase, pledge, hypothecate or otherwise dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into, or exercisable or exchangeable for, shares of Common Stock during the 180 days (subject to an additional extension to accommodate for earnings or material news releases) following the effective date of the Registration Statement, except with the Representative's prior written consent.

(j) The Company will use its best efforts to have the Securities and the Common Stock and Series E Warrants reserved for issuance under the Underwriter Warrants listed on the Nasdaq Global Market.

(k) On the First Closing Date, the Company shall issue to the Underwriters the Underwriter Warrants to purchase that number of shares of Common Stock and that number of Series E Warrants equal to ten percent of the Firm Securities (adjusted upward to the nearest whole share). The Underwriter Warrants shall be in the form of Exhibit A attached hereto. The Underwriter Warrants shall be purchased from the Company, severally and not jointly, for the accounts of the several Underwriters in proportion to the number of Firm Securities set forth opposite such Underwriter's name in Schedule I hereto, except that the respective purchase obligations of each Underwriter shall be adjusted by the Representative so that no Underwriter Warrants to be purchased by an Underwriter shall represent the right to purchase a fractional share of Common Stock or fractional Public Warrant.

(l) Whether or not this Agreement becomes effective or is terminated or the sale of the Securities to the Underwriters is consummated, the Company shall pay or cause to be paid (A) all expenses (including stock transfer taxes) incurred in connection with the delivery to the several Underwriters of the Securities, (B) all fees and expenses (including, without limitation, fees and expenses of the Company's accountants and counsel, but excluding fees and expenses of counsel for the Underwriters) in connection with the preparation, printing, filing, delivery and shipping of the Registration Statement (including the financial statements therein and all amendments and exhibits thereto), each preliminary prospectus, the Disclosure Package and the Prospectus as amended or supplemented and the printing, delivery and shipping of this Agreement and other underwriting documents, including Underwriters' Questionnaires, Underwriters' Powers of Attorney, Blue Sky Memoranda, the Agreement Among Underwriters and Selected Dealer Agreements, (C) all filing fees and fees and disbursements of counsel to the Underwriters incurred in connection with the qualification of the Securities for sale under state securities laws as provided in Section 4(f) hereof, (D) the filing fee of FINRA, (E) any applicable listing fees, (F) the cost of printing certificates representing the Securities, (G) the cost and charges of any transfer agent or registrar, (H) a non-accountable expense allowance equal to one percent (1%) of the gross proceeds received by the Company from the sale of the Securities of which non-accountable expense allowance shall be paid to the Representative and (I) all other costs and expenses incident to the performance of its obligations hereunder which are not otherwise provided for in this Section. It is understood, however, that, except as provided in this Section, Section 6 and Section 8 hereof, the Underwriters shall pay all of their own costs and expenses, including the fees of their counsel, stock transfer taxes on resale of any of the Securities by them and any advertising expenses connected with any offers they may make. If the sale of the Securities provided for herein is not consummated by reason of acts of the Company pursuant to Section 8(a) hereof which prevent this Agreement from becoming effective, or by reason of any failure, refusal or inability on the part of the Company to perform any agreement on its part to be performed or because any other condition of the Underwriters' obligations hereunder is not fulfilled, unless the failure to perform the agreement or fulfill the condition is due to the default or omission of any Underwriter, the Company shall reimburse the several Underwriters for all reasonable out-of-pocket disbursements (including fees and disbursements of counsel) incurred by the Underwriters in connection with their investigation, preparing to market and marketing the Securities or in contemplation of performing their obligations hereunder. The Company shall not in any event be liable to any of the Underwriters for loss of anticipated profits from the transactions covered by this Agreement.

**5. Conditions of Underwriters' Obligations.** The respective obligations of the several Underwriters hereunder are subject to the accuracy, at and as of the date hereof and the First Closing Date (as if made at the First Closing Date) and, with respect to the Optional Securities, the Option Closing Date (as if made at the Option Closing Date), of the representations and warranties of the Company contained herein, to the performance by the Company of its obligations hereunder and to the following additional conditions:

(a) The Registration Statement shall have become effective not later than \_\_\_\_ p.m., Eastern time, on the date of this Agreement, or such later time and date as the Representative shall approve and all filings required by Rules 424, 430A and 433 under the Securities Act shall have been timely made; no stop order suspending the effectiveness of the Registration Statement or any amendment thereof shall have been issued; no proceedings for the issuance of such an order shall have been initiated or threatened; and any request of the Commission for additional information (to be included in the Registration Statement, the Disclosure Package, the Prospectus, any Issuer Free Writing Prospectus or otherwise) shall have been complied with to the Representative's satisfaction.

(b) No Underwriter shall have advised the Company that the Registration Statement, the Disclosure Package or the Prospectus, or any amendment thereof or supplement thereto, contains an untrue statement of fact which, in the Representative's opinion, is material, or omits to state a fact which, in the Representatives opinion, is material and is required to be stated therein or is necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(c) On each Closing Date, the Representative shall have received the favorable opinion of Vinson & Elkins L.L.P., counsel for the Company, dated as of such Closing Date, the form of which is attached as Exhibit B.

(d) On each Closing Date, the Representative shall have received the favorable opinion of \_\_\_\_\_, special intellectual property/patent counsel for the Company, dated as of such Closing Date, the form of which is attached hereto as Exhibit C.

(e) On each Closing Date the Representative shall have received the favorable opinion of \_\_\_\_\_, special regulatory counsel for the Company, dated as of such Closing Date, the form of which is attached hereto Exhibit D.

(f) On each Closing Date the Representative shall have received the favorable opinion of Golenbock Eiseman Assor Bell & Peskoe LLP, counsel for the Underwriters, dated as of such Closing Date, in form and substance satisfactory to the Representative.

(g) There shall have been furnished to the Representative a certificate of the Company, dated as of each Closing Date and addressed to the Representative, signed by the Chief Executive Officer and by the Chief Financial Officer of the Company to the effect that:

(i) The representations and warranties of the Company in this Agreement are true and correct, as if made at and as of such Closing Date, and the Company has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to such Closing Date;

(ii) No stop order suspending the effectiveness of the Registration Statement has been issued, and no proceedings for that purpose have been initiated or are pending or, to their knowledge, contemplated;

(iii) Any and all filings required by Rules 424, 430A, 430B and 430C under the Securities Act have been timely made;

(iv) The signers of said certificate have carefully examined the Registration Statement and the Disclosure Package and the Prospectus, and any amendments or supplements thereto, and such documents contain all statements and information required to be included therein; the Registration Statement or any amendment thereto does not include any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading; and the Disclosure Package and the Prospectus or any supplements thereto do not include any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(v) Since the effective date of the Registration Statement, there has occurred no event required to be set forth in an amendment or supplement to the Registration Statement or the Disclosure Package and the Prospectus which has not been so set forth; and

(vi) Since the effective date of the Registration Statement, neither the Company nor any of its Subsidiaries shall have sustained any loss by strike, fire, flood, accident or other calamity (whether or not insured), or shall have become a party to or the subject of any litigation, which is material to the Company or its Subsidiaries taken as a whole, nor shall there have been a material adverse change in the general affairs, business, key personnel, capitalization, financial position, earnings or net worth of the Company and its Subsidiaries, whether or not arising in the ordinary course of business, which loss, litigation or change, in the Representative's judgment, shall render it inadvisable to proceed with the delivery of the Securities.

(h) On the date hereof, and on each Closing Date, the Representative shall have received from Malone & Bailey, PC, independent public or certified public accountants for the Company, a letter dated the date hereof addressed to the Representative, on behalf of the several Underwriters, in form and substance satisfactory to the Representative, containing statements and information of the type ordinarily included in accountant's "comfort letters" to underwriters, delivered according to Statement of Auditing Standards No. 72 (or any successor bulletin), with respect to the audited and unaudited financial statements and certain financial information contained in the Registration Statement and the Prospectus (and the Representative shall have received an additional five conformed copies of such accountants' letter for each of the several Underwriters).

(i) The Securities and the Common Stock and the Series E Warrants reserved for issuance under the Underwriter Warrants shall have been duly authorized for listing on the Nasdaq Global Market.

(j) The “lock-up” agreements between the Representatives and the officers and directors of the Company listed on Schedule II, delivered to the Representative on or before the date hereof, shall be in full force and effect on each Closing Date.

(k) On or before each Closing Date, the Representative and counsel for the Underwriters shall have received such information, certificates, agreements, opinions and other documents as they may reasonably require.

All such opinions, certificates, letters and documents shall be in compliance with the provisions hereof only if they are satisfactory in form and substance to the Representative and to counsel for the Underwriters. The Company shall furnish the Representative with such conformed copies of such opinions, certificates, letters and other documents as the Representative shall reasonably request. If any of the conditions specified in this Section 5 shall not have been fulfilled when and as required by this Agreement, this Agreement and all obligations of the Underwriters hereunder may be canceled at, or at any time prior to, the First Closing Date or the Option Closing Date, as the case may be, by the Representative. Any such cancellation shall be without liability of the Underwriters to the Company. Notice of such cancellation shall be given to the Company in writing, or by telegraph or telephone and confirmed in writing.

#### **6. Indemnification and Contribution.**

(a) The Company shall indemnify and hold harmless each Underwriter, its directors, officers, employees and agents and each person, if any, who controls any Underwriter within the meaning of the Securities Act and the Exchange Act against any loss, claim, damage or liability, joint or several, as incurred, to which such Underwriter or such controlling person may become subject, under the Securities Act or otherwise, insofar as such loss, claim, damage or liability (or action in respect thereof) arises out of or is based upon any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, or any amendment thereto, including any information deemed to be a part thereof pursuant to Rule 430A, Rule 430B or Rule 430C under the Securities Act, or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading; or (ii) upon any untrue statement or alleged untrue statement of a material fact contained in any Issuer Free Writing Prospectus, any preliminary prospectus, the Prospectus (or any amendment or supplement thereto) or any “issuer information” filed or required to be filed pursuant to Rule 433 under the Securities Act or the omission or alleged omission therefrom of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading and to reimburse each Underwriter, its officers, directors, employees, agents and each such controlling person for any and all expenses (including the fees and disbursements of one counsel chosen by the Representative) as such expenses are reasonably incurred by such Underwriter, its officers, directors, employees and agents or such controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action; provided, however, that the foregoing indemnity agreement shall not apply to any loss, claim, damage, liability or expense to the extent, but only to the extent, arising out of or based upon any untrue statement or alleged untrue statement or omission or alleged omission made in reliance upon and in conformity with written information furnished to the Company by the Representative expressly for use in the Registration Statement, any Issuer Free Writing Prospectus, any preliminary prospectus or the Prospectus (or any amendment or supplement thereto). The indemnity agreement set forth in this Section 6(a) shall be in addition to any liabilities that the Company may otherwise have.

(b) Each Underwriter severally, but not jointly, shall indemnify and hold harmless the Company, its directors, officers, employees and each person, if any who controls the Company within the meaning of the Securities Act or the Exchange Act against any loss, claim, damage or liability, joint or several, as incurred, to which the Company may become subject, under the Securities Act or otherwise, insofar as such loss, claim, damage or liability (or action in respect thereof) arises out of or is based upon any untrue or alleged untrue statement of a material fact contained in the Registration Statement, any Issuer Free Writing Prospectus, any preliminary prospectus or the Prospectus (or any amendment or supplement thereto), or arises out of or is based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, any Issuer Free Writing Prospectus, any preliminary prospectus, the Prospectus (or any amendment or supplement thereto), in reliance upon and in conformity with written information furnished to the Company by the Representative expressly for use therein; and to reimburse the Company, or any such director, officer, employee or controlling person for any legal and other expense reasonably incurred by the Company, or any such director, officer, employee or controlling person in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action. The indemnity agreement set forth in this Section 6(b) shall be in addition to any liabilities that each Underwriter may otherwise have.

(c) Promptly after receipt by an indemnified party under subsection (a) or (b) above of notice of any claim or the commencement of any action, the indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the claim or the commencement of that action; the failure to notify the indemnifying party shall not relieve it from any liability which it may have to an indemnified party otherwise than under such subsection. If any such claim or action shall be brought against an indemnified party, and it shall notify the indemnifying party thereof, the indemnifying party shall be entitled to participate therein and, to the extent that it wishes, jointly with any other similarly notified indemnifying party, to assume the defense thereof with counsel reasonably satisfactory to the indemnified party. After notice from the indemnifying party to the indemnified party of its election to assume the defense of such claim or action, the indemnifying party shall not be liable to the indemnified party under such subsection for any legal or other expenses subsequently incurred by the indemnified party in connection with the defense thereof other than reasonable costs of investigation; except that the Representative shall have the right to employ counsel to represent it and those other Underwriters who may be subject to liability arising out of any claim in respect of which indemnity may be sought by the Underwriters against the Company under such subsection if, in the Representative's reasonable judgment, based upon the advice of counsel, it is advisable for the Representative and those Underwriters to be represented by separate counsel, and in that event the fees and expenses of such separate counsel shall be paid by the Company.

(d) If the indemnification provided for in this Section 6 is unavailable or insufficient to hold harmless an indemnified party under subsection (a) or (b) above, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of the losses, claims, damages or liabilities referred to in subsection (a) or (b) above (i) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering of the Securities or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company on the one hand and the Underwriters on the other in connection with the statements or omissions that resulted in such losses, claims, damages or liabilities, as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total net proceeds from the offering of the Securities (before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Underwriters, in each case as set forth in the table on the cover page of the Prospectus. Relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such untrue statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contributions pursuant to this subsection (d) were to be determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take into account the equitable considerations referred to in the first sentence of this subsection (d). The amount paid or payable by an indemnified party as a result of the losses, claims, damages or liabilities referred to in the first sentence of this subsection (d) shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending against any action or claim which is the subject of this subsection (d). Notwithstanding the provisions of this subsection (d), no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Securities underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages that such Underwriter has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' obligations in this subsection (d) to contribute are several in proportion to their respective underwriting obligations and not joint. Each party entitled to contribution agrees that upon the service of a summons or other initial legal process upon it in any action instituted against it in respect of which contribution may be sought, it shall promptly give written notice of such service to the party or parties from whom contribution may be sought, but the omission so to notify such party or parties of any such service shall not relieve the party from whom contribution may be sought from any obligation it may have hereunder or otherwise (except as specifically provided in subsection (c) hereof).

(e) The obligations of the Company under this Section 6 shall be in addition to any liability which the Company may otherwise have; and the obligations of the Underwriters under this Section 6 shall be in addition to any liability that the respective Underwriters may otherwise have, and shall extend, upon the same terms and conditions, to each director of the Company (including any person who, with his consent, is named in the Registration Statement as about to become a director of the Company), to each officer of the Company who has signed the Registration Statement and to each person, if any, who controls the Company within the meaning of the Securities Act, in either case, whether or not such person is a party to any action or proceeding.

**7. Substitution of Underwriters.** If any Underwriter defaults in its obligation to purchase the number of Securities which it has agreed to purchase under this Agreement, the non-defaulting Underwriters shall be obligated to purchase (in the respective proportions which the number of Securities set forth opposite the name of each non-defaulting Underwriter in Schedule I hereto bears to the total number of Securities set forth opposite the names of all the non- defaulting Underwriters in Schedule I hereto) the Securities which the defaulting Underwriter agreed but failed to purchase; except that the non-defaulting Underwriters shall not be obligated to purchase any of the Securities if the total number of Securities which the defaulting Underwriter or Underwriters agreed but failed to purchase exceeds 10% of the total number of Firm Securities, and any non-defaulting Underwriter shall not be obligated to purchase more than 110% of the number of Securities set forth opposite its name in Schedule I hereto purchasable by it pursuant to the terms of Section 2. If the foregoing maximums are exceeded, (i) the non-defaulting Underwriters, and any other underwriters satisfactory to the Representative who so agree, shall have the right, but shall not be obligated, to purchase (in such proportions as may be agreed upon among them) all the Securities. If the non- defaulting Underwriters or the other underwriters satisfactory to the Representative do not elect to purchase the Securities which the defaulting Underwriter or Underwriters agreed but failed to purchase, this Agreement shall terminate without liability on the part of any non-defaulting Underwriter or the Company except for the payment of expenses to be borne by the Company and the Underwriters as provided in Section (4)(l) and the indemnity and contribution agreements of the Company and the Underwriters contained in Section 6 hereof.

Nothing contained herein shall relieve a defaulting Underwriter of any liability it may have for damages caused by its default. If the other underwriters satisfactory to the Representative are obligated or agree to purchase the Securities of a defaulting Underwriter, either the Representative or the Company may postpone the First Closing Date for up to five full Business Days in order to effect any changes that may be necessary in the Registration Statement, the Disclosure Package or the Prospectus or in any other document or agreement, and to file promptly any amendments or any supplements to the Registration Statement or the Disclosure Package or the Prospectus which in the Representative's opinion may thereby be made necessary.

#### **8. Effective Date and Termination.**

(a) This Agreement shall become effective at \_\_\_\_\_ a.m., New York City time, on the first full Business Day following the earlier of (i) the date hereof, or (ii) the day on which the Representative release the initial public offering of the Firm Securities for sale to the public. The Representative shall notify the Company immediately after the Representative has taken any action which causes this Agreement to become effective. Until this Agreement is effective, it may be terminated by the Company or by the Representative by giving notice as hereinafter provided to the Representative or by the Representative by giving notice as hereinafter provided to the Company, except that the provisions of Sections 4(l) and 6 shall at all times be effective. For the purpose of this Section, the Securities shall be deemed to have been released for sale to the public upon release by the Representative of an electronic communication authorizing commencement of the offering the Securities for sale by the Underwriters or other securities dealers.

(b) Until the First Closing Date, this Agreement may be terminated by the Representative by giving notice as hereinafter provided to the Company, if (i) the Company shall have failed, refused or been unable, at or prior to the First Closing Date, to perform any agreement on its part to be performed hereunder unless the failure to perform any agreement is due to the default or omission by any Underwriter, (ii) any other condition of the obligations of the Underwriters hereunder is not fulfilled; (iii) trading in securities generally on the New York Stock Exchange, American Stock Exchange or the Nasdaq Global Market shall have been suspended or minimum or maximum prices shall have been established on either of such exchanges or such market by the Commission or by such exchange or other regulatory body or governmental authority having jurisdiction; (iv) trading or quotation in any of the Company's securities shall have been suspended or limited by the Commission or by the Nasdaq Global Market or other regulatory body of governmental authority having jurisdiction; (v) a general banking moratorium shall have been declared by Federal or state authorities; (vi) a material disruption in securities settlement, payment or clearance services in the United States shall have occurred; (vii) there shall have been any material adverse change in general economic, political or financial conditions or if the effect of international conditions on the financial markets in the United States shall be such as, in the Representative's judgment, makes it inadvisable to proceed with the delivery of the Securities; or (viii) any attack on, outbreak or escalation of hostilities, declaration of war or act of terrorism involving the United States or any other national or international calamity or emergency if, in the Representative's judgment, the effect of any such attack, outbreak, escalation, declaration, act, calamity or emergency makes it impractical or inadvisable to proceed with the completion of the public offering or the delivery of the Securities. Any termination of this Agreement pursuant to this Section 8 shall be without liability on the part of the Company or any Underwriter, except as otherwise provided in Sections 4(l) or 6 hereof.

Any notice referred to above may be given at the address specified in Section 10 hereof in writing or by telegraph or telephone, and if by telegraph or telephone, shall be immediately confirmed in writing.

(c) This Agreement may also be terminated as provided in Section 7 hereof.

**9. Survival of Indemnities, Contribution, Warranties and Representations.** All representations, warranties, and agreements of the Company herein or in certificates delivered pursuant hereto, and the agreements of the several Underwriters and the Company contained in Section 6 hereof, shall remain operative and in full force and effect regardless of any investigation made by or on behalf of any Underwriter or any controlling person thereof, or the Company or any of its officers, directors, or controlling persons, and shall survive delivery of, and payment for, the Securities to and by the Underwriters hereunder.

**10. Notices.** All communications hereunder shall be in writing and shall be mailed, hand delivered or telecopied and confirmed to the parties hereto as follows:

If to the Representative:

MDB Capital Group LLC  
401 Wilshire Boulevard  
Santa Monica, California 90401  
Facsimile: (310) 526- 5020  
Attention: Christopher A. Marlett

with a copy to:

Andrew D. Hudders, Esq.  
Golenbock Eiseman Assor Bell & Peskoe LLP  
437 Madison Avenue – 40<sup>th</sup> Floor  
New York, New York 10022  
Facsimile (212) 907-0330

If to the Company:

Opexa Therapeutics, Inc.  
2635 North Crescent Ridge Drive  
The Woodlands, Texas 77381  
Facsimile (281) 872-8585

with a copy to:

Michael C. Blaney, Esq.  
Vinson & Elkins L.L.P.  
1001 Fannin, Suite 2300  
Houston, Texas, 77002  
Facsimile (713) 615-5487

**11. Information Furnished by Underwriters.** The statements set forth under the caption “Underwriting” in the table in the first paragraph concerning the number of shares each Underwriter has agreed to purchase and in the paragraphs concerning sales by Underwriters to the public at the offering price and to dealers at such price less a concession and sales by Underwriters to discretionary accounts in any preliminary prospectus and the Prospectus, constitute the only written information furnished by or on behalf of any Underwriter referred to in paragraphs (b) and (c) of Section 1 hereof and in paragraphs (a) and (b) of Section 6 hereof.

**12. Parties.** This Agreement is made solely for the benefit of the several Underwriters, the Company, any officer, director or controlling person referred to in Section 6 hereof, and their respective successors and assigns, and no other person shall acquire or have any right by virtue of this Agreement. The term “successors and assigns,” as used in this Agreement, shall not include any purchaser of any of the Securities from any of the Underwriters merely by reason of such purchase.

**13. Definition of “Business Day” and “Subsidiary.”** For purposes of this Agreement, (a) “Business Day” means any day on which the New York Stock Exchange, Inc. is open for trading, and (b) “Subsidiary” has the meaning set forth in Rule 405 under the Securities Act.

**14. Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of California, without giving effect to the choice of law or conflict of laws principles thereof.

**15. Partial Unenforceability .** The invalidity or unenforceability of any Section, paragraph or provision of this Agreement shall not affect the validity or enforceability of any other Section, paragraph or provision hereof. If any Section, paragraph or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

**16. General Provisions .** This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof. This Agreement may be executed in two or more counterparts, each one of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument. This Agreement may not be amended or modified unless in writing by all of the parties hereto, and no condition herein (express or implied) may be waived unless waived in writing by each party whom the condition is meant to benefit. The Section headings herein are for the convenience of the parties only and shall not affect the construction or interpretation of this Agreement.

Please confirm, by signing and returning to us two (2) counterparts of this Agreement, that the Representative is acting on behalf of itself and the several Underwriters and that the foregoing correctly sets forth the agreement among the Company and the several Underwriters.

Very truly yours,

**OPEXA THERAPEUTICS, INC.**

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

CONFIRMED AND ACCEPTED  
as of the date first above mentioned:

**MDB CAPITAL GROUP LLC,**  
as Representative of the Several Underwriters  
named in Schedule I hereto

By: \_\_\_\_\_  
[Authorized Signatory]

SCHEDULE I

Underwriting Agreement dated \_\_\_\_\_, 2008

|                       | Underwriter | Number of Firm Securities<br>to be Purchased |
|-----------------------|-------------|----------------------------------------------|
| MDB Capital Group LLC |             | <div>4,500,000</div>                         |

Schedule I

**SCHEDULE II**  
**Lock-Up Agreements**

*Schedule II*

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**SCHEDULE III**

**Issuer Free Writing Prospectus**

*Schedule III*

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**EXHIBIT A**  
**Form of Underwriter Warrant**

*Exhibit A*

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**EXHIBIT B**

**Form of Opinion of Company Counsel**

*Exhibit B*

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**EXHIBIT C**

**Form of Opinion of Special Intellectual Property Counsel of the Company**

*Exhibit C*

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**EXHIBIT D**

**Form of Opinion of Special Regulatory Counsel of the Company**

*Exhibit D*

EXERCISABLE ON OR AFTER \_\_\_\_\_, 2008  
AND ON OR BEFORE \_\_\_\_\_, 2013

Series E Warrant Certificate  
WARRANTS TO ACQUIRE COMMON STOCK OF

**OPEXA THERAPEUTICS, INC.**

Series E Warrant

CUSIP 66372T 11 1

No. W

This Series E Warrant Certificate certifies that,

...or registered assignee, is the registered holder of a Series E Warrant (the "Warrant") to acquire from Opexa Therapeutics, Inc., a Delaware corporation (the "Company"), the number of fully paid and non-exercisable shares of Common Stock, \$50 per share, of the Company (the "Common Stock") specified above for consideration equal to \$ \_\_\_\_\_ (the "Exercise Price") per share of Common Stock. This Series E Warrant evidenced by this Series E Warrant Certificate shall not be exercisable after and shall terminate and become void as at 5:00 P.M., Houston time, on \_\_\_\_\_, 2013 (the "Expiration Date").

The Series E Warrant evidenced by this Series E Warrant Certificate is part of a duly authorized issue of warrants expiring on the Expiration Date entitling the Holder hereof to receive shares of Common Stock, and is issued or to be issued pursuant to a Warrant Agreement dated \_\_\_\_\_, 2008 (the "Warrant Agreement"), duly executed and delivered by the Company to Continental Stock Transfer & Trust Company, as warrant agent (the "Warrant Agent"), which term includes any successor Warrant Agent under the Warrant Agreement, which Warrant Agreement is hereby incorporated by reference to and made a part of this instrument and is hereby referred to for a description of the rights, limitations of rights, obligations, duties and immunities thereunder, of the Warrant Agent, the Company and the Holders (hereinafter "Holders") meaning, from time to time, the registered holders of the warrant issued hereunder. To the extent any provision in this Series E Warrant Certificate conflicts with any provision of the Warrant Agreement, the provisions of the Warrant Agreement shall apply. A copy of the Warrant Agreement may be obtained by the Holder hereof upon written request to the Company at 2550 North Oremont Ridge Drive, The Woodlands, Texas 77381 Attention: Investor Relations. Capitalized terms not defined herein have the meanings ascribed thereto in the Warrant Agreement.

This Series E Warrant may be exercised, in whole or in part, at any time on or after \_\_\_\_\_, 2008 and on or before the Expiration Date, subject to the terms of the Warrant Agreement, by surrendering this Warrant Certificate, with the Parity of Election to Purchase set forth herein properly completed and executed, together with payment of the Aggregate Exercise Price in accordance with Section 9 of the Warrant Agreement in the case of a Cash Exercise. Each exercise must be for a whole number of Warrant Shares. In the event that upon any exercise of the Series E Warrant evidenced hereby the number of shares of Common Stock acquired shall be less than the total number of shares of Common Stock which may be purchased pursuant to this Series E Warrant, there shall be issued to the Holder hereof or such Holder's assignee a new Series E Warrant Certificate evidencing the unexercised portion of this Series E Warrant.

Dated: \_\_\_\_\_, 2008

COUNTERSIGNED AND REGISTERED

CONTINENTAL STOCK TRANSFER & TRUST COMPANY  
JERSEY CITY, N.J.

BY: \_\_\_\_\_ TRANSFER AGENT  
AND REGISTRAR

AUTHORIZED OFFICER

The Warrant Agreement provides that upon the occurrence of certain events the Exercise Price set forth on this Series E Warrant Certificate may, subject to certain conditions, be adjusted, and that upon the occurrence of certain events the number of shares of Common Stock and/or the type of securities or other property issuable upon the exercise of the Series E Warrant shall be adjusted. No fraction of a share of Common Stock will be issued upon the exercise of this Series E Warrant, but the Company will pay the cash value thereof determined as provided in the Warrant Agreement.

The Warrant Agreement provides in certain circumstances for a call right on the part of the Company, pursuant to which this Series E Warrant may be terminated.

Series E Warrant Certificates, when so authorized at the office of the Warrant Agent by the registered Holder transfer in person or by such Holder's legal representative or attorney duly appointed and authorized in writing, may be exchanged, in the manner and subject to the limitations provided in the Warrant Agreement, but without payment of any service charge, for another Series E Warrant Certificate or Series E Warrant Certificates of like tenor evidencing in the aggregate the right to purchase a like number of Warrant Shares.

Each issuer and holder of this Series E Warrant Certificate, by taking or holding the same, consents and agrees that the holder of this Series E Warrant Certificate when duly endorsed in blank may be treated by the Company, the Warrant Agent and all other persons dealing with this Series E Warrant Certificate as the absolute owner hereof for any purpose and as the person entitled to exercise the rights represented hereby or the person entitled to the transfer hereof on the register of the Company maintained by the Warrant Agent, and not to the contrary notwithstanding, provided that until such transfer on such register, the Company and the Warrant Agent may treat the registered Holder hereof as the owner for all purposes.

This Series E Warrant does not entitle any holder to any of the rights of a shareholder of the Company.

This Series E Warrant Certificate and the Warrant Agreement are subject to assignment as provided in the Warrant Agreement.

This Series E Warrant Certificate shall not be valid or obligatory for any purpose until it shall have been countersigned by the Warrant Agent.

IN WITNESS WHEREOF, the undersigned have caused this Series E Warrant Certificate to be executed as of the date set forth below.

**OPEXA THERAPEUTICS, INC.**



By

*John Harkley*

SECRETARY

By

*David B. McMillan*

PRESIDENT

PRODUCTION COORDINATOR KELLY GONZALES 831-469-1722

PROOF OF EXERCISE BY 2007

OPEXA THERAPEUTICS, INC.

TSB 28992 FC

Operator

Rev. 1

AMERICAN BANK NOTE COMPANY

771 ARMSTRONG LANE

COLUMBIA, TENNESSEE 38401

(631) 388-3003

/ EITHER 7 / LIVE 3085 / O / OPEXA 28992 FC

PLEASE INITIAL THE APPROPRIATE SELECTION FOR THIS PROOF: ON AS IS OK WITH CHANGES MAKE CHANGES AND SEND ANOTHER PROOF.

Color Checked for Filling, Lupa and Color Print in US-3 Dark Green.

Colors: This warrant certificate is printed on high quality, color base paper. It is a good representation of the color as it will appear on the final product. However, it is not an exact color rendition, and the final printed product may appear slightly different from the proof due to the difference between the type and printing ink.

NOTE: TEXT RECEIVED BY MODEM OR E-MAIL IS NOT PROOFREAD WORD FOR WORD.

# FORM OF ELECTION TO PURCHASE

To Opexa Therapeutics, Inc.:

In accordance with the Series E Warrant Certificate enclosed with this Form of Election to Purchase, the undersigned hereby irrevocably elects to exercise the Series E Warrant with respect to Warrant Shares in accordance with the terms of the Warrant Agreement.

1. Form of Exercise Price. The Holder intends that payment of the Exercise Price shall be made as:

a Cash Exercise;

a Cashless Exercise; or

The Holder understands that any Cashless Exercise is subject to compliance with all the terms of the Warrant Agreement.

2. Payment of Exercise Price. If the Holder has elected a Cash Exercise with respect to some or all of the Warrant Shares to be issued pursuant hereto, the Holder shall send via wire transfer to the account of the Company the sum of \$ \_\_\_\_\_ in immediately available funds, which sum represents the Aggregate Exercise Price (as defined in the Warrant Agreement) for the number of shares of Common Stock to which this Form of Election to Purchase relates, together with any applicable taxes payable by the undersigned pursuant to the Series E Warrant.

The undersigned requests that certificates for the shares of Common Stock issuable upon this exercise be issued in the name of

Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Social Security or Tax I.D. No.: \_\_\_\_\_

## ASSIGNMENT

(Form of assignment to be executed if Warrant  
Holder desires to transfer Warrant)

FOR VALUE RECEIVED, \_\_\_\_\_ hereby sells, assigns and transfers unto

this Warrant Certificate together with all right, title or interest therein and does hereby irrevocably appoint

\_\_\_\_\_ attorney

to transfer the within Warrant Certificate on the books of the Warrant Agent with full power of substitution in the premises.

Dated: \_\_\_\_\_

Signature

(Signature must conform in all respects to the name of holder as specified on the face of the Warrant Certificate)

(Signature Medallion Recommended) \_\_\_\_\_

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

AMERICAN BANK NOTE COMPANY  
711 ARMSTRONG LANE  
COLUMBIA, TENNESSEE 38401  
(631) 388-3003

PRODUCTION COORDINATOR: HOLLY GRONER 931-490-1722  
PROOF OF DECEMBER 19, 2007  
OPEXA THERAPEUTICS, INC.  
TSB 26992 BK

Operator: R

Now

/ EITHER 7 / LIVE JOBS / O / OPEXA 26992 BK

PLEASE INITIAL THE APPROPRIATE SELECTION FOR THIS PROOF: \_\_\_\_ OK AS IS \_\_\_\_ OK WITH CHANGES \_\_\_\_ MAKE CHANGES AND SEND ANOTHER PROOF

NOTE: TEXT RECEIVED BY MODEM OR E-MAIL IS NOT PROOFREAD WORD FOR WORD.

## WARRANT AGREEMENT

**THIS WARRANT AGREEMENT** (the “Agreement”) is dated \_\_\_\_\_, 2008, between Opexa Therapeutics, Inc., a Delaware corporation (the “Company”) and Continental Stock Transfer & Trust Company, acting as warrant agent (the “Warrant Agent”).

**WHEREAS**, the Company proposes to issue warrants (collectively with any Additional Warrants, the “Series E Warrants”) to acquire up to **[5,625,000]** shares, subject to adjustment as provided herein, of common stock, \$ .50 par value (“Common Stock”), of the Company (collectively, the “Warrant Shares”);

**WHEREAS**, each Series E Warrant shall represent the right to purchase from the Company, at an initial price of \$\_\_\_\_\_ per share **[125% of price of share of common stock offered to public]** (the “Exercise Price”), the number of shares specified on the certificates evidencing the Series E Warrants (the “Warrant Certificates”); and

**WHEREAS**, Continental Stock Transfer & Trust Company is willing to serve as the Warrant Agent in connection with the issuance of Warrant Certificates and the other matters as provided herein.

**NOW, THEREFORE**, in consideration of the foregoing and for the purpose of defining the terms and provisions of the Series E Warrants and the respective rights and obligations thereunder of the Company, the Warrant Agent and the record holders from time to time of the Series E Warrants (the “Holders”), the parties hereby agree as follows:

1. Definitions. For the purposes hereof, the following terms shall have the following meanings:

“Business Day” means any day except Saturday, Sunday and any day which shall be a federal legal holiday in the United States or a day on which banking institutions in The City of New York are authorized or required by law or other government action to close.

“Date of Exercise” means the date on which the Holder shall have delivered to the Company (i) a Warrant Certificate, (ii) the Form of Election to Purchase attached thereto (with the Warrant Shares Exercise Log attached to it), appropriately completed and duly signed, and (iii) in the case of a Cash Exercise, payment of the Exercise Price in accordance with Section 9 for the number of Warrant Shares so indicated by the Holder to be purchased.

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Securities and Exchange Commission promulgated thereunder.

“Expiration Date” means the date five years after the Initial Issuance Date.

“Initial Issuance Date” means \_\_\_\_\_, 2008.

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"Market Price" of a share of Common Stock on any date shall mean, (i) if the shares of Common Stock are traded on the Nasdaq Global Market or Nasdaq Capital Market, the last bid price reported on that date; (ii) if the shares of Common Stock are no longer quoted on Nasdaq and are listed on any other national securities exchange, the last sale price of the Common Stock reported by such exchange on that date; (iii) if the shares of Common Stock are not quoted on a any such market or listed on any such exchange and the shares of Common Stock are traded in the over-the-counter market, the last price reported on such day by the OTC Bulletin Board; (iv) if the shares of Common Stock are not quoted on a any such market, listed on any such exchange or quoted on the OTC Bulletin Board, then the last price quoted on such day in the over-the-counter market as reported by the National Quotation Bureau Incorporated (or any similar organization or agency succeeding its functions of reporting prices); or (v) if none of clauses (i)-(iv) are applicable, then as determined, in good faith, by the Board of Directors of the Company.

"Person" means a corporation, association, partnership, limited liability corporation, organization, business, individual, government or political subdivision thereof or governmental agency.

"Trading Day" means (i) a day on which the shares of Common Stock are traded on the Nasdaq Global Market, Nasdaq Capital Market, New York Stock Exchange or American Stock Exchange on which the shares of Common Stock are then listed or quoted, or (ii) if the shares of Common Stock are not listed on a any such exchange or market, a day on which the shares of Common Stock are traded in the over-the-counter market, as reported by the OTC Bulletin Board, or (iii) if the shares of Common Stock are not quoted on the OTC Bulletin Board, a day on which the shares of Common Stock are quoted in the over-the-counter market as reported by the National Quotation Bureau Incorporated (or any similar organization or agency succeeding its functions of reporting prices); provided, that in the event that the shares of Common Stock are not listed or quoted as set forth in clause (i), (ii) or (iii) hereof, then Trading Day shall mean a Business Day.

2. Form of Warrant Certificates.

(a) *Form* . The Warrant Certificates shall be issued in registered form only as definitive Warrant Certificates and shall be substantially in the form attached hereto as Exhibit A, shall be dated the date of issuance thereof (whether upon initial issuance, register of transfer, exchange or replacement) and shall bear such legends and endorsements typed, stamped, printed, lithographed or engraved thereon as the Company may deem appropriate and as are not inconsistent with the provisions of this Agreement. Warrant Certificates evidencing Series E Warrants to purchase the number of shares of Common Stock specified on each Warrant Certificate shall be signed by, or bear the facsimile signature of, the Chairman of the Board, Chief Executive Officer, President, any Vice President, Treasurer or Secretary of the Company. In the event the person whose facsimile signature has been placed upon any Warrant Certificate shall have ceased to serve in the capacity in which such person signed the Warrant Certificate before such Warrant Certificate is issued, it may be issued with the same effect as if he or she had not ceased to be such at the date of issuance.

(b) *Effect of Countersignature* . Unless and until countersigned by the Warrant Agent pursuant to this Agreement, a Warrant Certificate shall be invalid and of no effect and may not be exercised by the holder thereof. Such signature by the Warrant Agent upon any Warrant Certificate executed by the Company shall be conclusive evidence that such Warrant Certificate has been duly issued under the terms of this Agreement.

(c) *Warrant Register* . The Warrant Agent shall maintain books (the "Warrant Register"), for the registration of original issuance and the registration of transfer of Warrant Certificates. Upon the initial issuance of the Warrant Certificates, the Warrant Agent shall issue and register the Warrant Certificates in the names of the respective holders thereof in such denominations and otherwise in accordance with instructions delivered to the Warrant Agent by the Company. The Company and the Warrant Agent may deem and treat the registered Holder of each Warrant Certificate as the absolute owner of the Series E Warrants represented thereby for the purpose of any exercise thereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

(d) *Registration of Transfers* . The Warrant Agent shall register the transfer of any portion of a Warrant Certificate in the Warrant Register, upon surrender of the Warrant Certificate, with the Form of Assignment attached thereto duly completed and signed, to the Company at its address specified herein. Upon any such registration or transfer, a new Warrant Certificate substantially in the form attached hereto as Exhibit A (any such new Warrant Certificate, a "New Warrant Certificate"), evidencing the portion of the Warrant Certificate so transferred shall be issued to the transferee and a New Warrant Certificate evidencing the remaining portion of the Warrant Certificate not so transferred, if any, shall be issued to the transferring Holder. The delivery of the New Warrant Certificate by the Company to the transferee thereof shall be deemed to constitute acceptance by such transferee of all of the rights and obligations of a holder of a Warrant Certificate.

3. Term of Series E Warrants . Subject to the terms of Section 4, Series E Warrants shall be exercisable by the registered Holder at any time and from time to time on or after the Initial Issuance Date to and including the Expiration Date. At 5:00 p.m., Houston time on the Expiration Date, any portion of a Series E Warrant not exercised prior thereto shall be and become void and of no value.

4. Exercise of Series E Warrants and Delivery of Warrant Shares .

(a) If an effective registration statement is then available for the issuance of the Warrant Shares and the exercise is permitted in the state of the residence of the registered Holder, a registered Holder may only exercise the Series E Warrants through a cash exercise (a "Cash Exercise"). If an effective registration statement is not then available for the issuance of the Warrant Shares under the Federal securities laws or the state "blue sky" laws of the state of the residence of the registered Holder, then a registered Holder may exercise the Series E Warrants through either (i) through a cashless exercise (a "Cashless Exercise") pursuant to Section 4(b) below or (ii) through a Cash Exercise after making customary representations requested by the Company regarding investment intent and accredited status and agreeing to customary transfer restrictions requested by the Company to ensure compliance by the Company with applicable securities laws.

(b) The Holder shall effect a Cashless Exercise by surrendering Warrant Certificates to the Warrant Agent and noting on the Form of Election to Purchase that the Holder wishes to effect a Cashless Exercise, upon which the Company shall issue, or cause to be issued, to the Holder the number of Warrant Shares determined as follows:

$$X = Y \times (A-B)/A$$

where:

X = the number of Warrant Shares to be issued to the Holder;  
Y = the number of Warrant Shares with respect to which the Warrant Certificates are being exercised;  
A = the Market Price as of the Date of Exercise; and  
B = the Exercise Price.

(c) At such times, and upon such representations and agreements, if applicable, upon surrender of a Warrant Certificate and delivery of the Form of Election to Purchase (with the Warrant Shares Exercise Log attached) to the Warrant Agent at its address for notice set forth in Section 14, and, in the case of a Cash Exercise, upon payment of the Exercise Price multiplied by the number of Warrant Shares that the Holder intends to purchase thereunder (which must be a whole number) in accordance with Section 9 (the "Aggregate Exercise Price"), the Company shall promptly issue and deliver to the Holder a certificate for the Warrant Shares issuable upon such exercise. Any Person so designated by the Holder to receive Warrant Shares shall be deemed to have become holder of record of such Warrant Shares as of the Date of Exercise of the relevant Warrant Certificate. For so long as there is a then effective registration statement covering the issuance of the Warrant Shares or if a Holder effects a Cashless Exercise, the Warrant Shares shall be issued free of all restrictive legends, and the Company shall, upon request of the Holder, if available, use commercially reasonable efforts to deliver Warrant Shares hereunder electronically through the Depository Trust Corporation or another established clearing corporation performing similar functions. If there is not a then effective registration statement covering the issuance of the Warrant Shares and a Holder effects a Cash Exercise, the Warrant Shares shall be issued in certificated form and include customary legends regarding transfer restrictions deemed appropriate by the Company. If fewer than all Warrant Shares issuable upon exercise of the relevant Warrant Certificate are purchased on such Date of Exercise, then the Company will execute and deliver to the Holder or its assigns a New Warrant Certificate (dated the date thereof) evidencing the unexercised portion of the relevant Warrant Certificate.

5. Charges, Taxes and Expenses. Issuance and delivery of certificates for Warrant Shares shall be made without charge to the Holder for any issue or transfer tax, or transfer agent fee in respect of the issuance of such certificates, all of which taxes shall be paid by the Company; provided, however, that the Company shall not be obligated to pay any tax which may be payable in respect of any transfer involved in the registration of any certificates for Warrant Shares or Series E Warrants in a name other than that of the Holder. The Holder shall be responsible for all other tax liabilities that may arise as a result of holding or transferring any Warrant Certificate or receiving Warrant Shares upon exercise thereof.

6. Replacement of Warrant Certificate. If any Warrant Certificate is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation thereof, or in lieu of and substitution for such Warrant Certificate, a New Warrant Certificate, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction and customary and reasonable indemnity, if requested. Applicants for a New Warrant Certificate under such circumstances shall also comply with such other reasonable regulations and procedures and pay such other reasonable third-party costs as the Company may prescribe.

7. Reservation of Warrant Shares. The Company covenants that it will at all times reserve and keep available out of its authorized but unissued and otherwise unreserved Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of all outstanding Series E Warrants as herein provided, the number of Warrant Shares which are then issuable and deliverable upon the exercise of all outstanding Series E Warrants (taking into account the adjustments and restrictions of Section 8). The Company covenants that all Warrant Shares so issuable and deliverable shall, upon issuance and the payment of the applicable Exercise Price in accordance with the terms hereof, be duly and validly authorized and issued, and be fully paid and nonassessable.

8. Certain Adjustments. The Exercise Price and number of Warrant Shares issuable upon exercise of each Series E Warrant then outstanding are subject to adjustment from time to time as set forth in this Section 8.

(a) *Stock Dividends and Splits*. If the Company, (i) pays a stock dividend on its Common Stock, (ii) subdivides outstanding shares of Common Stock into a greater number of shares, or (iii) combines outstanding shares of Common Stock into a lesser number of shares, 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. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of shareholders entitled to receive such dividend, and any adjustment pursuant to clause (ii) or (iii) of this paragraph shall become effective immediately after the effective date of such subdivision or combination.

(b) *Extraordinary Transactions*. If, (i) the Company effects any merger or consolidation of the Company with or into another Person, (ii) the Company effects any sale of all or substantially all of its assets in one or a series of related transactions, (iii) any tender offer or exchange offer by the Company is completed pursuant to which holders of Common Stock are permitted to tender or exchange their shares for other securities, cash or property, or (iv) the Company effects any reclassification of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (in any such case, an "Extraordinary Transaction"), then each Holder's Series E Warrants will become the right thereafter to receive, upon exercise of his or her Series E Warrants, the same amount and kind of securities, cash or property as such Holder would have been entitled to receive upon the occurrence of such Extraordinary Transaction if it had been, immediately prior to such Extraordinary Transaction, the holder of the number of Warrant Shares then issuable upon exercise in full of the relevant Series E Warrant (the "Alternate Consideration") in lieu of Common Stock. The aggregate Exercise Price for each Series E Warrant will not be affected by any such Extraordinary Transaction, but the Company shall apportion such aggregate Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Extraordinary Transaction, then each Holder, to the extent practicable, shall be given the same choice as to the Alternate Consideration it receives upon any exercise of his or her Series E Warrant following such Extraordinary Transaction. In addition, at the request of each Holder, upon surrender of such Holder's Series E Warrant, any successor to the Company or surviving entity in such Extraordinary Transaction shall issue to such Holder a new warrant consistent with the foregoing provisions and evidencing the Holder's right to purchase the Alternate Consideration for the aggregate Exercise Price upon exercise thereof. Each Series E Warrant (or any such replacement security) will be similarly adjusted upon any subsequent transaction analogous to a Extraordinary Transaction.

(c) *Number of Warrant Shares* . Simultaneously with any adjustment to the Exercise Price pursuant to paragraph (a) of this Section, the number of Warrant Shares that may be purchased upon exercise of each Series E Warrant shall be increased or decreased proportionately, as the case may be, so that after such adjustment the aggregate Exercise Price payable hereunder for the adjusted number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment.

(d) *Calculations* . All calculations under this Section 8 shall be made to the nearest cent or the nearest 1/100th of a share, as applicable.

(e) *Notice of Adjustments* . Upon the occurrence of each adjustment pursuant to this Section 8, the Company at its expense will promptly calculate such adjustment in accordance with the terms of this Agreement and prepare a certificate setting forth such adjustment, including a statement of the adjusted Exercise Price and adjusted number of Warrant Shares or type of Alternate Consideration issuable upon exercise of each Series E Warrant (as applicable), describing the transactions giving rise to such adjustments and showing in detail the facts upon which such adjustment is based. The Company will promptly deliver to each Holder who makes a request in writing and to the Warrant Agent, a copy of each such certificate.

(f) *Notice of Corporate Events* . If the Company (i) declares a dividend or any other distribution of cash, securities or other property in respect of its Common Stock (other than a dividend payable solely in shares of Common Stock) or (ii) authorizes the voluntary dissolution, liquidation or winding up of the affairs of the Company, then the Company shall deliver to each Holder a notice describing the material terms and conditions of such dividend, distribution or transaction. Notwithstanding anything to the contrary in this Section 8(f), the failure to deliver any notice under this Section 8(f) or any defect therein shall not affect the validity of the corporate action required to be described in such notice. Until the exercise of its, his or her Series E Warrant or any portion of such Series E Warrant, a Holder shall not have nor exercise any rights by virtue of ownership of a Series E Warrant as a shareholder of the Company (including without limitation the right to notification of shareholder meetings or the right to receive any notice or other communication concerning the business and affairs of the Company other than as provided in this Section 8(f)).

9. Payment of Exercise Price. The Holder shall pay the Aggregate Exercise Price by paying, in lawful money of the United States, in cash, certified check or bank draft payable to the order of the Company (or as otherwise agreed to by the Company) delivered to the Warrant Agent together with the Warrant Certificate and Form of Election to Purchase.

10. Company Call Right. Notwithstanding any other provision contained in this Warrant Agreement to the contrary, in the event that the average closing bid prices per share of Common Stock, as quoted on the Nasdaq Global Market (or such other exchange or stock market on which the Common Stock may then be listed or quoted) over a period of 20 consecutive Trading Days, equals or exceeds 200% of the Exercise Price (appropriately adjusted for any stock split, reverse stock split, stock dividend or other reclassification or combination of the Common Stock occurring after the date hereof), the Company, upon thirty (30) calendar days prior written notice (the "Notice Period") given to the Holder within 10 Business Days of the end of such 20 consecutive Trading Day period, may call the Series E Warrants, in whole and not in part, at a redemption price equal to \$0.01 per share of Common Stock then purchasable pursuant to the Series E Warrants called for redemption. The Holder shall have the right to exercise the Series E Warrants prior to the end of the Notice Period. As of the last day of the Notice Period, any Series E Warrants timely and validly called for redemption by the Company shall terminate and permanently cease to be exercisable and the Holders shall then be entitled only to receive the redemption price.

Notwithstanding the ability of the Company to call the Series E Warrants for redemption, the Company agrees that the Series E Warrants underlying any warrant agreement issued to the underwriters and their designees and transferees in connection with the public offering in which the Series E Warrants were issued will not be subject to the call right and redemption set forth herein.

11. Holder not Deemed a Stockholder. Except as otherwise specifically provided herein, the Holder, solely in such Person's capacity as a Holder, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in the Series E Warrants be construed to confer upon the Holder, solely in such Person's capacity as a Holder, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares to which Person is then entitled to receive upon the due exercise of the Series E Warrants.

12. No Fractional Shares. No fractional shares will be issued in connection with any exercise of a Series E Warrant. In lieu of any fractional shares which would otherwise be issuable, the Company shall pay cash equal to the product of such fraction multiplied by the Market Price on the Date of Exercise.

13. Exchange Act Filings. The Holder agrees and acknowledges that it shall have sole responsibility for making any applicable filings with the U.S. Securities and Exchange Commission pursuant to Sections 13 and 16 of the Exchange Act as a result of its acquisition of any Series E Warrant and the Warrant Shares and any future retention or transfer thereof.

14. Notices. Any and all notices or other communications or deliveries hereunder (including without limitation any Exercise Notice) shall be in writing and shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified in this Section prior to 5:00 p.m. (Houston time) on a Trading Day, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified in this Section on a day that is not a Trading Day or later than 5:00 p.m. (Houston time) on any Trading Day, (iii) the Trading Day following the date of mailing, if sent by nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given. The addresses for such communications shall be:

if to the Company:

Opexa Therapeutics, Inc.  
2635 North Crescent Ridge Drive  
The Woodlands, Texas 77381  
Attn: Chief Financial Officer  
Facsimile No.: (281) 872-8585

if to the Warrant Agent:

Continental Stock Transfer & Trust Company  
17 Battery Place, 8th Floor  
New York, New York 10004  
Attention: Office of General Counsel

if to the Holder:

to the address or facsimile number appearing on the Warrant Register or such other address or facsimile number as the Holder may provide to the Company in accordance with this Section 14.

15. Warrant Agent.

(a) The Company and the Warrant Agent hereby agree that the Warrant Agent will serve as an agent of the Company as set forth in this Agreement.

(b) The Warrant Agent shall not by any act hereunder be deemed to make any representation as to validity or authorization of the Series E Warrants or the Warrant Certificates (except as to its countersignature thereon) or of any securities or other property delivered upon exercise of any Series E Warrant, or as to the number or kind or amount of securities or other property deliverable upon exercise of any Series E Warrant or the correctness of the representations of the Company made in such certificates that the Warrant Agent receives.

(c) The Warrant Agent shall not have any duty to calculate or determine any required adjustments with respect to the Exercise Price or the kind and amount of securities or other property receivable by Holders upon the exercise of Series E Warrants, nor to determine the accuracy or correctness of any such calculation.

(d) The Warrant Agent shall not (i) be liable for any recital or statement of fact contained herein or in the Warrant Certificates or for any action taken, suffered or omitted by it in good faith in the belief that any Warrant Certificate or any other document or any signature is genuine or properly authorized, (ii) be responsible for any failure by the Company to comply with any of its obligations contained in this Agreement or in the Warrant Certificates, (iii) be liable for any act or omission in connection with this Agreement except for its own gross negligence or willful misconduct or (iv) have any responsibility to determine whether a transfer of a Series E Warrant complies with applicable securities laws.

(e) The Warrant Agent is hereby authorized to accept instructions with respect to the performance of its duties hereunder from the Chief Executive Officer, the President, any Vice President, the Treasurer, or the Secretary or any Assistant Secretary of the Company and to apply to any such officer for written instructions (which will then be promptly given) and the Warrant Agent shall not be liable for any action taken or suffered to be taken by it in good faith in accordance with the instructions of any such officer, except for its own gross negligence or willful misconduct, but in its discretion the Warrant Agent may in lieu thereof accept other evidence of such or may require such further or additional evidence as it may deem reasonable.

(f) The Warrant Agent may exercise any of the rights and powers hereby vested in it or perform any duty hereunder either itself or by or through its attorneys, agents or employees, provided reasonable care has been exercised in the selection and in the continued employment of any persons. The Warrant Agent shall not be under any obligation or duty to institute, appear in or defend any action, suit or legal proceeding in respect hereof, unless first indemnified to its satisfaction. The Warrant Agent shall promptly notify the Company in writing of any claim made or action, suit or proceeding instituted against or arising out of or in connection with this Agreement.

(g) The Company will take such action as may reasonably be required by the Warrant Agent in order to enable it to carry out or perform its duties under this Agreement.

(h) The Warrant Agent shall act solely as agent of the Company hereunder. The Warrant Agent shall only be liable for the failure to perform such duties as are specifically set forth herein.

(i) The Warrant Agent may consult with legal counsel satisfactory to it (who may be legal counsel for the Company), and the Warrant Agent shall incur no liability or responsibility to the Company or to any Holder for any action taken, suffered or omitted by it in good faith in accordance with the opinion or advice of such counsel.

(j) The Company agrees to pay to the Warrant Agent compensation for all services rendered by the Warrant Agent hereunder as the Company and the Warrant Agent may agree from time to time, and to reimburse the Warrant Agent for reasonable expenses incurred in connection with the execution and administration of this Agreement (including the reasonable compensation and expenses of its counsel), and further agrees to indemnify the Warrant Agent for, and hold it harmless against, any loss, liability or expense incurred without gross negligence, bad faith or willful misconduct on its part, arising out of or in connection with the acceptance and administration of this Agreement.

(k) The Warrant Agent, and any shareholder, director, officer or employee of the Warrant Agent, may buy, sell or deal in any of the Series E Warrants or other securities of the Company or its Affiliates or become pecuniarily interested in transactions in which the Company or its Affiliates may be interested, or contract with or lend money to the Company or its Affiliates or otherwise act as fully and freely as though it were not the Warrant Agent under this Agreement. Nothing herein shall preclude the Warrant Agent from acting in any other capacity for the Company or for any other Person.

(l) No resignation or removal of the Warrant Agent and no appointment of a successor warrant agent shall become effective until the acceptance of appointment by the successor warrant agent as provided herein. The Warrant Agent may resign its duties and be discharged from all further duties and liability hereunder (except liability arising as a result of the Warrant Agent's own gross negligence or willful misconduct) after giving written notice to the Company. The Company may remove the Warrant Agent upon written notice, and the Warrant Agent shall thereupon in like manner be discharged from all further duties and liabilities hereunder, except as aforesaid. The Warrant Agent shall, at the Company's expense, cause to be mailed (by first class mail, postage prepaid) to each Holder of a Series E Warrant at such Holder's last address as shown on the register of the Company maintained by the Warrant Agent a copy of said notice of resignation or notice of removal, as the case may be. Upon such resignation or removal, the Company shall appoint in writing a new warrant agent. If the Company fails to do so within a period of 30 days after it has been notified in writing of such resignation by the resigning Warrant Agent or after such removal, then the resigning Warrant Agent or the Holder of any Series E Warrant may apply to any court of competent jurisdiction for the appointment of a new warrant agent. After acceptance in writing of such appointment by the new warrant agent, it shall be vested with the same powers, rights, duties and responsibilities as if it had been originally named herein as the Warrant Agent. Not later than the effective date of any such appointment, the Company shall give notice thereof to the resigning or removed Warrant Agent. Failure to give any notice provided for in this Section 15(l), however, or any defect therein, shall not affect the legality or validity of the resignation of the Warrant Agent or the appointment of a new warrant agent, as the case may be.

(m) Any corporation into which the Warrant Agent or any new warrant agent may be merged or any corporation resulting from any consolidation to which the Warrant Agent or any new warrant agent shall be a party or any corporation to which the Warrant Agent transfers substantially all of its corporate trust business shall be a successor Warrant Agent under this Agreement without any further act, provided that such corporation (i) would be eligible for appointment as successor to the Warrant Agent under the provisions of Section 15(l) or (ii) is a wholly owned subsidiary of the Warrant Agent. Any such successor Warrant Agent shall promptly cause notice of its succession as Warrant Agent to be mailed (by first class mail, postage prepaid) to each Holder in accordance with Section 14.

16. Miscellaneous.

(a) *Successors and Assigns.* This Agreement shall be binding on and inure to the benefit of the Company, the Warrant Agent and the Holders, and their respective successors and assigns. Subject to the preceding sentence, nothing in this Agreement shall be construed to give to any Person other than the Company, the Warrant Agent and the Holders any legal or equitable right, remedy or cause of action under this Agreement.

(b) *Amendments and Waivers.* The Company may, without the consent of the Holders, by supplemental agreement or otherwise, (i) make any changes or corrections in this Agreement that are required to cure any ambiguity or to correct or supplement any provision herein which may be defective or inconsistent with any other provision herein or (ii) add to the covenants and agreements of the Company for the benefit of the Holders, or surrender any rights or power reserved to or conferred upon the Company in this Agreement; provided that, in the case of (i) or (ii), such changes or corrections shall not adversely affect the interests of Holders of then outstanding Series E Warrants in any material respect. The Company may, with the consent, in writing or at a meeting, of the Holders of outstanding Series E Warrants exercisable for two-thirds of the Warrant Shares, amend in any way, by supplemental agreement or otherwise, this Agreement and/or all of the outstanding Warrant Certificates; provided, however, that no such amendment shall adversely affect any Series E Warrant differently than it affects all other Series E Warrants, unless the Holder thereof consents thereto. The Warrant Agent shall at the request of the Company, and without need of independent inquiry as to whether such supplemental agreement is permitted by the terms of this Section 16(b), join with the Company in the execution and delivery of any such supplemental agreements, but shall not be required to join in such execution and delivery for such supplemental agreement to become effective.

(c) *Choice of Law, etc.* . All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party hereto hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby. If either party shall commence an action or proceeding to enforce any provisions of this Agreement, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

(d) *Interpretation* . The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof.

(e) *Severability* . In case any one or more of the provisions of this Agreement shall be invalid or unenforceable in any respect, the validity and enforceability of the remaining terms and provisions of this Agreement shall not in any way be affected or impaired thereby and the parties will attempt in good faith to agree upon a valid and enforceable provision which shall be a commercially reasonable substitute therefor, and upon so agreeing, shall incorporate such substitute provision in this Agreement.

(f) *Additional Series E Warrants* . The Company may from time to time issue additional warrants (the "Additional Warrants") under this Warrant Agreement, without requiring the consent of any Holder, with the same terms as the warrants initially issued hereunder.

*[The remainder of this page has been left intentionally blank.]*

IN WITNESS WHEREOF , the parties has caused this Agreement to be duly executed by its authorized officer as of the date first indicated above.

OPEXA THERAPEUTICS, INC.

By: \_\_\_\_\_  
Name: David B. McWilliams  
Title: President

CONTINENTAL STOCK TRANSFER & TRUST COMPANY

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

Exhibit A

EXERCISABLE ON OR AFTER \_\_\_\_\_, 2008  
AND ON OR BEFORE \_\_\_\_\_, 2013

No. \_\_\_\_\_

Series E Warrant to Purchase \_\_\_\_\_ Shares

Series E Warrant Certificate

WARRANTS TO ACQUIRE COMMON STOCK OF OPEXA THERAPEUTICS, INC.

This Series E Warrant Certificate certifies that, \_\_\_\_\_, or registered assigns, is the registered holder of a Series E Warrant (the "Warrant") to acquire from Opexa Therapeutics, Inc., a Delaware corporation (the "Company"), the number of fully paid and non-assessable shares of Common Stock, \$.50 par value, of the Company (the "Common Stock") specified above for consideration equal to \$ \_\_\_\_\_ (the "Exercise Price") per share of Common Stock. The Series E Warrant evidenced by this Series E Warrant Certificate shall not be exercisable after and shall terminate and become void as of 5:00 P.M., Houston time, on \_\_\_\_\_, 2013 (the "Expiration Date").

The Series E Warrant evidenced by this Series E Warrant Certificate is part of a duly authorized issue of warrants expiring on the Expiration Date entitling the Holder hereof to receive shares of Common Stock, and is issued or to be issued pursuant to a Warrant Agreement dated \_\_\_\_\_, 2008 (the "Warrant Agreement"), duly executed and delivered by the Company to Continental Stock Transfer & Trust Company, as warrant agent (the "Warrant Agent", which term includes any successor Warrant Agent under the Warrant Agreement), which Warrant Agreement is hereby incorporated by reference in and made a part of this instrument and is hereby referred to for a description of the rights, limitation of rights, obligations, duties and immunities thereunder of the Warrant Agent, the Company and the Holders ("Holders" meaning, from time to time, the registered holders of the warrant issued thereunder). To the extent any provisions of this Series E Warrant Certificate conflicts with any provision of the Warrant Agreement, the provisions of the Warrant Agreement shall apply. A copy of the Warrant Agreement may be obtained by the Holder hereof upon written request to the Company at 2635 North Crescent Ridge Drive, The Woodlands, Texas 77381 Attention: Investor Relations. Capitalized terms not defined herein have the meanings ascribed thereto in the Warrant Agreement.

This Series E Warrant may be exercised, in whole or in part, at any time on or after \_\_\_\_\_, 2008 and on or before the Expiration Date, subject to the terms of the Warrant Agreement, by surrendering this Warrant Certificate, with the Form of Election to Purchase set forth hereon properly completed and executed, together with payment of the Aggregate Exercise Price in accordance with Section 9 of the Warrant Agreement in the case of a Cash Exercise. Each exercise must be for a whole number of Warrant Shares. In the event that upon any exercise of the Series E Warrant evidenced hereby the number of shares of Common Stock acquired shall be less than the total number of shares of Common Stock which may be purchased pursuant to this Series E Warrant, there shall be issued to the Holder hereof or such Holder's assignee a new Series E Warrant Certificate evidencing the unexercised portion of this Series E Warrant.

The Warrant Agreement provides that upon the occurrence of certain events the Exercise Price set forth on this Series E Warrant Certificate may, subject to certain conditions, be adjusted, and that upon the occurrence of certain events the number of shares of Common Stock and/or the type of securities or other property issuable upon the exercise of this Series E Warrant shall be adjusted. No fractions of a share of Common Stock will be issued upon the exercise of this Series E Warrant, but the Company will pay the cash value thereof determined as provided in the Warrant Agreement.

The Warrant Agreement provides in certain circumstances for a call right on the part of the Company, pursuant to which this Series E Warrant may be terminated.

Series E Warrant Certificates, when surrendered at the office of the Warrant Agent by the registered Holder thereof in person or by such Holder's legal representative or attorney duly appointed and authorized in writing, may be exchanged, in the manner and subject to the limitations provided in the Warrant Agreement, but without payment of any service charge, for another Series E Warrant Certificate or Series E Warrant Certificates of like tenor evidencing in the aggregate the right to purchase a like number of Warrant Shares.

Each taker and holder of this Series E Warrant Certificate, by taking or holding the same, consents and agrees that the holder of this Series E Warrant Certificate when duly endorsed in blank may be treated by the Company, the Warrant Agent and all other persons dealing with this Series E Warrant Certificate as the absolute owner hereof for any purpose and as the person entitled to exercise the rights represented hereby or the person entitled to the transfer hereof on the register of the Company maintained by the Warrant Agent, any notice to the contrary notwithstanding, provided that until such transfer on such register, the Company and the Warrant Agent may treat the registered Holder hereof as the owner for all purposes.

This Series E Warrant does not entitle any Holder to any of the rights of a shareholder of the Company.

This Series E Warrant Certificate and the Warrant Agreement are subject to amendment as provided in the Warrant Agreement.

This Series E Warrant Certificate shall not be valid or obligatory for any purpose until it shall have been countersigned by the Warrant Agent.

*[The remainder of this page has been left intentionally blank.]*

IN WITNESS WHEREOF , the undersigned have caused this Series E Warrant Certificate to be executed as of the date set forth below.

OPEXA THERAPEUTICS, INC.

By: \_\_\_\_\_  
Name David B. McWilliams  
Title President

By: /s/ \_\_\_\_\_  
Name  
Title

DATED: \_\_\_\_\_, 2008

Countersigned:

CONTINENTAL STOCK TRANSFER & TRUST COMPANY,  
as Warrant Agent

By: \_\_\_\_\_  
Name \_\_\_\_\_  
Title \_\_\_\_\_

FORM OF ELECTION TO PURCHASE

To Opexa Therapeutics, Inc.:

In accordance with the Series E Warrant Certificate enclosed with this Form of Election to Purchase, the undersigned hereby irrevocably elects to exercise the Series E Warrant with respect to Warrant Shares in accordance with the terms of the Warrant Agreement.

1. Form of Exercise Price. The Holder intends that payment of the Exercise Price shall be made as:

a Cash Exercise;

a Cashless Exercise; or

The Holder understands that any Cashless Exercise is subject to compliance with all the terms of the Warrant Agreement.

2. Payment of Exercise Price. If the Holder has elected a Cash Exercise with respect to some or all of the Warrant Shares to be issued pursuant hereto, the Holder shall send via wire transfer to the account of the Company the sum of \$ \_\_\_\_\_ in immediately available funds, which sum represents the Aggregate Exercise Price (as defined in the Warrant Agreement) for the number of shares of Common Stock to which this Form of Election to Purchase relates, together with any applicable taxes payable by the undersigned pursuant to the Series E Warrant.

The undersigned requests that certificates for the shares of Common Stock issuable upon this exercise be issued in the name of

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Social Security or Tax I.D. No.: \_\_\_\_\_

*Form of Election to Purchase*

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WARRANT SHARES EXERCISE LOG

| Date                        | Number of Warrant Shares Available to be Exercised | Number of Warrant Shares Exercised | Number of Warrant Shares Remaining to be Exercised |
|-----------------------------|----------------------------------------------------|------------------------------------|----------------------------------------------------|
| Warrant Shares Exercise Log |                                                    |                                    |                                                    |

FORM OF ASSIGNMENT

[To be completed and signed only upon transfer of Warrant]

FOR VALUE RECEIVED, the undersigned hereby sells, assigns and transfers unto \_\_\_\_\_ the right represented by the within Series E Warrant Certificate to purchase \_\_\_\_\_ shares of Common Stock of Opexa Therapeutics, Inc. to which the within Series E Warrant Certificate relates and appoints \_\_\_\_\_ attorney to transfer said right on the books of Opexa Therapeutics, Inc. with full power of substitution in the premises.

Dated: \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
(Signature must conform in all respects to name of holder as specified on the front page of the Series E Warrant Certificate)

Address of Transferee:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

In the presence of:

*Form of Assignment*

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**FORM OF  
UNDERWRITER'S WARRANT AGREEMENT**

Underwriter's Warrant Agreement (the "Agreement"), dated as of \_\_\_\_\_, 2008, between Opexa Therapeutics, Inc. (the "Company") and \_\_\_\_\_ (the "Holder").

**WITNESSETH:**

WHEREAS, the Company and MDB Capital Group LLC and certain other persons (collectively, the "Underwriters") have entered into an underwriting agreement dated \_\_\_\_\_, 2008 (the "Underwriting Agreement") whereby the Company has agreed to issue and sell to Underwriters an aggregate of **[4,500,000]** shares of common stock of the Company (the "Firm Shares" or in the singular a "Firm Share") and an aggregate of **[4,500,000]** Series E warrants (The "Firm Warrants" or in the singular a "Firm Warrant");

WHEREAS, the underwriters have agreed to make a public offering of the Firm Shares and the Firm Warrants, as those terms are described within the Underwriting Agreement (the "Offering");

WHEREAS, pursuant to Section \_\_\_\_ of the Underwriting Agreement the Company is obligated to issue to the Underwriters as of the date hereof a warrant for the purchase of up to **[450,000]** shares of Common Stock (the "Warrants") equal to ten percent (10%) of the Firm Shares sold in the Offering at a price per share of \$ \_\_\_\_\_;

WHEREAS, pursuant to Section \_\_\_\_ of the Underwriting Agreement, the Company is also obligated to issue to the Underwriters as of the date hereof warrants (the "Warrants") to acquire an aggregate of **[450,000]** warrants identical to the Firm Warrants sold in the Offering; and

WHEREAS, the Warrants may only be issued to the Underwriters and/or member firms of FINRA that may participate in the Offering and the bona fide officers and partners thereof as permitted by Rule 2710(c)(7)(A) and (B) (the "Rule") of the FINRA Conduct Rules including the Holder.

NOW, THEREFORE, in consideration of the premises contained herein, the payment to the Company of \$50, the agreements set forth herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Grant and Period.

1.1 Recitals. The above recitals are true and correct. The Offering has been registered under a registration statement on Form SB-2 (File No. 333-147167) which was declared effective by the Securities and Exchange Commission (the "Commission") on \_\_\_\_\_, 200\_\_ (the "Effective Date").

1.2 Grant. The Holder is hereby granted the right to purchase from the Company, at any time during the period commencing on \_\_\_\_\_, 2008 and expiring on \_\_\_\_\_, 2012 (the "Expiration Time"), up to **[450,000]** shares of Common Stock of the Company at an initial exercise price (subject to adjustment as provided in Section 5 hereof) of \$ \_\_\_\_\_ per share **[120% of the price per share of the Firm Shares]** (the "Exercise Price" or "Purchase Price"), subject to the terms and conditions of this Agreement.

2. Exercise of Warrant.

2.1 Full Exercise. Except as provided in Section 2.3 below, the Holder shall effect an exercise of the Warrants by surrendering to the Company this Agreement together with a Subscription in the form of Exhibit A attached thereto, duly executed by such Holder, at any time prior to the Expiration Time, at the Company's principal office, accompanied by payment in cash or by certified or official bank check payable to the order of the Company in the amount of the aggregate purchase price (the "Aggregate Price"), subject to any adjustments provided for in this Agreement. The Aggregate Price shall be the amount that is the result of the Exercise Price multiplied by the number of shares of Common Stock that are the subject of each Holder's Warrant (as adjusted as hereinafter provided).

2.2 Partial Exercise. The Warrants may also be exercised from time to time in part by surrendering this Agreement in the manner specified in Sections 2.1 or 2.3 hereof, except that the Purchase Price payable shall be the amount that is the result of the number of shares of Common Stock being purchased hereunder multiplied by the Exercise Price, subject to any adjustments provided for in this Agreement. Upon any such partial exercise, the Company, at its expense, will forthwith issue to the Holder a new Agreement of like tenor calling in the aggregate for the number of securities (as constituted as of the date hereof) for which this Agreement shall not have been exercised, issued in the name of the Holder or as such Holder (upon payment by such Holder of any applicable transfer taxes) may direct.

2.3 Cashless Exercise. The Holder may effect an exercise of the Warrants and pay the Exercise Price through a cashless exercise (a "Cashless Exercise"), as hereinafter provided, in its sole discretion. The Holder may effect a Cashless Exercise of the Warrants by surrendering to the Company this Agreement, together with a Subscription in the form of Exhibit B attached hereto, duly executed by such Holder, at any time prior to the Expiration Time, at the Company's principal office, upon which the Company shall issue to the Holder the number of shares of Common Stock determined as follows:

$$X = Y \times (A-B)/A$$

where X = the number of shares of Common Stock to be issued to the Holder;

$$Y = \text{the number of shares of Common Stock with respect to which this Warrant is being exercised;}$$

$$A = \text{the Market Price as of the Date of Exercise; and}$$

$$B = \text{the Exercise Price.}$$

"Market Price" of a share of Common Stock on any date shall mean, (i) if the shares of Common Stock are traded on the Nasdaq Global Market, Nasdaq Global Select Market or the Nasdaq Capital Market, the last bid price reported on that date; (ii) if the shares of Common Stock are no longer quoted on a Nasdaq market and are listed on any other national securities exchange, the last sale price of the Common Stock reported by such exchange on that date; (iii) if the shares of Common Stock are not quoted on any such market or listed on any such exchange and the shares of Common Stock are traded in the over-the-counter market, the last price reported on such day by the OTC Bulletin Board; (iv) if the shares of Common Stock are not quoted on a any such market, listed on any such exchange or quoted on the OTC Bulletin Board, then the last price quoted on such day in the over-the-counter market as reported by the National Quotation Bureau Incorporated (or any similar organization or agency succeeding its functions of reporting prices); or (v) if none of clauses (i)-(iv) are applicable, then as determined, in good faith, by the Board of Directors of the Company and the Holders. "Date of Exercise" means the date on which the Holder shall have delivered to the Company (i) this Warrant, (ii) the applicable Form of Subscription attached thereto, appropriately completed and duly signed, and (iii) if applicable, payment of the Exercise Price.

2.4 Restrictions on Exercise. If for any reason a registration statement for the issuance of the shares is not effective at the time of exercise, Holder will make customary representations to Company as may be required to qualify the issuance for exemption from the registration requirements of the Securities Act of 1933.

3. Issuance of Certificates. Upon the exercise of the Warrants, the issuance of certificates for shares of Common Stock shall be made promptly (and, in any event within three business days thereafter) without charge to the Holder thereof including, without limitation, any tax which may be payable in respect of the issuance thereof, and such certificates shall (subject to the provisions of Section 4 and Section 5 hereof) be issued in the name of, or in such names as may be directed by, the Holder thereof; provided, however, that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of any such certificates in a name other than that of the Holder and the Company shall not be required to issue or deliver such certificates unless or until the person or persons requesting the issuance thereof shall have paid to the Company the amount of such tax or shall have established to the satisfaction of the Company that such tax has been paid.

4. Restriction on Transfer of Warrants. The Holder of a Warrant, by acceptance thereof, covenants and agrees that the Warrants may not be sold, transferred, assigned, pledged or hypothecated, or be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of the securities underlying the Warrants, in whole or in part, for a period of one year from the effectiveness of the Offering, except (a) to a NASD member firm that participated in the Offering and the bona fide officers or partners thereof, (b) by operation of law, or (c) by reason of reorganization of the Company.

5. Adjustments to Exercise Price and Number of Securities.

5.1 Stock Dividends and Splits. If the Company, (i) pays a stock dividend on its Common Stock, (ii) subdivides outstanding shares of Common Stock into a greater number of shares, or (iii) combines outstanding shares of Common Stock into a lesser number of shares, 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. Any adjustment made pursuant to clause (i) of this paragraph shall become effective immediately after the record date for the determination of shareholders entitled to receive such dividend, and any adjustment pursuant to clause (ii) or (iii) of this paragraph shall become effective immediately after the effective date of such subdivision or combination.

5.2 Extraordinary Transactions. If, (i) the Company effects any merger or consolidation of the Company with or into another Person, (ii) the Company effects any sale of all or substantially all of its assets in one or a series of related transactions, (iii) any tender offer or exchange offer by the Company is completed pursuant to which holders of Common Stock are permitted to tender or exchange their shares for other securities, cash or property, or (iv) the Company effects any reclassification of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (in any such case, an "Extraordinary Transaction"), then each Holder's Warrants will become the right thereafter to receive, upon exercise of his or her Warrants, the same amount and kind of securities, cash or property as such Holder would have been entitled to receive upon the occurrence of such Extraordinary Transaction if it had been, immediately prior to such Extraordinary Transaction, the holder of the number of Warrant Shares then issuable upon exercise in full of the relevant Warrant (the "Alternate Consideration") in lieu of Common Stock. The aggregate Exercise Price for each Warrant will not be affected by any such Extraordinary Transaction, but the Company shall apportion such aggregate Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Extraordinary Transaction, then each Holder, to the extent practicable, shall be given the same choice as to the Alternate Consideration it receives upon any exercise of his or her Warrant following such Extraordinary Transaction. In addition, at the request of each Holder, upon surrender of such Holder's Warrant, any successor to the Company or surviving entity in such Extraordinary Transaction shall issue to such Holder a new warrant consistent with the foregoing provisions and evidencing the Holder's right to purchase the Alternate Consideration for the aggregate Exercise Price upon exercise thereof. Each Warrant (or any such replacement security) will be similarly adjusted upon any subsequent transaction analogous to a Extraordinary Transaction.

5.3 Adjustment in Number of Securities. Upon each adjustment of the Exercise Price pursuant to the provisions of this Section 5, the number of securities issuable upon the exercise of each Warrant shall be adjusted to the nearest full amount by multiplying a number equal to the Exercise Price in effect immediately prior to such adjustment by the number of securities issuable upon exercise of the Warrants immediately prior to such adjustment and dividing the product so obtained by the adjusted Exercise Price.

5.4 No Adjustment of Exercise Price in Certain Cases. No adjustment of the Exercise Price shall be made if the amount of said adjustment shall be less than \$.01 per Share; provided, however, that in such case any adjustment that would otherwise be required then to be made shall be carried forward and shall be made at the time of and together with the next subsequent adjustment which, together with any adjustment so carried forward, shall amount to at least \$.01 per Share.

5.5 Notice of Adjustment. In each case of an adjustment or readjustment of the Exercise Price or the number of any securities issuable upon exercise of the Warrants, the Company at its expense will promptly calculate such adjustment in accordance with the terms of this Agreement and prepare a certificate setting forth such adjustment, including a statement of the adjusted Exercise Price and adjusted number of shares of Common Stock or type of Alternate Consideration issuable upon exercise of each Warrant (as applicable), describing the transactions giving rise to such adjustments and showing in detail the facts upon which such adjustment is based. The Company will promptly deliver to each Holder who makes a request in writing, a copy of each such certificate.

6. Registration Rights.

6.1 Demand Registration.

6.1.1 Grant of Right. The Company, upon written demand ("Initial Demand Notice") of the Holder(s) of at least 51% of the Warrants and/or the underlying Common Stock and/or the underlying securities ("Majority Holders"), agrees to register on one occasion, all or any portion of the Warrants requested by the Majority Holders in the Initial Demand Notice and all of the securities underlying such Warrants, including the Common Stock (collectively, the "Registrable Securities"). On such occasion, the Company will file a registration statement or a post-effective amendment to the Registration Statement covering the Registrable Securities within thirty days after receipt of the Initial Demand Notice and use its best efforts to have such registration statement or post-effective amendment declared effective as soon as possible thereafter. The demand for registration may be made at any time during a period of five years beginning on the Effective Date. The Company covenants and agrees to give written notice of its receipt of any Initial Demand Notice by any Holder(s) to all other registered Holders of the Warrants and/or the Registrable Securities within ten days from the date of the receipt of any such Initial Demand Notice.

6.1.2 Terms. The Company shall bear all fees and expenses attendant to registering the Registrable Securities, including the expenses of any one legal counsel selected by the Holders to represent them in connection with the sale of the Registrable Securities, but the Holders shall pay any and all underwriting commissions. The Company agrees to use its reasonable best efforts to qualify or register the Registrable Securities in such states as are reasonably requested by the Majority Holder(s); provided, however, that in no event shall the Company be required to register the Registrable Securities in a state in which such registration would cause (i) the Company to be obligated to qualify to do business in such state, or would subject the Company to taxation as a foreign corporation doing business in such jurisdiction or (ii) the principal stockholders of the Company to be obligated to escrow their shares of capital stock of the Company. The Company shall cause any registration statement or post-effective amendment filed pursuant to the demand rights granted under Section 6.1.1 to remain effective for a period of nine consecutive months from the effective date of such registration statement or post-effective amendment.

6.2 "Piggy-Back" Registration.

6.2.1 Grant of Right. In addition to the demand right of registration, the Holders of the Warrants shall have the right for a period of seven years commencing on the Effective Date, to include the Registrable Securities as part of any other registration of securities filed by the Company (other than in connection with a transaction contemplated by Rule 145(a) promulgated under the Act or pursuant to Form S-8); provided, however, that if, in the written opinion of the Company's managing underwriter or underwriters, if any, for such offering, the inclusion of the Registrable Securities, when added to the securities being registered by the Company or the selling stockholder(s), will exceed the maximum amount of the Company's securities which can be marketed (i) at a price reasonably related to their then current market value, and (ii) without materially and adversely affecting the entire offering, then the Company will still be required to include the Registrable Securities, but may require the Holders to agree, in writing, to delay the sale of all or any portion of the Registrable Securities for a period of 90 days from the effective date of the offering, provided, further, that if the sale of any Registrable Securities is so delayed, then the number of securities to be sold by all stockholders in such public offering during such 90 day period shall be apportioned pro rata among all such selling stockholders, including all holders of the Registrable Securities, according to the total amount of securities of the Company owned by said selling stockholders, including all holders of the Registrable Securities.

6.2.2 Terms. The Company shall bear all fees and expenses attendant to registering the Registrable Securities, including the expenses of any legal counsel selected by the Holders to represent them in connection with the sale of the Registrable Securities but the Holders shall pay any and all underwriting commissions related to the Registrable Securities. In the event of such a proposed registration, the Company shall furnish the then Holders of outstanding Registrable Securities with not less than fifteen days written notice prior to the proposed date of filing of such registration statement. Such notice to the Holders shall continue to be given for each applicable registration statement filed (during the period in which the Warrant is exercisable) by the Company until such time as all of the Registrable Securities have been registered and sold. The holders of the Registrable Securities shall exercise the "piggy back" rights provided for herein by giving written notice, within ten (10) days of the receipt of the Company's notice of its intention to file a registration statement. The Company shall cause any registration statement filed pursuant to the above "piggyback" rights to remain effective for at least nine months from the date that the Holders of the Registrable Securities are first given the opportunity to sell all of such securities.

6.3 Damages. Should the registration or the effectiveness thereof required by Sections 6.1 and 6.2 hereof be delayed by the Company or the Company otherwise fails to comply with such provisions, the Company shall, in addition to any other equitable or other relief available to the Holder(s), be liable for any and all incidental, special and consequential damages sustained by the Holder(s), including, but not limited to, the loss of any profits that might have been received by the holder upon the sale of the Warrants or the Common Stock underlying this Warrant.

6.4 General Terms.

6.4.1 Indemnification. The Company shall indemnify the Holder(s) of the Registrable Securities to be sold pursuant to any registration statement hereunder and each person, if any, who controls such Holders within the meaning of Section 15 of the Act or Section 20(a) of the Securities Exchange Act of 1934, as amended ("Exchange Act"), against all loss, claim, damage, expense or liability (including all reasonable attorneys' fees and other expenses reasonably incurred in investigating, preparing or defending against litigation, commenced or threatened, or any claim whatsoever whether arising out of any action between the underwriter and the Company or between the underwriter and any third party or otherwise) to which any of them may become subject under the Act, the Exchange Act or otherwise, arising from such registration statement but only to the same extent and with the same effect as the provisions pursuant to which the Company has agreed to indemnify the underwriters contained in Section 6 of the Underwriting Agreement between the Company, MDB Capital Group LLC and the other underwriters named therein dated the Effective Date. The Holder(s) of the Registrable Securities to be sold pursuant to such registration statement, and their successors and assigns, shall severally, and not jointly, indemnify the Company, its officers and directors and each person, if any, who controls the Company within the meaning of Section 15 of the Act or Section 20(a) of the Exchange Act, against all loss, claim, damage, expense or liability (including all reasonable attorneys' fees and other expenses reasonably incurred in investigating, preparing or defending against any claim whatsoever) to which they may become subject under the Act, the Exchange Act or otherwise, arising from information furnished by or on behalf of such Holders, or their successors or assigns, in writing, for specific inclusion in such registration statement to the same extent and with the same effect as the provisions contained in Section 6 of the Underwriting Agreement pursuant to which the underwriters have agreed to indemnify the Company.

6.4.2 Exercise of Warrant. Nothing contained in this Warrant shall be construed as requiring the Holder(s) to exercise their Warrant prior to or after the initial filing of any registration statement or the effectiveness thereof.

6.4.3 Documents Delivered to Holders. The Company shall furnish MDB Capital Group LLC, as representative of the Holders participating in any of the foregoing offerings, a signed counterpart, addressed to the participating Holders, of (i) an opinion of counsel to the Company, dated the effective date of such registration statement (and, if such registration includes an underwritten public offering, an opinion dated the date of the closing under any underwriting agreement related thereto), and (ii) a "cold comfort" letter dated the effective date of such registration statement (and, if such registration includes an underwritten public offering, a letter dated the date of the closing under the underwriting agreement) signed by the independent public accountants who have issued a report on the Company's financial statements included in such registration statement, in each case covering substantially the same matters with respect to such registration statement (and the prospectus included therein) and, in the case of such accountants' letter, with respect to events subsequent to the date of such financial statements, as are customarily covered in opinions of issuer's counsel and in accountants' letters delivered to underwriters in underwritten public offerings of securities. The Company shall also deliver promptly to MDB Capital Group LLC, as representative of the Holders participating in the offering, the correspondence and memoranda described below and copies of all correspondence between the Commission and the Company, its counsel or auditors and all memoranda relating to discussions with the Commission or its staff with respect to the registration statement and permit MDB Capital Group LLC, as representative of the Holders, to do such investigation, upon reasonable advance notice, with respect to information contained in or omitted from the registration statement as it deems reasonably necessary to comply with applicable securities laws or rules of FINRA. Such investigation shall include access to books, records and properties and opportunities to discuss the business of the Company with its officers and independent auditors, all to such reasonable extent and at such reasonable times and as often as MDB Capital Group LLC, as representative of the Holders, shall reasonably request. The Company shall not be required to disclose any confidential information or other records to MDB Capital Group LLC, as representative of the Holders, or to any other person, until and unless such persons shall have entered into reasonable confidentiality agreements (in form and substance reasonably satisfactory to the Company), with the Company with respect thereto.

6.4.4 Underwriting Agreement. The Company shall enter into an underwriting agreement with the managing underwriter(s), if any, selected by any Holders whose Registrable Securities are being registered pursuant to this Section 6, which managing underwriter shall be reasonably acceptable to the Company. Such agreement shall be reasonably satisfactory in form and substance to the Company, each Holder and such managing underwriters, and shall contain such representations, warranties and covenants by the Company and such other terms as are customarily contained in agreements of that type used by the managing underwriter. The Holders shall be parties to any underwriting agreement relating to an underwritten sale of their Registrable Securities and may, at their option, require that any or all the representations, warranties and covenants of the Company to or for the benefit of such underwriters shall also be made to and for the benefit of such Holders. Such Holders shall not be required to make any representations or warranties to or agreements with the Company or the underwriters except as they may relate to such Holders and their intended methods of distribution. Such Holders, however, shall agree to such covenants and indemnification and contribution obligations for selling stockholders as are customarily contained in agreements of that type used by the managing underwriter. Further, such Holders shall execute appropriate custody agreements and otherwise cooperate fully in the preparation of the registration statement and other documents relating to any offering in which they include securities pursuant to this Section 6. Each Holder shall also furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as shall be reasonably required to effect the registration of the Registrable Securities.

6.4.5 Rule 144 Sale. Notwithstanding anything contained in this Section 6 to the contrary, the Company shall have no obligation pursuant to Sections 6.1 or 6.2 for the registration of Registrable Securities held by any Holder (i) where such Holder would then be entitled to sell under Rule 144 within any three-month period (or such other period prescribed under Rule 144 as may be provided by amendment thereof) all of the Registrable Securities then held by such Holder, and (ii) where the number of Registrable Securities held by such Holder is within the volume limitations under paragraph (e) of Rule 144 (calculated as if such Holder were an affiliate within the meaning of Rule 144).

6.4.6 Supplemental Prospectus. Each Holder agrees, that upon receipt of any notice from the Company of the happening of any event as a result of which the prospectus included in the Registration Statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in light of the circumstances then existing, such Holder will immediately discontinue disposition of Registrable Securities pursuant to the Registration Statement covering such Registrable Securities until such Holder's receipt of the copies of a supplemental or amended prospectus, and, if so desired by the Company, such Holder shall deliver to the Company (at the expense of the Company) or destroy (and deliver to the Company a certificate of such destruction) all copies, other than permanent file copies then in such Holder's possession, of the prospectus covering such Registrable Securities current at the time of receipt of such notice.

7. Elimination of Fractional Interest. The Company shall not be required to issue certificates representing fractions of shares of Common Stock upon the exercise of the Warrants, nor shall it be required to issue script or pay cash in lieu of fractional interests, it being the intent of the parties that all fractional interests may be eliminated, at the Company's option, by rounding any fraction up to the nearest whole number of shares of Common Stock or other securities, properties or rights, or in lieu thereof paying cash equal to such fractional interest.

8. Reservation, Validity and Listing. The Company covenants and agrees that during the exercise period, the Company shall at all times reserve and keep available out of its authorized shares of Common Stock, solely for the purpose of issuance upon the exercise of the Warrants, such number of shares of Common Stock or other securities, properties or rights as shall be issuable upon the exercise under this Warrant Certificate. The Company covenants and agrees that, upon exercise of the Warrants, and payment of the Exercise Price therefor, all shares of Common Stock and other securities issuable upon such exercise shall be duly authorized, validly issued, fully paid, non-assessable and not subject to the preemptive rights of any shareholder. As long as the Warrants shall be outstanding, the Company shall use its commercially reasonable efforts to cause all shares of Common Stock issuable upon the exercise of the Warrants to be listed and quoted (subject to official notice of issuance) on all securities exchanges and systems on which the Common Stock are then listed and/or quoted, including Nasdaq and the American Stock Exchange.

9. Notices to Warrant Holder. Nothing contained in this Agreement shall be construed as conferring upon the Holder of the Warrants the right to vote or to consent or to receive notice as a shareholder in respect of any meetings of shareholders for the election of directors or any other matter, or as having any rights whatsoever as a shareholder of the Company. If, however, at any time prior to the expiration of the Warrants and their exercise, any of the following events shall occur:

(a) the Company shall take a record of the holders of its shares of Common Stock for the purpose of entitling them to receive a dividend or distribution payable otherwise than in cash, or a cash dividend or distribution payable otherwise than out of current or retained earnings, as indicated by the accounting treatment of such dividend or distribution on the books of the Company; or

(b) the Company shall offer to all the holders of its Common Stock any additional shares of capital stock of the Company or securities convertible into or exchangeable for shares of capital stock of the Company, or any option, right or warrant to subscribe therefor; or

(c) a dissolution, liquidation or winding up of the Company (other than in connection with a consolidation or merger) or a sale of all or substantially all of its property, assets and business as an entirety shall be proposed;

then, in any one or more of said events, the Company shall give to the extent practicable written notice of such event at least 15 days prior to the date fixed as a record date of the date of closing the transfer books for the determination of the shareholders entitled to such dividend, distribution, convertible or exchangeable securities or subscription rights, or entitled to vote on such proposed dissolution, liquidation, winding up or sale. Such notices shall specify such record date or the date of closing the transfer books, as the case may be.

10. Notices. All notices, requests, consents and other communications hereunder shall be in writing and shall be deemed to have been duly given when sent by (i) facsimile; or (ii) delivered personally or by overnight courier or mailed by registered or certified mail, return receipt requested:

- (a) If to the registered Holder, to the address of such Holder as shown on the books of the Company.

With a copy to:

Golenbock Eiseman Assor Bell & Peskoe LLP  
437 Madison Avenue  
New York, NY 10022  
Attn: Andrew D. Hudders, Esq.  
Fax: (212) 754-0330  
Tel: (212) 907-7300

- (b) If to the Company, to the address set forth below or to such other address as the Company may designate by notice to the Holders.

Opexa Therapeutics, Inc.  
2635 North Crescent Ridge Prime  
The Woodlands, Texas 77381  
Attn: Chief Financial Officer  
Fax: (281) 872-8585

With a copy to:

Vinson & Elkins LLP  
1001 Fannin, Suite 2300  
Houston, Texas 77002  
Attn: Michael C. Blaney  
Tel: (713) 758-3487  
Fax: (713) 615-5487

11. Entire Agreement; Modification. This Agreement (and the Underwriting Agreement to the extent applicable) contains the entire understanding between the parties hereto with respect to the subject matter hereof, and the terms and provisions of this Agreement may only be modified, waived or amended in writing. Any modification, waiver or amendment executed by the Company and a majority of Holders shall be binding on all Holders. Notice of any modification, waiver or amendment shall be promptly provided to any Holder not consenting to such modification, waiver or amendment.

12. Successors. All the covenants and provisions of this Agreement shall be binding upon and inure to the benefit of the Company, the Holders and their respective successors and assigns hereunder.

13. Governing Law; Submission to Jurisdiction. This Agreement shall be governed by and construed in accordance with the internal laws of the State of New York without regard to the conflicts of laws principles thereof. The parties hereto hereby irrevocably agree that any suit or proceeding arising directly and/or indirectly pursuant to or under this Agreement, shall be brought solely in a federal or state court located in the City, County and State of New York. By its execution hereof, the parties hereby covenant and irrevocably submit to the in personam jurisdiction of the federal and state courts located in the City, County and State of New York and agree that any process in any such action may be served upon any of them personally, or by certified mail or registered mail upon them or their agent, return receipt requested, with the same full force and effect as if personally served upon them in New York City. The parties hereto waive any claim that any such jurisdiction is not a convenient forum for any such suit or proceeding and any defense or lack of in personam jurisdiction with respect thereto. In the event of any such action or proceeding, the party prevailing therein shall be entitled to payment from the other party hereto of its reasonable counsel fees and disbursements in an amount judicially determined.

14. Severability. If any provision of this Agreement shall be held to be invalid or unenforceable, such invalidity or unenforceability shall not affect any other provision of this Agreement.
15. Captions. The caption headings of the sections of this Agreement are for convenience of reference only and are not intended, nor should they be construed as, a part of this Agreement and shall be given no substantive effect.
16. Benefits of This Agreement. Nothing in this Agreement shall be construed to give to any person or corporation other than the Company and any registered Holder(s) of the Warrant Certificates any legal or equitable right, remedy or claim under this Agreement; and this Agreement shall be for the sole and exclusive benefit of the Company and any Holder(s) of the Warrant Certificates.
17. Counterparts. This Agreement may be executed in any number of counterparts and each of such counterparts shall for all purposes be deemed to be an original, and such counterparts shall together constitute but one and the same instrument.

IN WITNESS HEREOF, the parties hereto have caused this Agreement to be duly executed, as of the day and year first above written.

Opexa Therapeutics, Inc.

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

**EXHIBIT A**

**FORM OF SUBSCRIPTION (CASH EXERCISE)**

(To be signed only upon exercise of Warrant)

TO: Opexa Therapeutics, Inc.  
2635 North Crescent Rope Prime  
The Woodlands, Texas 77381  
Fax: (281) 872-8585

The undersigned holder of Warrant Certificate Number \_\_\_\_\_ (the "Warrant Certificate"), representing Warrants (as defined in the Warrant Certificate) of Opexa Therapeutics, Inc. (the "Company"), which Warrant Certificate is being delivered herewith, hereby irrevocably elects to purchase \_\_\_\_\_ Shares (as defined in the Warrant Certificate), and herewith makes payment of \$ \_\_\_\_\_ therefor, all in accordance with the Warrant Certificate and the Warrant Agreement referred to in the Warrant Certificate. Certificates for the Shares shall be issued in the name of \_\_\_\_\_ and delivered to the following address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Social Security Number or Tax Identification Number: \_\_\_\_\_  
Date: \_\_\_\_\_  
  
(Signature must conform in all respects to name of Holder as specified on the face of the Warrant Certificate)

**Address**

Social Security Number or  
Tax Identification Number

\_\_\_\_\_

EXHIBIT B

FORM OF SUBSCRIPTION (CASHLESS EXERCISE)

TO: Opexa Therapeutics, Inc.  
2635 North Crescent Rope Prime  
The Woodlands, Texas 77381  
Fax: (281) 872-8585

The undersigned holder of Warrant Certificate number \_\_\_\_\_ (the "Warrant Certificate"), representing \_\_\_\_\_ Warrants (as defined in the Warrant Certificate) of Opexa Therapeutics, Inc. (the "Company"), which Warrant Certificate is being delivered herewith, hereby irrevocably elects to exercise (on a cashless exercise basis in accordance with the formula set forth in Section 2.3 of the Warrant Agreement referred to in the Warrant Certificate (the "Warrant Agreement")) the Warrant Certificate with respect to \_\_\_\_\_ Shares (as defined in the Warrant Certificate), all in accordance with the Warrant Certificate and the Warrant Agreement. Certificates for the Shares shall be issued in the name of \_\_\_\_\_ and delivered to the following address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Social Security Number or Tax Identification Number: \_\_\_\_\_  
Date: \_\_\_\_\_  
  
(Signature must conform in all respects to name of Holder as specified on the face of the Warrant Certificate)

Address

Social Security Number or  
Tax Identification Number

\_\_\_\_\_

**FORM OF ASSIGNMENT**

(To be exercised by the registered holder if such Holder desires to transfer the Warrant Certificate)

FOR VALUE RECEIVED \_\_\_\_\_ hereby sells, assigns and transfers unto:

**Print Name of Transferee**

**Address**

**City State Zip Code**

this Warrant Certificate, together with all right, title and interest therein, and does hereby irrevocably constitute and appoint \_\_\_\_\_ Attorney, to transfer the within Warrant Certificate on the books of the within-named Company, with full power of substitution.

Dated:

\_\_\_\_\_

Signature:

\_\_\_\_\_

(Signature must conform in all respects to name of Holder as specified on the face of the Warrant Certificate)

Social Security Number or Other Identifying Number of Assignee

## FORM OF

## UNDERWRITER'S WARRANT TO ACQUIRE WARRANTS AGREEMENT

Underwriter's Warrant To Acquire Warrants Agreement (the "Agreement"), dated as of \_\_\_\_\_, 200\_\_, between Opexa Therapeutics, Inc. (the "Company") and \_\_\_\_\_ (the "Holder").

## WITNESSETH:

WHEREAS, the Company and MDB Capital Group, LLC and the other parties named therein (collectively, the "Underwriters") have entered into an underwriting agreement dated \_\_\_\_\_, 200\_\_ (the "Underwriting Agreement") whereby the Company has agreed to issue and sell to the Underwriters an aggregate of **[4,500,000]** shares of common stock of the Company (the "Firm Shares" or in the singular a "Firm Share") and an aggregate of **[4,500,000]** Series E warrants (The "Firm Warrants" or in the singular a "Firm Warrant");

WHEREAS, the Underwriters have agreed to make a public offering of the Firm Shares and the Firm Warrants, as those terms are described within the Underwriting Agreement (the "Offering");

WHEREAS, pursuant to Section \_\_\_\_ of the Underwriting Agreement, the Company is obligated to issue to the Underwriters as of the date hereof a warrant for the purchase of an aggregate of **[450,000]** shares of Common Stock, equal to ten percent (10%) of the Firm Shares sold in the Offering, at a price per share of \$\_\_\_\_\_;

WHEREAS, pursuant to Section \_\_\_\_ of the Underwriting Agreement, the Company is also obligated to issue to the Underwriters as of the date hereof warrants (the "Warrants") to acquire an aggregate of **[450,000]** Series E warrants identical to the Series E warrants sold in the Offering (the "Public Warrants" or in the singular a "Public Warrant");

WHEREAS, the exercise price for each Warrant for a Public Warrant is \$\_\_\_\_\_, a price that is equal to **[120%]** of the price per Public Warrant in the Offering;

WHEREAS the Company has entered into a Warrant Agreement dated \_\_\_\_\_, 2007 with Continental Stock Transfer & Trust Company, acting as warrant agent for the Series E Warrants;

WHEREAS, the Warrants may only be issued to the Underwriters and/or member firms of FINRA that may participate in the Offering and the bona fide officers and partners thereof as permitted by Rule 2710(c)(7)(A) and (B) (the "Rule") of FINRA Conduct Rules (each and each permitted transferee hereunder, a "Holder," and collectively, the "Holders").

NOW, THEREFORE, in consideration of the premises contained herein, the payment to the Company of \$50, the agreements set forth herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

1. Grant and Period.

1.1 Recital. The above recitals are true and correct. The Offering has been registered under a registration statement on Form SB-2 (File No. 333-147167) ("Registration Statement") which was declared effective by the Securities and Exchange Commission (the "Commission") on \_\_\_\_\_, 200\_\_ (the "Effective Date").

1.2 Grant. The Holder is hereby granted the right to purchase from the Company, at any time during the period commencing on \_\_\_\_\_, 200\_\_ and expiring on \_\_\_\_\_, 20\_\_ (the "Expiration Time"), [450,000] Public Warrants at an exercise price of \$\_\_\_\_ per Public Warrant (the "Exercise Price" or "Purchase Price"), subject to the terms and conditions of this Agreement.

1.3 Redemption It is agreed by the Company that its right to call the Public Warrants for redemption shall not apply to the Public Warrants for which this Warrant may be exercised. If the Public Warrants have been redeemed, then the Company will issue warrants equivalent to the Public Warrant in lieu thereof.

## 2. Exercise of Warrant.

2.1 Full Exercise. Except as provided in Section 2.3 below, the Holder shall effect an exercise of the Warrants by surrendering to the Company this Agreement, together with a Subscription in the form of Exhibit A attached hereto, duly executed by such Holder, at any time prior to the Expiration Time, at the Company's principal office, accompanied by payment in cash or by certified or official bank check payable to the order of the Company in the amount of the aggregate purchase price (the "Aggregate Price"), subject to any adjustments provided for in this Agreement. The Aggregate Price shall be an amount that is the result of the Exercise Price multiplied by the number of Public Warrants that are the subject of each Holder's Agreement (as adjusted as hereinafter provided).

2.2 Partial Exercise. The Warrants may also be exercised from time to time in part by surrendering this Agreement in the manner specified in Sections 2.1 or 2.3 hereof, except that the Purchase Price payable shall be an amount that is the result of the number of Public Warrants being purchased hereunder multiplied by the Exercise Price, subject to any adjustments provided for in this Agreement. Upon any such partial exercise, the Company, at its expense, will forthwith issue to the Holder a new Agreement of like tenor calling in the aggregate for the number of securities (as constituted as of the date hereof) for which this Agreement shall not have been exercised, issued in the name of the Holder or as such Holder (upon payment by such Holder of any applicable transfer taxes) may direct.

2.3 Cashless Exercise. The Holder may pay the Exercise Price through a cashless exercise (a "Cashless Exercise"), as hereinafter provided, in its sole discretion. The Holder may effect a Cashless Exercise of the Warrants by surrendering to the Company this Agreement, together with a Subscription in the form of Exhibit B attached hereto, duly executed by such Holder, at any time prior to the Expiration Time, at the Company's principal office, upon which the Company shall issue to the Holder the number of Public Warrants determined as follows:

|       |   |   |                                                                                     |
|-------|---|---|-------------------------------------------------------------------------------------|
|       | X | = | $Y \times (A-B)/A$                                                                  |
| where | X | = | the number of Public Warrants to be issued to the Holder;                           |
|       | Y | = | the number of Public Warrants with respect to which the Warrant is being exercised; |
|       | A | = | the Market Price as of the Date of Exercise; and                                    |
|       | B | = | the Exercise Price.                                                                 |

"Market Price" of a Public Warrant on any date shall mean, (i) if the Public Warrants are traded on the Nasdaq Global Market, Nasdaq Global Select Market or the Nasdaq Capital Market, the last bid price reported on that date; (ii) if the Public Warrants are no longer quoted on a Nasdaq market and are listed on any other national securities exchange, the last sale price of the Public Warrants reported by such exchange on that date; (iii) if the Public Warrants are not quoted on any such market or listed on any such exchange and the Public Warrants are traded in the over-the-counter market, the last price reported on such day by the OTC Bulletin Board; (iv) if the Public Warrants are not quoted on any such market, listed on any such exchange or quoted on the OTC Bulletin Board, then the last price quoted on such day in the over-the-counter market as reported by the National Quotation Bureau Incorporated (or any similar organization or agency succeeding its functions of reporting prices); or (v) if none of clauses (i)-(iv) are applicable, then as determined by taking the Market Price of a share of Common Stock as determined in the same manner as clauses (i) – (iv) and subtracting from that per share amount (y) the then exercise price of a Warrant and (z) the exercise price of the Public Warrant for a share of Common Stock. In the event that a Market Price may not be determined using any of the foregoing, then the Market Price will be determined, in good faith, by the Board of Directors and the Holders of the Warrant. "Date of Exercise" means the date on which the Holder shall have delivered to the Company (i) this Warrant, (ii) the applicable Form of Subscription attached thereto, appropriately completed and duly signed, and (iii) if applicable, payment of the Exercise Price.

2.4 Restrictions on Exercise. If for any reason a registration statement for the issuance of the Series E Warrants is not effective at the time of exercise, Holder will make customary representations to Company as may be required to qualify the issuance for exemption from the registration requirements of the Securities Act of 1933.

3. Issuance of Certificates. Upon the exercise of the Warrants, the issuance of warrant certificates for the Public Warrants shall be made promptly (and, in any event within three business days thereafter) without charge to the Holder thereof including, without limitation, any tax which may be payable in respect of the issuance thereof, and such certificates shall (subject to the provisions of Section 4 and Section 5 hereof) be issued in the name of, or in such names as may be directed by, the Holder thereof; provided, however, that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of any such certificates in a name other than that of the Holder and the Company shall not be required to issue or deliver such certificates unless or until the person or persons requesting the issuance thereof shall have paid to the Company the amount of such tax or shall have established to the satisfaction of the Company that such tax has been paid.

4. Restriction on Transfer of Warrant. The Holder of a Warrant, by acceptance thereof, covenants and agrees that the Warrants may not be sold, transferred, assigned, pledged or hypothecated, or be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of the securities underlying the Warrants, in whole or in part, for a period of \_\_\_\_ days from the effectiveness of the Offering, except (a) to a FINRA member firm that participated in the Offering and the bona fide officers or partners thereof, (b) by operation of law, or (c) by reason of reorganization of the Company.

5. Certain Events.

5.1 Amendments. If the Company amends the class of Public Warrants or the number of Public Warrants and exercise price thereof are adjusted, then this Warrant will become exercisable for such Public Warrants, as amended and/or adjusted.

5.2 Extraordinary Transactions. If, (i) the Company effects any merger or consolidation of the Company with or into another Person, (ii) the Company effects any sale of all or substantially all of its assets in one or a series of related transactions, (iii) any tender offer or exchange offer by the Company is completed pursuant to which holders of Public Warrants are permitted to tender or exchange their Public Warrants for other securities, cash or property, or (iv) the Company effects any reclassification of the Public Warrants or any compulsory exchange pursuant to which the Public Warrants are effectively converted into or exchanged for other securities, cash or property (in any such case, an "Extraordinary Transaction"), then each Holder's Warrants will become the right thereafter to receive, upon exercise of his or her Warrants, the same amount and kind of securities, cash or property as such Holder would have been entitled to receive upon the occurrence of such Extraordinary Transaction if it had been, immediately prior to such Extraordinary Transaction, the holder of the number of Public Warrants then issuable upon exercise in full of the relevant Warrant (the "Alternate Consideration") in lieu of Public Warrants. The aggregate Exercise Price for each Warrant will not be affected by any such Extraordinary Transaction, but the Company shall apportion such aggregate Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Public Warrants are given any choice as to the securities, cash or property to be received in a Extraordinary Transaction, then each Holder, to the extent practicable, shall be given the same choice as to the Alternate Consideration it receives upon any exercise of his or her Warrant following such Extraordinary Transaction. In addition, at the request of each Holder, upon surrender of such Holder's Warrant, any successor to the Company or surviving entity in such Extraordinary Transaction shall issue to such Holder a new warrant consistent with the foregoing provisions and evidencing the Holder's right to purchase the Alternate Consideration for the aggregate Exercise Price upon exercise thereof. Each Warrant (or any such replacement security) will be similarly adjusted upon any subsequent transaction analogous to a Extraordinary Transaction.

5.3 Notice of Adjustment. In each case of an adjustment or readjustment of the type of securities issuable upon exercise of the Warrants pursuant to Section 6.2, the Company shall promptly give written notice of such adjustment or readjustment.

6. Registration Rights.

6.1 Demand Registration.

6.1.1 Grant of Right. The Company, upon written demand ("Initial Demand Notice") of the Holder(s) of at least 51% of the Warrants and/or the underlying Public Warrants and/or the underlying securities ("Majority Holders"), agrees to register on one occasion, all or any portion of the Warrants requested by the Majority Holders in the Initial Demand Notice and all of the securities underlying such Warrants, including the Public Warrants and Common Stock, the Warrants, the Public Warrants and the Common Stock underlying the Public Warrants (collectively, the "Registrable Securities"). On such occasion, the Company will file a registration statement or a post-effective amendment to the Registration Statement covering the Registrable Securities within thirty days after receipt of the Initial Demand Notice and use its best efforts to have such registration statement or post-effective amendment declared effective as soon as possible thereafter. The demand for registration may be made at any time during a period of five years beginning on the Effective Date. The Company covenants and agrees to give written notice of its receipt of any Initial Demand Notice by any Holder(s) to all other registered Holders of the Warrants and/or the Registrable Securities within ten days from the date of the receipt of any such Initial Demand Notice.

6.1.2 Terms. The Company shall bear all fees and expenses attendant to registering the Registrable Securities, including the expenses of any one legal counsel selected by the Holders to represent them in connection with the sale of the Registrable Securities, but the Holders shall pay any and all underwriting commissions. The Company agrees to use its reasonable best efforts to qualify or register the Registrable Securities in such states as are reasonably requested by the Majority Holder(s); provided, however, that in no event shall the Company be required to register the Registrable Securities in a state in which such registration would cause (i) the Company to be obligated to qualify to do business in such state, or would subject the Company to taxation as a foreign corporation doing business in such jurisdiction or (ii) the principal stockholders of the Company to be obligated to escrow their shares of capital stock of the Company. The Company shall cause any registration statement or post-effective amendment filed pursuant to the demand rights granted under Section 6.1.1 to remain effective for a period of nine consecutive months from the effective date of such registration statement or post-effective amendment.

6.2 "Piggy-Back" Registration.

6.2.1 Grant of Right. In addition to the demand right of registration, the Holders of the Warrants shall have the right for a period of seven years commencing on the Effective Date, to include the Registrable Securities as part of any other registration of securities filed by the Company (other than in connection with a transaction contemplated by Rule 145(a) promulgated under the Act or pursuant to Form S-8); provided, however, that if, in the written opinion of the Company's managing underwriter or underwriters, if any, for such offering, the inclusion of the Registrable Securities, when added to the securities being registered by the Company or the selling stockholder(s), will exceed the maximum amount of the Company's securities which can be marketed (i) at a price reasonably related to their then current market value, and (ii) without materially and adversely affecting the entire offering, then the Company will still be required to include the Registrable Securities, but may require the Holders to agree, in writing, to delay the sale of all or any portion of the Registrable Securities for a period of 90 days from the effective date of the offering, provided, further, that if the sale of any Registrable Securities is so delayed, then the number of securities to be sold by all stockholders in such public offering during such 90 day period shall be apportioned pro rata among all such selling stockholders, including all holders of the Registrable Securities, according to the total amount of securities of the Company owned by said selling stockholders, including all holders of the Registrable Securities.

6.2.2 Terms. The Company shall bear all fees and expenses attendant to registering the Registrable Securities, including the expenses of any legal counsel selected by the Holders to represent them in connection with the sale of the Registrable Securities but the Holders shall pay any and all underwriting commissions related to the Registrable Securities. In the event of such a proposed registration, the Company shall furnish the then Holders of outstanding Registrable Securities with not less than fifteen days written notice prior to the proposed date of filing of such registration statement. Such notice to the Holders shall continue to be given for each applicable registration statement filed (during the period in which the Warrant is exercisable) by the Company until such time as all of the Registrable Securities have been registered and sold. The holders of the Registrable Securities shall exercise the "piggy back" rights provided for herein by giving written notice, within ten (10) days of the receipt of the Company's notice of its intention to file a registration statement. The Company shall cause any registration statement filed pursuant to the above "piggyback" rights to remain effective for at least nine months from the date that the Holders of the Registrable Securities are first given the opportunity to sell all of such securities.

6.3 Damages. Should the registration or the effectiveness thereof required by Sections 6.1 and 6.2 hereof be delayed by the Company or the Company otherwise fails to comply with such provisions, the Company shall, in addition to any other equitable or other relief available to the Holder(s), be liable for any and all incidental, special and consequential damages sustained by the Holder(s), including, but not limited to, the loss of any profits that might have been received by the holder upon the sale of shares of Warrants, Common Stock or Public Warrants (and shares of Common Stock underlying the Public Warrants) underlying this Warrant.

6.4.1 Indemnification. The Company shall indemnify the Holder(s) of the Registrable Securities to be sold pursuant to any registration statement hereunder and each person, if any, who controls such Holders within the meaning of Section 15 of the Act or Section 20(a) of the Securities Exchange Act of 1934, as amended ("Exchange Act"), against all loss, claim, damage, expense or liability (including all reasonable attorneys' fees and other expenses reasonably incurred in investigating, preparing or defending against litigation, commenced or threatened, or any claim whatsoever whether arising out of any action between the underwriter and the Company or between the underwriter and any third party or otherwise) to which any of them may become subject under the Act, the Exchange Act or otherwise, arising from such registration statement but only to the same extent and with the same effect as the provisions pursuant to which the Company has agreed to indemnify the underwriters contained in Section \_\_\_\_\_ of the Underwriting Agreement between the Company, MDB Capital Group LLC and the other underwriters named therein dated the Effective Date. The Holder(s) of the Registrable Securities to be sold pursuant to such registration statement, and their successors and assigns, shall severally, and not jointly, indemnify the Company, its officers and directors and each person, if any, who controls the Company within the meaning of Section 15 of the Act or Section 20(a) of the Exchange Act, against all loss, claim, damage, expense or liability (including all reasonable attorneys' fees and other expenses reasonably incurred in investigating, preparing or defending against any claim whatsoever) to which they may become subject under the Act, the Exchange Act or otherwise, arising from information furnished by or on behalf of such Holders, or their successors or assigns, in writing, for specific inclusion in such registration statement to the same extent and with the same effect as the provisions contained in Section \_\_\_\_\_ of the Underwriting Agreement pursuant to which the underwriters have agreed to indemnify the Company.

6.4.2 Exercise of Warrant. Nothing contained in this Warrant shall be construed as requiring the Holder(s) to exercise their Warrant or Public Warrants underlying such Warrant prior to or after the initial filing of any registration statement or the effectiveness thereof.

6.4.3 Documents Delivered to Holders. The Company shall furnish MDB Capital Group LLC, as representative of the Holders participating in any of the foregoing offerings, a signed counterpart, addressed to the participating Holders, of (i) an opinion of counsel to the Company, dated the effective date of such registration statement (and, if such registration includes an underwritten public offering, an opinion dated the date of the closing under any underwriting agreement related thereto), and (ii) a "cold comfort" letter dated the effective date of such registration statement (and, if such registration includes an underwritten public offering, a letter dated the date of the closing under the underwriting agreement) signed by the independent public accountants who have issued a report on the Company's financial statements included in such registration statement, in each case covering substantially the same matters with respect to such registration statement (and the prospectus included therein) and, in the case of such accountants' letter, with respect to events subsequent to the date of such financial statements, as are customarily covered in opinions of issuer's counsel and in accountants' letters delivered to underwriters in underwritten public offerings of securities. The Company shall also deliver promptly to MDB Capital Group LLC, as representative of the Holders participating in the offering, the correspondence and memoranda described below and copies of all correspondence between the Commission and the Company, its counsel or auditors and all memoranda relating to discussions with the Commission or its staff with respect to the registration statement and permit MDB Capital Group LLC, as representative of the Holders, to do such investigation, upon reasonable advance notice, with respect to information contained in or omitted from the registration statement as it deems reasonably necessary to comply with applicable securities laws or rules of FINRA. Such investigation shall include access to books, records and properties and opportunities to discuss the business of the Company with its officers and independent auditors, all to such reasonable extent and at such reasonable times and as often as MDB Capital Group LLC, as representative of the Holders, shall reasonably request. The Company shall not be required to disclose any confidential information or other records to MDB Capital Group LLC, as representative of the Holders, or to any other person, until and unless such persons shall have entered into reasonable confidentiality agreements (in form and substance reasonably satisfactory to the Company), with the Company with respect thereto.

6.4.4 Underwriting Agreement. The Company shall enter into an underwriting agreement with the managing underwriter(s), if any, selected by any Holders whose Registrable Securities are being registered pursuant to this Section 7, which managing underwriter shall be reasonably acceptable to the Company. Such agreement shall be reasonably satisfactory in form and substance to the Company, each Holder and such managing underwriters, and shall contain such representations, warranties and covenants by the Company and such other terms as are customarily contained in agreements of that type used by the managing underwriter. The Holders shall be parties to any underwriting agreement relating to an underwritten sale of their Registrable Securities and may, at their option, require that any or all the representations, warranties and covenants of the Company to or for the benefit of such underwriters shall also be made to and for the benefit of such Holders. Such Holders shall not be required to make any representations or warranties to or agreements with the Company or the underwriters except as they may relate to such Holders and their intended methods of distribution. Such Holders, however, shall agree to such covenants and indemnification and contribution obligations for selling stockholders as are customarily contained in agreements of that type used by the managing underwriter. Further, such Holders shall execute appropriate custody agreements and otherwise cooperate fully in the preparation of the registration statement and other documents relating to any offering in which they include securities pursuant to this Section 7. Each Holder shall also furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as shall be reasonably required to effect the registration of the Registrable Securities.

6.4.5 Rule 144 Sale. Notwithstanding anything contained in this Section 6 to the contrary, the Company shall have no obligation pursuant to Sections 6.1 or 6.2 for the registration of Registrable Securities held by any Holder (i) where such Holder would then be entitled to sell under Rule 144 within any three-month period (or such other period prescribed under Rule 144 as may be provided by amendment thereof) all of the Registrable Securities then held by such Holder, and (ii) where the number of Registrable Securities held by such Holder is within the volume limitations under paragraph (e) of Rule 144 (calculated as if such Holder were an affiliate within the meaning of Rule 144).

6.4.6 Supplemental Prospectus. Each Holder agrees, that upon receipt of any notice from the Company of the happening of any event as a result of which the prospectus included in the Registration Statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in light of the circumstances then existing, such Holder will immediately discontinue disposition of Registrable Securities pursuant to the Registration Statement covering such Registrable Securities until such Holder's receipt of the copies of a supplemental or amended prospectus, and, if so desired by the Company, such Holder shall deliver to the Company (at the expense of the Company) or destroy (and deliver to the Company a certificate of such destruction) all copies, other than permanent file copies then in such Holder's possession, of the prospectus covering such Registrable Securities current at the time of receipt of such notice.

7. Elimination of Fractional Interest. The Company shall not be required to issue certificates representing fractions of Public Warrants upon the exercise of the Warrants, nor shall it be required to issue script or pay cash in lieu of fractional interests, it being the intent of the parties that all fractional interests may be eliminated by rounding any fraction up to the nearest whole number of Public Warrants or other securities, properties or rights, or in lieu thereof paying cash equal to such fractional interest.

8. Reservation, Validity and Listing. The Company covenants and agrees that during the exercise period, the Company shall at all times reserve and keep available out of its authorized shares of Common Stock, solely for the purpose of issuance upon the exercise of the Public Warrants that are issuable under the Warrants, such number of shares of Common Stock or other securities, properties or rights as shall be issuable upon the exercise of the Public Warrants that are issuable under the Warrants. The Company covenants and agrees that, upon exercise of the Warrants, and payment of the Exercise Price therefor, all Public Warrants and other securities issuable upon such exercise shall be duly authorized, validly issued and not subject to the preemptive rights of any shareholder. As long as the Warrants shall be outstanding, the Company shall use its commercially reasonable efforts to cause all Public Warrants issuable upon the exercise of the Warrants to be listed and quoted (subject to official notice of issuance) on all securities exchanges and systems on which the Public Warrants are then listed and/or quoted, including Nasdaq.

9. Notices to Holders. Nothing contained in this Agreement shall be construed as conferring upon the Holders the right to vote or to consent or to receive notice as a shareholder in respect of any meetings of shareholders for the election of directors or any other matter, or as having any rights whatsoever as a shareholder of the Company. If, however, at any time prior to the expiration of the Warrants and their exercise, any of the following events shall occur:

(a) the Company shall take a record of the holders of its shares of Common Stock for the purpose of entitling them to receive a dividend or distribution payable otherwise than in cash, or a cash dividend or distribution payable otherwise than out of current or retained earnings, as indicated by the accounting treatment of such dividend or distribution on the books of the Company; or

(b) the Company shall offer to all the holders of its Common Stock any additional shares of capital stock of the Company or securities convertible into or exchangeable for shares of capital stock of the Company, or any option, right or warrant to subscribe therefor; or

(c) a dissolution, liquidation or winding up of the Company (other than in connection with a consolidation or merger) or a sale of all or substantially all of its property, assets and business as an entirety shall be proposed;

then, in any one or more of said events, the Company shall give to the extent practicable written notice of such event at least 15 days prior to the date fixed as a record date of the date of closing the transfer books for the determination of the shareholders entitled to such dividend, distribution, convertible or exchangeable securities or subscription rights, or entitled to vote on such proposed dissolution, liquidation, winding up or sale. Such notices shall specify such record date or the date of closing the transfer books, as the case may be.

10. Notices. All notices, requests, consents and other communications hereunder shall be in writing and shall be deemed to have been duly given when sent by (i) facsimile; or (ii) delivered personally or by overnight courier or mailed by registered or certified mail, return receipt requested:

(a) If to the registered Holder, to the address of such Holder as shown on the books of the Company.

With a copy to:

Andrew D. Hudders, Esq.  
Golenbock Eiseman Assor Bell & Peskoe LLP  
437 Madison Avenue  
New York, New York 10022  
Fax: (212) 754-0330

- (b) If to the Company, to the address set forth below or to such other address as the Company may designate by notice to the Holders.

Opexa Therapeutics, Inc.  
2635 North Crescent Ridge Drive  
The Woodlands, Texas 77381  
Fax: (281) 872-8585

With a copy to:

Vinson & Elkins, LLP  
1001 Fannin, Suite 2300  
Houston, Texas 77002  
Tel: (713) 758-3487  
Fax: (713) 615-5487  
Attention: Michael C. Blaney

11. Entire Agreement; Modification. This Agreement (and the Underwriting Agreement to the extent applicable) contains the entire understanding between the parties hereto with respect to the subject matter hereof, and the terms and provisions of this Agreement may only be modified, waived or amended in writing. Any modification, waiver or amendment executed by the Company and a majority of Holders shall be binding on all Holders. Notice of any modification, waiver or amendment shall be promptly provided to any Holder not consenting to such modification, waiver or amendment.

12. Successors. All the covenants and provisions of this Agreement shall be binding upon and inure to the benefit of the Company, the Holders and their respective successors and assigns hereunder.

13. Governing Law; Submission to Jurisdiction. This Agreement shall be governed by and construed in accordance with the internal laws of the State of New York without regard to the conflicts of laws principles thereof. The parties hereto hereby irrevocably agree that any suit or proceeding arising directly and/or indirectly pursuant to or under this Agreement, shall be brought solely in a federal or state court located in the City, County and State of New York. By its execution hereof, the parties hereby covenant and irrevocably submit to the in personam jurisdiction of the federal and state courts located in the City, County and State of New York and agree that any process in any such action may be served upon any of them personally, or by certified mail or registered mail upon them or their agent, return receipt requested, with the same full force and effect as if personally served upon them in New York City. The parties hereto waive any claim that any such jurisdiction is not a convenient forum for any such suit or proceeding and any defense or lack of in personam jurisdiction with respect thereto. In the event of any such action or proceeding, the party prevailing therein shall be entitled to payment from the other party hereto of its reasonable counsel fees and disbursements in an amount judicially determined.

14. Severability. If any provision of this Agreement shall be held to be invalid or unenforceable, such invalidity or unenforceability shall not affect any other provision of this Agreement.

15. Captions. The caption headings of the sections of this Agreement are for convenience of reference only and are not intended, nor should they be construed as, a part of this Agreement and shall be given no substantive effect.

16. Benefits of This Agreement. Nothing in this Agreement shall be construed to give to any person or corporation other than the Company and any registered Holder(s) of the Warrant Certificates any legal or equitable right, remedy or claim under this Agreement; and this Agreement shall be for the sole and exclusive benefit of the Company and any Holder(s) of the Warrant Certificates.

17. Counterparts. This Agreement may be executed in any number of counterparts and each of such counterparts shall for all purposes be deemed to be an original, and such counterparts shall together constitute but one and the same instrument.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed, as of the day and year first above written.

OPEXA THERAPEUTICS, INC.

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

EXHIBIT A

FORM OF SUBSCRIPTION (CASH EXERCISE)

(To be signed only upon exercise of Warrants)

TO: Opexa Therapeutics, Inc.  
2635 North Crescent Ridge Drive  
The Woodlands, Texas 77381

The undersigned holder of Warrant Certificate Number \_\_\_\_\_ (the "Warrant Certificate"), representing the right to acquire \_\_\_\_\_ Public Warrants (as defined in the Warrant Agreement referred to in the Warrant Certificate) of Opexa Therapeutics, Inc. (the "Company"), which Warrant Certificate is being delivered herewith, hereby irrevocably elects to purchase \_\_\_\_\_ Public Warrants, and herewith makes payment of \$ \_\_\_\_\_ therefor, all in accordance with the Warrant Certificate and the Warrant Agreement referred to in the Warrant Certificate. Certificates for the Public Warrants shall be issued in the name of \_\_\_\_\_ and delivered to the following address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Social Security Number or Tax Identification Number: \_\_\_\_\_  
Date: \_\_\_\_\_

(Signature must conform in all respects to name of Holder as specified on the face of the Warrant Certificate)

Address

Social Security Number or  
Tax Identification Number

\_\_\_\_\_

EXHIBIT B

FORM OF SUBSCRIPTION (CASHLESS EXERCISE)

TO: Opexa Therapeutics, Inc.  
2635 North Crescent Ridge Drive  
The Woodlands, Texas 77381

The undersigned holder of Warrant Certificate Number \_\_\_\_\_ (the "Warrant Certificate"), representing the right to acquire \_\_\_\_\_ Public Warrants (as defined in the Warrant Agreement referred to in the Warrant Certificate ) of Opexa Therapeutics, Inc. (the "Company"), which Warrant Certificate is being delivered herewith, hereby irrevocably elects to exercise (on a cashless exercise basis in accordance with the formula set forth in Section 2.3 of the Warrant Agreement referred to in the Warrant Certificate) the Warrant Certificate with respect to \_\_\_\_\_ Public Warrants, all in accordance with the Warrant Certificate and the Warrant Agreement referred to in the Warrant Certificate. Certificates for the Public Warrants shall be issued in the name of \_\_\_\_\_ and delivered to the following address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_  
Name: \_\_\_\_\_  
Social Security Number or Tax Identification Number: \_\_\_\_\_  
Date: \_\_\_\_\_

(Signature must conform in all respects to name of Holder as specified on the face of the Warrant Certificate)

Address

Social Security Number or  
Tax Identification Number

\_\_\_\_\_

**FORM OF ASSIGNMENT**

(To be exercised by the registered holder if such Holder desires to transfer the Warrant Certificate)

FOR VALUE RECEIVED \_\_\_\_\_ hereby sells, assigns and transfers unto:

**Print Name of Transferee**

**Address**

**City State Zip Code**

this Warrant Certificate, together with all right, title and interest therein, and does hereby irrevocably constitute and appoint \_\_\_\_\_ Attorney, to transfer the within Warrant Certificate on the books of the within-named Company, with full power of substitution.

Dated: \_\_\_\_\_

Signature: \_\_\_\_\_

(Signature must conform in all respects to name of Holder as specified on the face of the Warrant Certificate)

\_\_\_\_\_  
Social Security Number or Other Identifying Number of Assignee



Registered, Public Company Accounting Oversight Board  
American Institute of CPAs, Center for Audit Quality  
Texas Society of Certified Public Accountants

Exhibit 23.1

#### CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

As independent public accountants, we hereby consent to the incorporation in this Registration Statement on Form SB-2/A of our report dated March 14, 2007 except for Note 15 which is dated November 2, 2007 and notes 2, 4, 6 and 12 which are dated November 29, 2007, included in the Annual Report on Form 10-KSB of Opexa Therapeutics, Inc. for the year ended December 31, 2006 and to all references to our Firm included in this Registration Statement.

/s/ Malone & Bailey, PC

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Malone & Bailey, PC  
www.malone-bailey.com  
Houston, Texas  
December 20, 2007

[www.malone-bailey.com](http://www.malone-bailey.com) | 2925 Briarpark Drive, Suite 930 | Houston, TX 77042 | o. 713.343.4200 | f. 713.266.1815