

DOR BIOPHARMA INC  
Form SB-2/A  
April 16, 2007

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As filed with the Securities and Exchange Commission on April 16, 2007.  
Registration No. 333-141209

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

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AMENDMENT NO. 1  
TO  
FORM SB-2  
REGISTRATION STATEMENT  
UNDER  
THE SECURITIES ACT OF 1933

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**DOR BIOPHARMA, INC.**

(Name of small business issuer as specified in its charter)

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<b>DELAWARE</b> (State or other jurisdiction of incorporation or organization)	<b>2834</b> (Primary Standard Industrial Classification Code Number)	<b>41-1505029</b> (I.R.S. Employer Identification Number)
<b>1101 Brickell Ave., Suite 701-S</b> <b>Miami, FL</b> (Address of principal executive offices)		<b>33131</b> (Zip Code)
	<b>(786) 425-3848</b> (Issuer's telephone number, including area code)	

**Christopher J. Schaber**  
**President and Chief Executive Officer**  
**DOR BioPharma, Inc.**  
**1101 Brickell Avenue, Suite 701-S**  
**Miami, Florida 33131**  
**(786) 425-3848**  
(Name, address, including zip code, and telephone number,  
including area code, of agent for service)

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with copies to:

**Leslie J. Croland, Esq.**  
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**350 East Las Olas Blvd., Suite 1150**  
**Fort Lauderdale, Florida 33334-3607**  
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**Approximate date of commencement of proposed sale to the public:** From time to time, at the discretion of the selling stockholder, after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act, check the following box.

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

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

If this Form is a 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**

Title of each class of securities to be registered	Amount to be registered (1)	Proposed maximum offering price per unit (2)	Proposed maximum aggregate offering price (2)	Amount of registration fee(2)
Common Stock, \$.001 par value per share	18,717,301	\$0.62	\$11,604,726	\$357

(1) Includes 4,065,041 shares of the Registrant’s common stock, issued to a Selling Stockholder, as defined in the accompanying prospectus, on January 3, 2007, 11,680,850 shares of the Registrant’s common stock issued to certain Selling Stockholders on February 9, 2007, 995,947 shares of the Registrant’s common stock issued to certain Selling Stockholders as the result of anti-dilution provisions in a stock purchase agreement, 815,357 shares of the Registrant’s common stock issued to certain Selling Stockholders as compensation for services rendered to the Registrant and up to 1,160,106 shares of the Registrant’s common stock issuable upon exercise of warrants. Pursuant to Rule 416 under the Securities Act of 1933, as amended (the “Securities Act”), to the extent additional shares of Registrant’s common stock may be issued or issuable as a result of a stock split, stock dividend or other distribution declared at any time by the Registrant while this registration statement is in effect, this registration statement is hereby deemed to cover all such additional shares of common stock.

(2) Estimated solely for purposes of calculating the registration fee according to Rule 457(c) under the Securities Act of 1933, as amended, on the basis of the average of the high and low prices of the Registrant’s common stock reported on the Over-The-Counter Bulletin Board on April 11, 2007. The Registrant previously paid \$328 in connection with this Registration Statement originally filed on March 9, 2007.

**The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to Section 8(a), may determine.**

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The information in this prospectus is not complete and may be changed. The selling stockholder 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.

**SUBJECT TO COMPLETION, DATED APRIL 16, 2007**

**PROSPECTUS**

**DOR BioPharma, Inc.**

**18,717,301 Shares of Common Stock**

This prospectus relates to the sale from time to time of up to 18,717,301 shares of our common stock by the selling stockholders named in this prospectus in the section "Selling Stockholders," including their pledgees, assignees and successors-in-interest, whom we collectively refer to in this document as the "Selling Stockholders." We completed two stock purchase transactions pursuant to which we issued to certain of the Selling Stockholders an aggregate of 15,745,891 shares of our common stock. In addition, 995,947 shares of our common stock are being registered for certain Selling Shareholders who received the shares as a result of anti-dilution provisions in a stock purchase agreement. We have issued an aggregate of 815,357 shares of our common stock to certain Selling Stockholders as compensation for services rendered to us. We also have issued warrants (the "Warrants") to purchase up to an aggregate of 1,160,106 shares of common stock to certain Selling Stockholders. The common stock offered by this prospectus shall be adjusted to cover any additional securities as may become issuable to prevent dilution resulting from stock splits, stock dividends or similar transactions. The prices at which the Selling Stockholders may sell the shares will be determined by the prevailing market price for the shares or in negotiated transactions. We will not receive any of the proceeds from the sale of any of the shares covered by this prospectus. References in this prospectus to the "Company," "we," "our," and "us" refer to DOR BioPharma, Inc.

Our common stock is quoted on the Over-the-Counter Bulletin Board ("OTCBB") under the symbol "DORB.OB." On April 11, 2007, the last reported sale price for our common stock as reported on the OTCBB was \$0.62 per share.

**Investing in our common stock involves certain risks. See "Risk Factors" beginning on page 5 for a discussion of these risks.**

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

**DOR BioPharma, Inc.  
1101 Brickell Avenue, Suite 701-S  
Miami, Florida 33131  
(786) 425-3848**

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



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You should rely only on the information contained or incorporated by reference in this prospectus and in any accompanying prospectus supplement. We have not authorized anyone to provide you with different information.

We have not authorized the selling stockholder to make an offer of these shares of common stock in any jurisdiction where the offer is not permitted.

You should not assume that the information in this prospectus or prospectus supplement is accurate as of any date other than the date on the front of this prospectus.





## FORWARD-LOOKING STATEMENTS

The information contained in this prospectus, including the information incorporated by reference into this prospectus, includes forward-looking statements as defined in the Private Securities Reform Act of 1995. These forward-looking statements are often identified by words such as “may,” “will,” “expect,” “intend,” “anticipate,” “believe,” “estimate,” “contingent,” and similar expressions. These statements involve estimates, assumptions and uncertainties that could cause actual results to differ materially from those expressed for the reasons described in this prospectus. You should not place undue reliance on these forward-looking statements.

You should be aware that our actual results could differ materially from those contained in the forward-looking statements due to a number of factors, including:

- significant uncertainty inherent in developing vaccines against bioterror threats, and manufacturing and conducting preclinical and clinical trials of vaccines;
  - our ability to obtain regulatory approvals;
  - uncertainty as to whether our technologies will be safe and effective;
- our ability to make certain that our cash expenditures do not exceed projected levels;
  - our ability to obtain future financing or funds when needed;
- that product development and commercialization efforts will be reduced or discontinued due to difficulties or delays in clinical trials or a lack of progress or positive results from research and development efforts;
- our ability to successfully obtain further grants and awards from the U.S. Government and other countries, and maintenance of our existing grants;
  - our ability to enter into any biodefense procurement contracts with the U.S. Government or other countries;
  - our ability to patent, register and protect our technology from challenge and our products from competition;
    - maintenance or expansion of our license agreements with our current licensors;
    - maintenance of a successful business strategy;
- the FDA not considering orBec<sup>®</sup> approvable based upon existing studies because orBec<sup>®</sup> did not achieve statistical significance in its primary endpoint in the pivotal Phase III clinical study (i.e. a p-value of less than or equal to 0.05);
- orBec<sup>®</sup> may not show therapeutic effect or an acceptable safety profile in future clinical trials, if required, or could take a significantly longer time to gain regulatory approval than we expect or may never gain approval;
- we are dependent on the expertise, effort, priorities and contractual obligations of third parties in the clinical trials, manufacturing, marketing, sales and distribution of our products;
  - orBec<sup>®</sup> may not gain market acceptance; and
  - others may develop technologies or products superior to our products.

You should also consider carefully the statements under "Risk Factors" and other sections of this prospectus, which address additional factors that could cause our actual results to differ from those set forth in the forward-looking statements and could materially and adversely affect our business, operating results and financial condition. All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by the applicable cautionary statements.

The forward-looking statements speak only as of the date on which they are made, and, except to the extent required by federal securities laws, we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.



## PROSPECTUS SUMMARY

### The Company

We are a research and development biopharmaceutical company focused on the development of oral therapeutic products intended for areas of unmet medical need and biodefense vaccines. We have filed a new drug application (“NDA”) for our lead product orBec® (oral beclomethasone dipropionate) with the U.S. Food and Drug Administration (the “FDA”) for the treatment of gastrointestinal Graft-versus-Host-Disease (“GI GVHD”), and have received a Prescription Drug User Fee Act (“PDUFA”) date for the FDA to complete its review of all materials regarding orBec® of July 21, 2007. In addition, the FDA’s Oncologic Drugs Advisory Committee (“ODAC”) will review the NDA for orBec® on May 10, 2007. We have also filed a Marketing Authorization Application (“MAA”) with the European Central Authority, European Medicines Evaluation Agency (“EMA”) for orBec® which has also been validated for review.

We were incorporated in 1987. We maintain two active segments: BioTherapeutics and BioDefense. Our business strategy is to: (a) prepare for the potential marketing approval of orBec® by the FDA and the EMA; (b) conduct prophylactic use clinical trials of orBec® for the prevention of GI GVHD; (c) evaluate and initiate additional clinical trials to explore the effectiveness of oral BDP (orBec®) in other therapeutic indications involving inflammatory conditions of the gastrointestinal tract; (d) reinstate development of our other biotherapeutics products namely LPM™-Leuprolide, and Oraprine™; (e) explore acquisition strategies under which the Company may be acquired by another company with oncologic or GI products; (f) identify a sales and marketing partner for orBec® for territories outside of the U.S., and potentially inside the U.S.; (g) secure government funding for each of our biodefense programs through grants, contracts, and procurements; (h) convert our biodefense vaccine programs from early stage development to advanced development and manufacturing with the potential to collaborate and/or partner with other companies in the biodefense area; and (i) acquire or in-license new clinical-stage compounds for development.

Our principal executive offices are located at 1101 Brickell Avenue, Suite 701-S, Miami, Florida 33131 and our telephone number is 786-425-3848.

### *orBec®*

Our lead therapeutic product orBec® is an orally administered corticosteroid that exerts a potent, local anti-inflammatory effect within the mucosal tissue of the gastrointestinal tract. We filed an NDA on September 21, 2006 for orBec® with the FDA for the treatment of GI GVHD. The NDA was accepted on November 21, 2006, and in accordance with the PDUFA the FDA will complete and review of all materials regarding orBec® by July 21, 2007. Additionally, on May 9, 2007, the ODAC will review the NDA. We also filed an MAA with the EMA on November 3, 2006, which was validated for review on November 28, 2006. We assembled an experienced team of consultants and contractors who worked on all aspects of the NDA preparation, including data management, data analysis, biostatistics, and medical writing. Manufacturing of the requisite NDA stability batches of drug product have been completed with the process validation batches anticipated to begin in the second quarter of 2007.

We anticipate the market potential for orBec® for the treatment of GI GVHD to be approximately 70 percent of the more than 12,000 bone marrow and stem cell transplants that occur each year in the U.S.

We are having strategic discussions with a number of pharmaceutical companies regarding the partnering or sale of orBec® in the U.S. and abroad, including evaluating acquisition opportunities of the entire company. We also may seek a partner for the other potential indications of orBec®. We are also actively considering an alternative strategy of a commercial launch of orBec® by ourselves in the U.S.

**RiVax™**

The development of RiVax™, our ricin toxin vaccine, has progressed significantly this year. Our academic partner, The University of Texas Southwestern led by Dr. Ellen Vitetta, completed a Phase 1 safety and immunogenicity trial of RiVax™ in human volunteers. The results of the Phase 1 safety and immunogenicity dose-escalation study indicate that the vaccine is well tolerated and induces antibodies in humans that neutralize ricin toxin. Despite the absence of an adjuvant, antibodies were present in the blood of several volunteers for as long as 127 days after their last vaccination. The functional activity of the antibodies was confirmed by transferring serum globulins from the vaccinated individuals along with active ricin toxin to sensitive mice, which then survived subsequent exposure to ricin toxin. The outcome of the study was recently published in the Proceedings of the National Academy of Sciences. In January of 2005, we entered into a manufacturing and supply agreement for RiVax™ with Cambrex Corporation. In July of 2006, we announced successful completion of current Good Manufacturing Practices ("cGMP") milestone for the production of RiVax™.

### **BT-VACC™**

Our botulinum toxin vaccine, called BT-VACC™, was developed through the research of Dr. Lance Simpson at Thomas Jefferson University in Philadelphia, Pennsylvania. Botulinum toxin is the product of the bacteria *Clostridium botulinum*. Botulinum toxin is one of the most poisonous natural substances known. Botulinum toxin causes acute, symmetric, descending flaccid paralysis due to its action on peripheral cholinergic nerves. Paralysis typically presents 12 to 72 hours after exposure. Death results from paralysis of the respiratory muscles. Current treatments include respiratory support and passive immunization with antibodies which must be administered before symptoms occur, which leaves little time post-exposure for effective treatment.

### **Recent Developments**

On January 3, 2007, we received \$3 million under a non-binding letter of intent with Sigma-Tau Pharmaceuticals, Inc. ("Sigma-Tau"), which granted Sigma-Tau an exclusive right to negotiate terms and conditions for a possible business transaction or strategic alliance regarding orBec® and potentially other DOR pipeline compounds until March 1, 2007. Sigma-Tau is a pharmaceutical company that creates novel therapies for the unmet needs of patients with rare diseases. They have both prescription and consumer products in metabolic, oncology, renal and supplements. Under the terms of the letter of intent, Sigma-Tau has purchased \$1 million of our common stock at the market price of \$0.246 per share, representing approximately four million shares. Sigma-Tau paid an additional \$2 million, which was to be considered an advance payment to be deducted from upfront monies due to us by Sigma-Tau pursuant to any future orBec® commercialization arrangement reached between the two parties. On February 21, 2007, Sigma-Tau relinquished its exclusive rights under the letter of intent with regard to acquisition discussions. However, all other terms of the letter of intent remain in effect, and Sigma-Tau and us are engaged in discussions for a European collaboration relating to orBec®. Also, because no agreement was reached by March 1, 2007, we are obligated to return \$2 million to Sigma-Tau by April 30, 2007. If we do not pay Sigma Tau back in cash by May 31, 2007, interest will accrue at a rate of 6% compounded annually and Sigma Tau will have the option in its sole discretion of converting the accrued amount into common stock at a price per share equal to 80% of the market price at the time the payment is made.

On January 17, 2007, we received an unsolicited non-binding expression of interest from Cell Therapeutics, Inc. ("CTIC") to acquire us. After due deliberation and consideration by a committee of independent Board members established by our Board of Directors (the "Independent Committee") and further deliberation and consideration by our full Board of Directors, on April 9, 2007, the Independent Committee as well as our full Board of Directors each unanimously resolved to reject as inadequate for stockholders the expression of interest by CTIC to acquire us and notified CTIC of such resolutions.

On February 9, 2007, we completed the sale of an aggregate of 11,680,850 shares of our common stock to institutional investors and certain of our officers and directors for an aggregate purchase price of \$5,490,000. Pursuant to a registration rights agreement, we agreed to file this registration statement with the Securities and Exchange Commission in order to register the resale of the shares.

As of April 11, 2007, there were 91,913,336 shares outstanding, including the 17,557,195 shares of our common stock offered by the Selling Stockholders pursuant to this prospectus. The number of shares offered by this prospectus, including the 1,160,106 shares of our common stock underlying warrants, represent approximately 21% of the total common stock outstanding as of April 11, 2007, assuming such Warrants were fully exercised.

The Selling Stockholders may sell these shares in the over-the-counter market or otherwise, at market prices prevailing at the time of sale, at prices related to the prevailing market price, or at negotiated prices. We will not receive any proceeds from the sale of shares by the Selling Stockholders.

We are also registering for sale any additional shares of common stock which may become issuable by reason of any stock dividend, stock split, recapitalization or other similar transaction effected without the receipt of consideration, which results in an increase in the number of outstanding shares of our common stock

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## **Risk Factors**

*You should carefully consider the risks, uncertainties and other factors described below before you decide whether to buy shares of our common stock. Any of the factors could materially and adversely affect our business, financial condition, operating results and prospects and could negatively impact the market price of our common stock. Also, you should be aware that the risks and uncertainties described below are not the only ones facing us. Additional risks and uncertainties that we do not yet know of, or that we currently think are immaterial, may also impair our business operations. You should also refer to the other information contained in and incorporated by reference into this Annual Report, including our financial statements and the related notes.*

### **Risks Related to our industry**

*We have had significant losses and anticipate future losses; if additional funding cannot be obtained, we may reduce or discontinue our product development and commercialization efforts and we may be unable to continue our operations.*

We are a company that has experienced significant losses since inception and have a significant accumulated deficit. We expect to incur additional operating losses in the future and expect our cumulative losses to increase. As of December 31, 2006, we had approximately \$120,000 in cash available. On January 3, 2007, we completed the sale of 4,065,041 shares of our common stock to Sigma-Tau for a purchase price of \$1 million. On February 9, 2007, we completed the sale of an aggregate of 11,680,850 shares of our common stock to institutional investors and certain of our officers and directors for an aggregate purchase price of \$5,490,000. In addition, during 2007, we had warrant exercises in the amount of \$677,312. Consequently, as of March 1, 2007, we had \$7,089,092 in cash of which \$2,000,000 is payable to Sigma-Tau. Based on our budgetary projections of \$5,500,000 over the next 12 months, the financings will allow us to continue and maintain operations into the first quarter of 2008. In addition, our existing NIH biodefense grant facilities provide us with significant overhead contributions to continue to operate our business. On September 29, 2006, we announced that we had received approximately \$5,300,000 in grants for the development of our biodefense programs. We estimate that the overhead revenue contribution from our existing NIH biodefense grants will generate an additional \$850,000 over the next four quarters.

All of our products are currently in development, preclinical studies or clinical trials, and we have not generated any revenues from sales or licensing of these products. Through December 31, 2006, we had expended approximately \$17,400,000 developing our current product candidates for preclinical research and development and clinical trials, and we currently expect to spend at least \$6.0 million over the next two years in connection with the development and commercialization of our vaccines and therapeutic products, licenses, employee agreements, and consulting agreements. Unless and until we are able to generate sales or licensing revenue from orBec®, our leading product candidate, or another one of our product candidates, we may require additional funding to meet these commitments, sustain our research and development efforts, provide for future clinical trials, and continue our operations. We may not be able to obtain additional required funding on terms satisfactory to our requirements, if at all. If we are unable to raise additional funds when necessary, we may have to reduce or discontinue development, commercialization or clinical testing of some or all of our product candidates or take other cost-cutting steps that could adversely affect our ability to achieve our business objectives. If additional funds are raised through the issuance of equity securities, stockholders may experience dilution of their ownership interests, and the newly issued securities may have rights superior to those of the common stock. If additional funds are raised by the issuance of debt, we may be subject to limitations on our operations.

*If we are unsuccessful in developing our products, our ability to generate revenues will be significantly impaired.*

To be profitable, our organization must, along with corporate partners and collaborators, successfully research, develop and commercialize our technologies or product candidates. Our current product candidates are in various

stages of clinical and preclinical development and will require significant further funding, research, development, preclinical and/or clinical testing, regulatory approval and commercialization, and are subject to the risks of failure inherent in the development of products based on innovative or novel technologies. Specifically, each of the following is possible with respect to any of our other product candidates:

- we will not be able to maintain our current research and development schedules;
- we may be unsuccessful in our efforts to secure profitable procurement contracts from the U.S. government or others for our biodefense products;
  - we will encounter problems in clinical trials; or
  - the technology or product will be found to be ineffective or unsafe.

If any of the risks set forth above occurs, or if we are unable to obtain the necessary regulatory approvals as discussed below, we may not be able to successfully develop our technologies and product candidates and our business will be seriously harmed. Furthermore, for reasons including those set forth below, we may be unable to commercialize or receive royalties from the sale of any other technology we develop, even if it is shown to be effective, if:

- it is uneconomical or the market for the product does not develop or diminishes;
- we are not able to enter into arrangements or collaborations to manufacture and/or market the product;
  - the product is not eligible for third-party reimbursement from government or private insurers;
  - others hold proprietary rights that preclude us from commercializing the product;
    - others have brought to market similar or superior products; or
- the product has undesirable or unintended side effects that prevent or limit its commercial use.

***Our business is subject to extensive governmental regulation, which can be costly, time consuming and subjects us to unanticipated delays.***

Our business is subject to very stringent United States, federal, foreign, state and local government laws and regulations, including the Federal Food, Drug and Cosmetic Act, the Environmental Protection Act, the Occupational Safety and Health Act, and state and local counterparts to these acts. These laws and regulations may be amended, additional laws and regulations may be enacted, and the policies of the FDA and other regulatory agencies may change.

The regulatory process applicable to our products requires pre-clinical and clinical testing of any product to establish its safety and efficacy. This testing can take many years and require the expenditure of substantial capital and other resources. We may be unable to obtain, or we may experience difficulties and delays in obtaining, necessary domestic and foreign governmental clearances and approvals to market a product. Also, even if regulatory approval of a product is granted, that approval may entail limitations on the indicated uses for which the product may be marketed. The pivotal clinical trial of our product candidate orBec<sup>®</sup> began in 2001. In December of 2004, we announced top line results for our pivotal Phase 3 trial of orBec<sup>®</sup> in GI GVHD, in which orBec<sup>®</sup> demonstrated a statistically significant reduction in mortality during the prospectively defined Day 200 post-transplant period and positive trends on its primary endpoint. While orBec<sup>®</sup> did not achieve statistical significance in its primary endpoint of time to treatment failure at Day 50 (p-value 0.1177), orBec<sup>®</sup> did achieve a statistically significant reduction in mortality compared to

placebo. Additional clinical trials may be necessary prior to approval by the FDA of a marketing application.

Following any regulatory approval, a marketed product and its manufacturer are subject to continual regulatory review. Later discovery of problems with a product or manufacturer may result in restrictions on such product or manufacturer. These restrictions may include withdrawal of the marketing approval for the product. Furthermore, the advertising, promotion and export, among other things, of a product are subject to extensive regulation by governmental authorities in the United States and other countries. If we fail to comply with applicable regulatory requirements, we may be subject to fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and/or criminal prosecution.

***There may be unforeseen challenges in developing biodefense products.***

For development of biodefense vaccines and therapeutics, the FDA has instituted policies that are expected to result in accelerated approval. This includes approval for commercial use using the results of animal efficacy trials, rather than efficacy trials in humans. However, we will still have to establish that the vaccine and countermeasures it is developing are safe in humans at doses that are correlated with the beneficial effect in animals. Such clinical trials will also have to be completed in distinct populations that are subject to the countermeasures; for instance, the very young and the very old, and in pregnant women, if the countermeasure is to be licensed for civilian use. Other agencies will have an influence over the risk benefit scenarios for deploying the countermeasures and in establishing the number of doses utilized in the Strategic National Stockpile. We may not be able to sufficiently demonstrate the animal correlation to the satisfaction of the FDA, as these correlates are difficult to establish and are often unclear. Invocation of the two animal rule may raise issues of confidence in the model systems even if the models have been validated. For many of the biological threats, the animal models are not available and we may have to develop the animal models, a time-consuming research effort. There are few historical precedents, or recent precedents, for the development of new countermeasure for bioterrorism agents. Despite the two animal rule, the FDA may require large clinical trials to establish safety and immunogenicity before licensure and it may require safety and immunogenicity trials in additional populations. Approval of biodefense products may be subject to post-marketing studies, and could be restricted in use in only certain populations.

***We will be dependent on government funding, which is inherently uncertain, for the success of our biodefense operations.***

We are subject to risks specifically associated with operating in the biodefense industry, which is a new and unproven business area. We do not anticipate that a significant commercial market will develop for our biodefense products. Because we anticipate that the principal potential purchasers of these products, as well as potential sources of research and development funds, will be the U.S. government and governmental agencies, the success of our biodefense division will be dependent in large part upon government spending decisions. The funding of government programs is dependent on budgetary limitations, congressional appropriations and administrative allotment of funds, all of which are inherently uncertain and may be affected by changes in U.S. government policies resulting from various political and military developments.

***The manufacture of our products is a highly exacting process, and if we or one of our materials suppliers encounter problems manufacturing our products, our business could suffer.***

The FDA and foreign regulators require manufacturers to register manufacturing facilities. The FDA and foreign regulators also inspect these facilities to confirm compliance with cGMP or similar requirements that the FDA or foreign regulators establish. We or our materials suppliers may face manufacturing or quality control problems causing product production and shipment delays or a situation where we or the supplier may not be able to maintain compliance with the FDA's cGMP requirements, or those of foreign regulators, necessary to continue manufacturing our drug substance. Any failure to comply with cGMP requirements or other FDA or foreign regulatory requirements could adversely affect our clinical research activities and our ability to market and develop our products.



***If the parties we depend on for supplying our drug substance raw materials and certain manufacturing-related services do not timely supply these products and services, it may delay or impair our ability to develop, manufacture and market our products.***

We rely on suppliers for our drug substance raw materials and third parties for certain manufacturing-related services to produce material that meets appropriate content, quality and stability standards and use in clinical trials of our products and, after approval, for commercial distribution. To succeed, clinical trials require adequate supplies of drug substance and drug product, which may be difficult or uneconomical to procure or manufacture. We and our suppliers and vendors may not be able to (i) produce our drug substance or drug product to appropriate standards for use in clinical studies, (ii) perform under any definitive manufacturing, supply or service agreements with us or (iii) remain in business for a sufficient time to successfully produce and market our product candidates. If we do not maintain important manufacturing and service relationships, we may fail to find a replacement supplier or required vendor or develop our own manufacturing capabilities which could delay or impair our ability to obtain regulatory approval for our products and substantially increase our costs or deplete profit margins, if any. If we do find replacement manufacturers and vendors, we may not be able to enter into agreements with them on terms and conditions favorable to us and, there could be a substantial delay before a new facility could be qualified and registered with the FDA and foreign regulatory authorities.

***We do not have sales and marketing experience and our lack of experience may restrict our success in commercializing our product candidates.***

We do not have experience in marketing or selling pharmaceutical products. We may be unable to establish satisfactory arrangements for marketing, sales and distribution capabilities necessary to commercialize and gain market acceptance for orBec<sup>®</sup> or our other product candidates. To obtain the expertise necessary to successfully market and sell orBec<sup>®</sup>, or any other product, will require the development of our own commercial infrastructure and/or collaborative commercial arrangements and partnerships. Our ability to make that investment and also execute our current operating plan is dependent on numerous factors, including, the performance of third party collaborators with whom we may contract. Accordingly, we may not have sufficient funds to successfully commercialize orBec<sup>®</sup> or any other potential product in the United States or elsewhere.

***Our products, if approved, may not be commercially viable due to health care changes and third party reimbursement limitations.***

Recent initiatives to reduce the federal deficit and to change health care delivery are increasing cost-containment efforts. We anticipate that Congress, state legislatures and the private sector will continue to review and assess alternative benefits, controls on health care spending through limitations on the growth of private health insurance premiums and Medicare and Medicaid spending, price controls on pharmaceuticals, and other fundamental changes to the health care delivery system. Any changes of this type could negatively impact the commercial viability of our products, if approved. Our ability to successfully commercialize our product candidates, if they are approved, will depend in part on the extent to which appropriate reimbursement codes and authorized cost reimbursement levels of these products and related treatment are obtained from governmental authorities, private health insurers and other organizations, such as health maintenance organizations. In the absence of national Medicare coverage determination, local contractors that administer the Medicare program may make their own coverage decisions. Any of our product candidates, if approved and when commercially available, may not be included within the then current Medicare coverage determination or the coverage determination of state Medicaid programs, private insurance companies or other health care providers. In addition, third-party payers are increasingly challenging the necessity and prices charged for medical products, treatments and services.

***We may not be able to retain rights licensed to us by third parties to commercialize key products or to develop the third party relationships we need to develop, manufacture and market our products.***

We currently rely on license agreements from, the University of Texas Southwestern Medical Center, The University of Texas Medical Branch at Galveston, Thomas Jefferson University, Southern Research Institute, the University of Alabama Research Foundation, and George B. McDonald M.D. for the rights to commercialize key product candidates. We may not be able to retain the rights granted under these agreements or negotiate additional agreements on reasonable terms, or at all.

Furthermore, we currently have very limited product development capabilities and no manufacturing, marketing or sales capabilities. For us to research, develop and test our product candidates, we need to contract or partner with outside researchers, in most cases with or through those parties that did the original research and from whom we have licensed the technologies. If products are successfully developed and approved for commercialization, then we will need to enter into collaboration and other agreements with third parties to manufacture and market our products. We may not be able to induce the third parties to enter into these agreements, and, even if we are able to do so, the terms of these agreements may not be favorable to us. Our inability to enter into these agreements could delay or preclude the development, manufacture and/or marketing of some of our product candidates or could significantly increase the costs of doing so. In the future, we may grant to our development partners rights to license and commercialize pharmaceutical and related products developed under the agreements with them, and these rights may limit our flexibility in considering alternatives for the commercialization of these products. Furthermore, third-party manufacturers or suppliers may not be able to meet our needs with respect to timing, quantity and quality for the products.

Additionally, if we do not enter into relationships with third parties for the marketing of our products, if and when they are approved and ready for commercialization, we would have to build our own sales force. Development of an effective sales force would require significant financial resources, time and expertise. We may not be able to obtain the financing necessary to establish a sales force in a timely or cost effective manner, if at all, and any sales force we are able to establish may not be capable of generating demand for our product candidates, if they are approved.

***We may suffer product and other liability claims; we maintain only limited product liability insurance, which may not be sufficient.***

The clinical testing, manufacture and sale of our products involves an inherent risk that human subjects in clinical testing or consumers of our products may suffer serious bodily injury or death due to side effects, allergic reactions or other unintended negative reactions to our products. As a result, product and other liability claims may be brought against us. We currently have clinical trial and product liability insurance with limits of liability of \$5 million, which may not be sufficient to cover our potential liabilities. Because liability insurance is expensive and difficult to obtain, we may not be able to maintain existing insurance or obtain additional liability insurance on acceptable terms or with adequate coverage against potential liabilities. Furthermore, if any claims are brought against us, even if we are fully covered by insurance, we may suffer harm such as adverse publicity.

***We may not be able to compete successfully with our competitors in the biotechnology industry.***

The biotechnology industry is intensely competitive, subject to rapid change and sensitive to new product introductions or enhancements. Most of our existing competitors have greater financial resources, larger technical staffs, and larger research budgets than we have, as well as greater experience in developing products and conducting clinical trials. Our competition is particularly intense in the gastroenterology and transplant areas and is also intense in the therapeutic area of inflammatory bowel disease. We face intense competition in the area of biodefense from various public and private companies and universities as well as governmental agencies, such as the U.S. Army, which may have their own proprietary technologies that may directly compete with our technologies. In addition, there may be other companies that are currently developing competitive technologies and products or that may in the future develop technologies and products that are comparable or superior to our technologies and products. We may not be able to compete successfully with our existing and future competitors.

***We may be unable to commercialize our products if we are unable to protect our proprietary rights, and we may be liable for significant costs and damages if we face a claim of intellectual property infringement by a third party.***

Our success depends in part on our ability to obtain and maintain patents, protect trade secrets and operate without infringing upon the proprietary rights of others. In the absence of patent and trade secret protection, competitors may adversely affect our business by independently developing and marketing substantially equivalent or superior products and technology, possibly at lower prices. We could also incur substantial costs in litigation and suffer diversion of attention of technical and management personnel if we are required to defend ourselves in intellectual property infringement suits brought by third parties, with or without merit, or if we are required to initiate litigation against others to protect or assert our intellectual property rights. Moreover, any such litigation may not be resolved in our favor.

Although we and our licensors have filed various patent applications covering the uses of our product candidates, patents may not be issued from the patent applications already filed or from applications that we might file in the future. Moreover, the patent position of companies in the pharmaceutical industry generally involves complex legal and factual questions, and recently has been the subject of much litigation. Any patents we have obtained, or may obtain in the future, may be challenged, invalidated or circumvented. To date, no consistent policy has been developed in the United States Patent and Trademark Office regarding the breadth of claims allowed in biotechnology patents.

In addition, because patent applications in the United States are maintained in secrecy until patents issue, and because publication of discoveries in the scientific or patent literature often lags behind actual discoveries, we cannot be certain that we and our licensors are the first creators of inventions covered by any licensed patent applications or patents or that we or they are the first to file. The Patent and Trademark Office may commence interference proceedings involving patents or patent applications, in which the question of first inventorship is contested. Accordingly, the patents owned or licensed to us may not be valid or may not afford us protection against competitors with similar technology, and the patent applications licensed to us may not result in the issuance of patents.

It is also possible that our patented technologies may infringe on patents or other rights owned by others, licenses to which may not be available to us. We may not be successful in our efforts to obtain a license under such patent on terms favorable to us, if at all. We may have to alter our products or processes, pay licensing fees or cease activities altogether because of patent rights of third parties.

In addition to the products for which we have patents or have filed patent applications, we rely upon unpatented proprietary technology and may not be able to meaningfully protect our rights with regard to that unpatented proprietary technology. Furthermore, to the extent that consultants, key employees or other third parties apply technological information developed by them or by others to any of our proposed projects, disputes may arise as to the proprietary rights to this information, which may not be resolved in our favor.

***Our business could be harmed if we fail to retain our current personnel or if they are unable to effectively run our business.***

We have only eight employees and we depend upon these employees to manage the day-to-day activities of our business. Because we have such limited personnel, the loss of any of them or our inability to attract and retain other qualified employees in a timely manner would likely have a negative impact on our operations. Dr. Christopher J. Schaber, Chief Executive Officer, was hired in August 2006; Evan Myrianthopoulos, our Chief Financial Officer, was hired in November 2004, although he was on the Board for two years prior to that; James Clavijo, our Controller, Treasurer and Corporate Secretary was hired in October 2004; and Dr. Robert Brey, our Chief Scientific Officer was hired in 1996. In August 2006, Dr. James S. Kuo was appointed Chairman of the Board. We will not be successful if this management team cannot effectively manage and operate our business. Several members of our board of directors are associated with other companies in the biopharmaceutical industry. Stockholders should not expect an obligation

on the part of these board members to present product opportunities to us of which they become aware outside of their capacity as members of our board of directors.

### **Risks Related to our Common Stock**

#### ***Our stock price is highly volatile.***

The market price of our common stock, like that of many other research and development public pharmaceutical and biotechnology companies, has been highly volatile and may continue to be so in the future due to a wide variety of factors, including:

- announcements of technological innovations, more important bio-threats or new commercial therapeutic products by us, our collaborative partners or our present or potential competitors;
  - our quarterly operating results and performance;
- announcements by us or others of results of pre-clinical testing and clinical trials;
  - developments or disputes concerning patents or other proprietary rights;
    - acquisitions;
  - litigation and government proceedings;
    - adverse legislation;
  - changes in government regulations;
- economic and other external factors; and
  - general market conditions

Our stock price has fluctuated between January 1, 2003 through December 31, 2006, the per share price of our common stock ranged between a high of \$1.71 per share to a low of \$0.20 per share. As of April 11, 2007, our common stock traded at \$0.62. The fluctuation in the price of our common stock has sometimes been unrelated or disproportionate to our operating performance.

#### ***Our stock trades on the over the counter bulletin board and our stock is not listed on the American Stock Exchange***

On April 18, 2006, our stock was delisted from the American Stock Exchange (“AMEX”) and began trading on the Over-the-Counter Bulletin Board (the “OTCBB”) securities market on April 18, 2006 under the ticker symbol DORB. The OTCBB is a decentralized market regulated by the National Association of Securities Dealers (NASD) in which securities are traded via an electronic quotation system that serves more than 3,000 companies. On the OTCBB, securities are traded by a network of brokers or dealers who carry inventories of securities to facilitate the buy and sell orders of investors, rather than providing the order matchmaking service seen in specialist exchanges. OTCBB securities include national, regional, and foreign equity issues. Companies traded OTCBB must be current in their reports filed with the SEC and other regulatory authorities.

Our stock was delisted from the AMEX because we did not maintain shareholder equity above the \$6,000,000, as required under the maintenance requirement for continued listing.

If our common stock is not listed on a national exchange or market, the trading market for our common stock may become illiquid. Our common stock is subject to the penny stock rules of the SEC, which generally are applicable to equity securities with a price of less than \$5.00 per share, other than securities registered on certain national securities exchanges or quoted on the NASDAQ system, provided that current price and volume information with respect to transactions in such securities is provided by the exchange or system. The penny stock rules require a broker-dealer, before a transaction in a penny stock not otherwise exempt from the rules, to deliver a standardized risk disclosure document prepared by the SEC that provides information about penny stocks and the nature and level of risks in the penny stock market. The broker-dealer also must provide the customer with bid and ask quotations for the penny stock, the compensation of the broker-dealer and its salesperson in the transaction and monthly account statements showing the market value of each penny stock held in the customer's account. In addition, the penny stock rules require that, before a transaction in a penny stock that is not otherwise exempt from such rules, the broker-dealer must make a special written determination that the penny stock is a suitable investment for the purchaser and receive the purchaser's written agreement to the transaction. As a result of these requirements, our common stock could be priced at a lower price and our stockholders could find it more difficult to sell their shares.

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***Shareholders may suffer substantial dilution.***

We have a number of agreements or obligations that may result in dilution to investors. These include:

- warrants to purchase approximately 34,400,000 shares of our common stock at a current weighted average exercise price of approximately \$0.69;
- anti-dilution rights associated with a portion of the above warrants which can permit purchase of additional shares and/or lower exercise prices under certain circumstances; and
  - options to purchase approximately 11,900,000 shares of our common stock of a current weighted average exercise price of approximately \$0.50.

To the extent that anti-dilution rights are triggered, or warrants or options are exercised, our stockholders will experience substantial dilution and our stock price may decrease.

Our shares of common stock are thinly traded, so stockholders may be unable to sell at or near ask prices or at all if they need to sell shares to raise money or otherwise desire to liquidate their shares.

Our common stock has from time to time been “thinly-traded,” meaning that the number of persons interested in purchasing our common stock at or near ask prices at any given time may be relatively small or non-existent. This situation is attributable to a number of factors, including the fact that we are a small company that is relatively unknown to stock analysts, stock brokers, institutional investors and others in the investment community that generate or influence sales volume, and that even if we came to the attention of such persons, they tend to be risk-averse and would be reluctant to follow an unproven company such as ours or purchase or recommend the purchase of our shares until such time as we became more seasoned and viable. As a consequence, there may be periods of several days or more when trading activity in our shares is minimal or non-existent, as compared to a seasoned issuer which has a large and steady volume of trading activity that will generally support continuous sales without an adverse effect on share price. We cannot give stockholders any assurance that a broader or more active public trading market for our common shares will develop or be sustained, or that current trading levels will be sustained.

## **RECENT DEVELOPMENTS**

On January 3, 2007, we received \$3 million under a non-binding letter of intent with Sigma-Tau Pharmaceuticals, Inc. (“Sigma-Tau”), which granted Sigma-Tau an exclusive right to negotiate terms and conditions for a possible business transaction or strategic alliance regarding orBec<sup>®</sup> and potentially other DOR pipeline compounds until March 1, 2007. Sigma-Tau is a pharmaceutical company that creates novel therapies for the unmet needs of patients with rare diseases. They have both prescription and consumer products in metabolic, oncology, renal and supplements. Under the terms of the letter of intent, Sigma-Tau has purchased \$1 million of our common stock at the market price of \$0.246 per share, representing approximately four million shares. Sigma-Tau paid an additional \$2 million, which was to be considered an advance payment to be deducted from upfront monies due to us by Sigma-Tau pursuant to any future orBec<sup>®</sup> commercialization arrangement reached between the two parties. On February 21, 2007, Sigma-Tau relinquished its exclusive rights under the letter of intent with regard to acquisition discussions. However, all other terms of the letter of intent remain in effect, and Sigma-Tau and us are engaged in discussions for a European collaboration relating to orBec<sup>®</sup>. Also, because no agreement was reached by March 1, 2007, we are obligated to return \$2 million to Sigma-Tau by April 30, 2007. If we do not pay Sigma Tau back in cash by May 31, 2007, interest will accrue at a rate of 6% compounded annually and Sigma Tau will have the option in its sole discretion of converting the accrued amount into common stock at a price per share equal to 80% of the market price

at the time the payment is made.

On January 17, 2007, we received an unsolicited non-binding expression of interest from Cell Therapeutics, Inc. (“CTIC”) to acquire us. After due deliberation and consideration by a committee of independent Board members established by our Board of Directors (the “Independent Committee”) and further deliberation and consideration by our full Board of Directors, on April 9, 2007, the Independent Committee as well as our full Board of Directors each unanimously resolved to reject as inadequate for stockholders the expression of interest by CTIC to acquire us and notified CTIC of such resolutions.

On February 9, 2007, we completed the sale of an aggregate of 11,680,850 shares of our common stock to institutional investors and certain of our officers and directors for an aggregate purchase price of \$5,490,000. Pursuant to a registration rights agreement, we agreed to file this registration statement with the Securities and Exchange Commission in order to register the resale of the shares.

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## BUSINESS

### Overview

We are a research and development biopharmaceutical company focused on the development of oral therapeutic products intended for areas of unmet medical need and biodefense vaccines. We have filed a new drug application (“NDA”) for our lead product orBec® (oral beclomethasone dipropionate) with the U.S. Food and Drug Administration (the “FDA”) for the treatment of gastrointestinal Graft-versus-Host-Disease (“GI GVHD”), and have received a Prescription Drug User Fee Act (“PDUFA”) date for the FDA to complete its review of all materials regarding orBec® of July 21, 2007. In addition, the FDA’s Oncologic Drugs Advisory Committee (“ODAC”) will review the NDA for orBec® on May 10, 2007. We have also filed a Marketing Authorization Application (“MAA”) with the European Central Authority, European Medicines Evaluation Agency (“EMA”) for orBec® which has also been validated for review.

We were incorporated in 1987. We maintain two active segments: BioTherapeutics and BioDefense. Our business strategy is to: (a) prepare for the potential marketing approval of orBec® by the FDA and the EMA; (b) conduct prophylactic use clinical trials of orBec® for the prevention of GI GVHD; (c) evaluate and initiate additional clinical trials to explore the effectiveness of oral BDP (orBec®) in other therapeutic indications involving inflammatory conditions of the gastrointestinal tract; (d) reinstate development of our other biotherapeutics products namely LPM™-Leuprolide, and Oraprine™; (e) explore acquisition strategies under which the Company may be acquired by another company with oncologic or GI products; (f) identify a sales and marketing partner for orBec® for territories outside of the U.S., and potentially inside the U.S.; (g) secure government funding for each of our biodefense programs through grants, contracts, and procurements; (h) convert our biodefense vaccine programs from early stage development to advanced development and manufacturing with the potential to collaborate and/or partner with other companies in the biodefense area; and (i) acquire or in-license new clinical-stage compounds for development.

On January 3, 2007, we received \$3 million under a non-binding letter of intent with Sigma-Tau Pharmaceuticals, Inc. (“Sigma-Tau”), which granted Sigma-Tau an exclusive right to negotiate terms and conditions for a possible business transaction or strategic alliance regarding orBec® and potentially other DOR pipeline compounds until March 1, 2007. Sigma-Tau is a pharmaceutical company that creates novel therapies for the unmet needs of patients with rare diseases. They have both prescription and consumer products in metabolic, oncology, renal and supplements. Under the terms of the letter of intent, Sigma-Tau has purchased \$1 million of our common stock at the market price of \$0.246 per share, representing approximately four million shares. Sigma-Tau paid an additional \$2 million, which was to be considered an advance payment to be deducted from upfront monies due to us by Sigma-Tau pursuant to any future orBec® commercialization arrangement reached between the two parties. On February 21, 2007, Sigma-Tau relinquished its exclusive rights under the letter of intent with regard to acquisition discussions. However, all other terms of the letter of intent remain in effect, and Sigma-Tau and us are engaged in discussions for a European collaboration relating to orBec®. Also, because no agreement was reached by March 1, 2007, we are obligated to return \$2 million to Sigma-Tau by April 30, 2007. If we do not pay Sigma Tau back in cash by May 31, 2007, interest will accrue at a rate of 6% compounded annually and Sigma Tau will have the option in its sole discretion of converting the accrued amount into common stock at a price per share equal to 80% of the market price at the time the payment is made.

On January 17, 2007, we received an unsolicited non-binding expression of interest from Cell Therapeutics, Inc. (“CTIC”) to acquire us. After due deliberation and consideration by a committee of independent Board members established by our Board of Directors (the “Independent Committee”) and further deliberation and consideration by our full Board of Directors, on April 9, 2007, the Independent Committee as well as our full Board of Directors each unanimously resolved to reject as inadequate for stockholders the expression of interest by CTIC to acquire us and notified CTIC of such resolutions.



## **BioTherapeutics Overview**

Through our BioTherapeutics Division, we are in the process of developing oral therapeutic products to treat unmet medical needs. Our lead product, orBec<sup>®</sup>, has been evaluated in a randomized, multi-center, double-blinded, placebo-controlled pivotal Phase 3 clinical trial for the treatment of GI GVHD, a serious and life-threatening gastrointestinal inflammation associated with allogeneic bone marrow or stem cell transplant therapy. orBec<sup>®</sup> demonstrated a statistically significant reduction in mortality during the prospectively defined Day 200 post-transplant period and positive trends on its primary endpoint. While orBec<sup>®</sup> did not achieve statistical significance in time to treatment failure through Day 50 (p-value 0.1177), the primary endpoint of its pivotal trial, it did achieve statistical significance in other key outcomes such as median time to treatment failure through Day 80 (p-value 0.0226), and most importantly, it demonstrated a statistically significant survival advantage in comparison to placebo at 200 days post-transplant (p-value 0.0139) and at one year post-randomized (p-value 0.04).

We filed an NDA on September 21, 2006 for orBec<sup>®</sup> with the FDA for the treatment of GI GVHD. The NDA was accepted on November 21, 2006, and in accordance with the PDUFA the FDA will complete its review of all materials regarding orBec<sup>®</sup> by July 21, 2007. Additionally, on May 10, 2007 an ODAC panel will review the NDA. We also filed an MAA with the EMEA on November 3, 2006, which was validated on November 28, 2006.

To build upon the positive results obtained during development of orBec<sup>®</sup> for the treatment of GI GVHD, we will pursue a follow-on development program targeting the prevention of acute GVHD. This program will be a Phase 2 single center trial that will be conducted at the Fred Hutchinson Cancer Research Center. This study will enroll approximately 138 patients and is designed to assess the safety and efficacy of orBec<sup>®</sup> in preventing acute GVHD after allogeneic hematopoietic stem cell transplantation. We anticipate initiating this Phase 2 clinical trial in the second quarter of 2007.

We expect to initiate in mid-2007 our next pipeline development program in the biotherapeutics area, which is our LPM<sup>®</sup> (Lipid Polymer Micelle) drug delivery system to enhance the intestinal absorption of water-soluble drugs/peptides, like leuprolide. This system incorporates biocompatible lipids and polymers and is potentially useful for a wide variety of molecular structures of water-soluble drugs, particularly those based on peptides that are not readily absorbed in the GI tract. Leuprolide is both a candidate drug for further development in several indications, such as prostate cancer and endometriosis as well as a prototype for development of other similar non-absorbable, but water soluble drugs. Preclinical animal pharmacokinetic ("PK") data indicate high relative bioavailability of leuprolide in the 20-40% range. The mechanism for absorption by LPM is to promote the passive uptake through the opening of paracellular channels in intestinal epithelial tissue. Based on the work in animals, we anticipate conducting a Phase 1 PK safety and tolerability study in humans in mid-2007.

## **BioDefense Overview**

In collaboration with two United States academic research institutions, we are developing vaccines to combat the threat posed by two potent biological toxins; ricin toxin and botulinum toxin. Both vaccines under development are recombinant products in bacterial hosts and both consist of nontoxic subunits of the native toxins. These subunits induce antibodies that neutralize the toxins from which they are derived. Through exclusive licenses with two Universities, we have secured important intellectual property rights related to these vaccines. Both of these are considered bioterrorism threats by the U.S. Department of Homeland Security ("DHS"), National Institute of Allergic and Infectious Diseases ("NIAID"), Department of Defense ("DOD") and Centers for Disease Control and Prevention ("CDC"). We are developing our biodefense countermeasures for potential U.S. government procurement pursuant to the Project Bioshield Act of 2004, which provides incentives to industry to supply biodefense countermeasures to the Strategic National Stockpile.

On September 13, 2004, we were awarded a \$6,433,316 grant from the NIAID for RiVax<sup>™</sup>, our genetically engineered vaccine against ricin toxin, one of the most lethal plant toxins known to man. Ricin toxin can inflict

serious damage to lungs and cause death if inhaled. The grant supports the process development for manufacturing of RiVax™, our recombinant vaccine against ricin toxin. The grant is based on milestones and certain budget amounts are earned as we meet milestones in the development of RiVax™. On September 29, 2006, we announced that we had been awarded a grant of approximately \$4,800,000 from the NIAID over a three-year period for the continued development of RiVax™. This continuing grant supports additional characterization of the vaccine and animal testing that is necessary for obtaining FDA licensure under conditions where human efficacy testing is not ethical or permitted.

On January 30, 2006, we announced results of a Phase 1 clinical trial of RiVax™. This study was completed by investigators at the University of Texas Southwestern Medical Center (“UT Southwestern”) led by Dr. Ellen Vitetta, Director of the Cancer Immunobiology Center at UT Southwestern. Results from the trial demonstrated that RiVax™ is safe and immunogenic after immunization with three monthly injections of vaccine, with volunteers developing antibodies against ricin toxin. The functional activity of the antibodies was confirmed by transferring serum samples from the vaccinated volunteers into mice, which then survived exposure to ricin toxin. Results of the study were published in the *Proceedings of the National Academy of Sciences*. Under the sponsorship of the NIH grant, we have developed a scaleable process for the manufacture of the subunit immunogen component of RiVax™, begun long term stability testing, and have developed a second generation formulation of RiVax™ which will be tested in a Phase 2 trial.

Our vaccine against botulinum neurotoxin, BT-VACC™, is a mucosally administered vaccine that protects against exposure to botulinum neurotoxins. Botulinum neurotoxin is the most potent natural toxin and is on the NIAID Category A list of biothreats. Based on promising preclinical results that demonstrate induction of protective immune responses via oral or intranasal vaccination, we anticipate that BT-VACC™ can be developed as either a stand alone vaccine or administered as a booster to the current injected vaccines. We are developing BT-VACC™ to be administered by the mucosal route since such vaccines induce more complete protection than injected vaccines and are thought to confer better protection against aerosol or oral exposure to botulinum neurotoxin. Since mucosally administered formulations can be given without needles and trained personnel, we expect that that BT-VACC™ will be poised for rapid distribution and vaccination for military use or civilian vaccination in response to bioterrorism. Any vaccine for botulinum will have to be composed of multiple antigens representing several natural serotypes. At this point, we have demonstrated that combinations of three serotypes can induce protective immune response in animals. The three serotypes are A, B, and E, which represent the most common of the botulinum serotypes and the ones most likely to be used as bioweapons. Our plans are to focus on development of the oral vaccine concept using formulation technology that permits increased contact of the antigen with immune inductive sites in the GI tract, and alternatively develop the A-B-E trivalent vaccine as a nasal spray vaccine. In conjunction with DOW Pharma, we have demonstrated that it will be feasible to manufacture the required antigens in a bacterial host (*P. fluorescens*), and are anticipating developing purification processes for each antigen. BT-VACC™ is covered by issued and pending U.S. patents.

On September 29, 2006, we announced that we had been awarded a Small Business Innovation Research (“SBIR”) grant of approximately \$500,000 from the NIAID over a one year period for further work to combine antigens from different serotypes of botulinum toxin for a prototype multivalent vaccine. This grant will support further work in identifying an effective formulations technology that permits the oral administration of the three vaccine subunits in a single combination vaccine.

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**BioTherapeutics Division****orBec®**

Our lead therapeutic product orBec® is an orally administered corticosteroid that exerts a potent, local anti-inflammatory effect within the mucosal tissue of the gastrointestinal tract. We filed an NDA on September 21, 2006 for orBec® with the FDA for the treatment of GI GVHD. The NDA was accepted on November 21, 2006, and in accordance with the PDUFA the FDA will complete and review of all materials regarding orBec® by July 21, 2007. Additionally, on May 9, 2007, the ODAC will review the NDA. We also filed an MAA with the EMEA on November 3, 2006, which was validated for review on November 28, 2006. We assembled an experienced team of consultants and contractors who worked on all aspects of the NDA preparation, including data management, data analysis, biostatistics, and medical writing. Manufacturing of the requisite NDA stability batches of drug product have been completed with the process validation batches anticipated to begin in the second quarter of 2007.

Both filings are supported by data from two randomized, double-blinded, placebo controlled clinical trials. The first was a 129 patient pivotal Phase 3 multi-center clinical trial for orBec® conducted at 16 bone marrow/stem cell transplant centers in the U.S. and France. The second was a 60 patient Phase 2 supportive clinical trial conducted at the Fred Hutchinson Cancer Center.

**Comprehensive Long-Term Mortality Results**

Among the new data reported in the January 2007 pre-published online first edition issue of *Blood*, the peer-reviewed Journal of the American Society of Hematology, orBec® showed continued survival benefit when compared to placebo one year after randomization in the pivotal Phase 3 clinical trial. Overall, 18 patients (29%) in the orBec® group and 28 patients (42%) in the placebo group died within one year of randomization (46% reduction in mortality, hazard ratio 0.54, 95% CI: 0.30, 0.99, p=0.04, stratified log-rank test). Results from the Phase 2 trial also demonstrated enhanced long-term survival benefit with orBec® versus placebo. In that study, at one year after randomization, 6 of 31 patients (19%) in the orBec® group had died while 9 of 29 patients (31%) in the placebo group had died (45% reduction in mortality, p=0.26). Pooling the survival data from both trials demonstrated that the survival benefit of orBec® treatment was sustained long after orBec® was discontinued and extended well beyond 3 years after the transplant. As of September 25, 2005, median follow-up of patients in the two trials was 3.5 years (placebo patients) and 3.6 years (orBec® patients), with a range of 10.6 months to 11.1 years. The risk of mortality was 37% lower for patients randomized to orBec® compared with placebo (hazard ratio 0.63, p=0.03, stratified log-rank test).

**200 Days Post Transplant Mortality Results**

	Phase 3 trial		Phase 2 trial	
	orBec®	Placebo	orBec®	Placebo
Number of patients randomized	62	67	31	29
Number (%) who died	5 (8%)	16 (24%)	3 (10%)	6 (21%)
Hazard ratio (95% confidence interval)	0.33 (0.12, 0.89)		0.47 (0.12, 1.87)	
Death with infection*	3 (5%)	9 (13%)	2 (6%)	5 (17%)
Death with relapse*	3 (5%)	9 (13%)	1 (3%)	4 (14%)

\*Some patients died with both infection and relapse of their underlying malignancy.

In the pivotal Phase 3 clinical trial, survival at the pre-specified endpoint of 200 days post-transplant showed a clinically meaningful and statistically significant result. According to the manuscript, “the risk of mortality during the 200-day post-transplant period was 67% lower with orBec<sup>®</sup> treatment compared to placebo treatment (hazard ratio 0.33; 95% CI: 0.12, 0.89; p=0.03, Wald chi-square test).” Although orBec<sup>®</sup> did not achieve statistical significance in the primary endpoint of its pivotal trial, namely time to treatment failure through Day 50 (p=0.1177), orBec<sup>®</sup> did achieve statistical significance in other key outcomes such as reduction in the risk of treatment failure through Day 80 (p=0.0226) and, most importantly, demonstrated a statistically significant long-term survival advantage compared with placebo. The most common proximate causes of death by transplant day-200 were relapse of the underlying malignancy and infection. Relapse of the hematologic malignancy had contributed to the deaths of 9/67 patients (13.4%) in the placebo arm and 3/62 patients (4.8%) in the BDP arm. Infection contributed to the deaths of 9/67 patients (13.4%) in the placebo arm and 3/62 (4.8%) in the BDP arm. Acute or chronic GVHD was the proximate cause of death in 3/67 patients (4.5%) in the placebo arm and in 1/62 (1.6%) in the BDP arm.

A retrospective analysis of survival at 200 days post-transplant in the supportive Phase 2 clinical trial showed consistent response rates with the pivotal Phase 3 trial; three patients (10%) who had been randomized to orBec<sup>®</sup> had died, compared with six deaths (21%) among patients who had been randomized to placebo, leading to a reduced hazard of day-200 mortality, although not statistically significantly different. Detailed analysis of the likely proximate cause of death showed that mortality with infection or with relapse of underlying malignancy were both reduced in the same proportion after treatment with orBec<sup>®</sup> compared to placebo. By transplant day-200, relapse of hematologic malignancy had contributed to the deaths of 1 of 31 patients (3%) in the orBec<sup>®</sup> arm and 4 of 29 patients (14%) in the placebo arm. Infection contributed to the deaths of 2 of 31 patients (6%) in the orBec<sup>®</sup> arm and 5 of 29 patients (17%) in the placebo arm.

In the pivotal Phase 3 trial, orBec<sup>®</sup> achieved these mortality results despite the fact that there were more “high risk of underlying cancer relapse” patients in the orBec<sup>®</sup> group than in the placebo group: 40, or 65%, versus 29, or 43%, respectively. There was also an imbalance of non-myeloablative patients in the orBec<sup>®</sup> treatment group, 26, or 42%, in the orBec<sup>®</sup> group versus 15, or 22%, in the placebo group, putting the orBec<sup>®</sup> group at further disadvantage. In addition, a subgroup analysis also revealed that patients dosed with orBec<sup>®</sup> who had received stem cells from unrelated donors had a 94% reduction in the risk of mortality 200 days post-transplant.

### ***Safety and Adverse Events***

The frequencies of severe adverse events, adverse events related to study drug, and adverse events resulting in study drug discontinuation were all comparable to that of the placebo group in both trials. Patients who remained on orBec<sup>®</sup> until Day 50 in the pivotal study had a higher likelihood of having biochemical evidence of abnormal hypothalamic-pituitary-adrenal (“HPA”) axis function compared to patients on placebo.

### ***Commercialization and Market***

We anticipate the market potential for orBec<sup>®</sup> for the treatment of GI GVHD to be approximately 70 percent of the more than 12,000 bone marrow and stem cell transplants that occur each year in the U.S.

We are having strategic discussions with a number of pharmaceutical companies regarding the partnering or sale of orBec<sup>®</sup> in the U.S. and abroad, including evaluating acquisition opportunities of the entire company. We also may seek a partner for the other potential indications of orBec<sup>®</sup>. We are also actively considering an alternative strategy of a commercial launch of orBec<sup>®</sup> by ourselves in the U.S.

On January 3, 2007, we received \$3 million under a non-binding letter of intent with Sigma-Tau Pharmaceuticals, Inc. (“Sigma-Tau”), which granted Sigma-Tau an exclusive right to negotiate terms and conditions for a possible business

transaction or strategic alliance regarding orBec<sup>®</sup> and potentially other DOR pipeline compounds until March 1, 2007. Sigma-Tau is a pharmaceutical company that creates novel therapies for the unmet needs of patients with rare diseases. They have both prescription and consumer products in metabolic, oncology, renal and supplements.

Under the terms of the letter of intent, Sigma-Tau has purchased \$1 million of our common stock at the market price of \$0.246 per share, representing approximately four million shares. Sigma-Tau paid an additional \$2 million in cash, which was to be considered an advance payment to be deducted from upfront monies due to us by Sigma-Tau pursuant to any future orBec<sup>®</sup> commercialization arrangement reached between the two parties. Because no agreement was reached by March 1, 2007, we are obligated to return \$2 million to Sigma-Tau by April 30, 2007. If we do not pay Sigma-Tau back in cash by May 31, 2007, interest will accrue at a rate of 6% compounded annually and Sigma-Tau will have the option in its sole discretion of converting the accrued amount into common stock at a price per share equal to 80% of the market price at the time the payment is made. On February 21, 2007, Sigma-Tau relinquished its exclusive rights under the letter of intent with regard to acquisition discussions. However, all other terms of the letter of intent remain in effect, and Sigma-Tau and us are engaged in discussions for a European collaboration relating to orBec<sup>®</sup>.

### ***Research and Development***

Since 2000, we have incurred expenses of approximately \$15,000,000 in the development of orBec<sup>®</sup>. Research and development costs for orBec<sup>®</sup> totaled \$3,019,756 in 2006 and \$2,209,770 in 2005, of which \$124,958 are for costs reimbursed under the FDA orphan products grant. If orBec<sup>®</sup> is approved by the FDA in the third quarter of 2007, we expect orBec<sup>®</sup> to begin generating revenues by the fourth quarter of 2007. If the FDA rejects the NDA or does not approve orBec<sup>®</sup> in a timely manner (or in accordance with anticipated and established timelines), our financial condition, liquidity, and ability to raise additional equity financing could be impaired.

To build upon the positive results obtained during development of orBec<sup>®</sup> for the treatment of GI GVHD, we will pursue a follow-on development program targeting the prevention of acute GVHD. This program will be a Phase 2 single center trial that will be conducted at the Fred Hutchinson Cancer Research Center. This study will enroll approximately 138 patients and is designed to assess the safety and efficacy of orBec<sup>®</sup> in preventing acute GVHD after allogeneic hematopoietic stem cell transplantation. We anticipate initiating this Phase 2 clinical trial in the second quarter of 2007. If the data from this clinical trial demonstrates positive results, the potential market for orBec<sup>®</sup> would expand to potentially include all patients in the U.S. who undergo allogeneic hematopoietic stem cell transplantation and who are at risk for developing acute GVHD.

### ***About Graft-versus-Host Disease***

Graft-versus-Host Disease occurs in patients following an allogeneic bone marrow transplant in which tissues of the host, most frequently the gut, liver, and skin, are attacked by lymphocytes in the donor (graft) marrow. Patients with mild to moderate GI GVHD present to the clinic with early satiety, anorexia, nausea, vomiting and diarrhea. If left untreated, symptoms of GI GVHD persist and can progress to necrosis and exfoliation of most of the epithelial cells of the intestinal mucosa, frequently a fatal condition. Approximately 50 to 70% of the approximate 12,000 annual allogeneic transplant patients in the United States will develop some form of acute GI GVHD.

GI GVHD is one of the most common causes for the failure of bone marrow transplant procedures. These procedures are being increasingly utilized to treat leukemia and other cancer patients with the prospect of eliminating residual disease and reducing the likelihood of relapse. orBec<sup>®</sup> represents a first-of-its-kind oral, locally acting therapy tailored to treat the gastrointestinal manifestation of GVHD, the organ system where GVHD is most frequently encountered and highly problematic. orBec<sup>®</sup> is intended to reduce the need for systemic immunosuppressives to treat GI GVHD. Currently approved systemic immunosuppressives utilized to control GI GVHD substantially inhibit the highly desirable graft-versus-leukemia (“GVL”) effect of bone marrow transplants, leading to high rates of aggressive forms of

relapse, as well as substantial rates of mortality due to opportunistic infection.

### ***About Allogeneic Bone Marrow/Stem Cell Transplantation (HSCT)***

Allogeneic hematopoietic stem cell transplantation (“HSCT”) is considered a potentially curative option for many leukemias as well as other forms of blood cancer. In an allogeneic HSCT procedure, hematopoietic stem cells are harvested from a closely matched relative or unrelated person, and are transplanted into the patient following either high-dose chemotherapy or intense immunosuppressive conditioning therapy. The curative potential of allogeneic HSCT is now partly attributed to the so-called GVL or graft-versus-tumor (“GVT”) effects of the newly transplanted donor cells to recognize and destroy malignant cells in the recipient patient.

The use of allogeneic HSCT has grown substantially over the last decade due to advances in human immunogenetics, the establishment of unrelated donor programs, the use of cord blood as a source of hematopoietic stem cells and the advent of non-myeloablative conditioning regimens (“mini-transplants”) that avoid the side effects of high-dose chemotherapy. Based on the latest statistics available, it is estimated that there are more than 10,000 HSCT procedures annually in the U.S. and a comparable number in Europe. Estimates as to the current annual rate of increase in these procedures are as high as 20%. High rates of morbidity and mortality occur in this patient population. Clinical trials are also underway testing allogeneic HSCT for treatment of some metastatic solid tumors such as breast cancer, renal cell carcinoma, melanoma and ovarian cancer. Allogeneic transplants have also been used as curative therapy for several genetic disorders, including immunodeficiency syndromes, inborn errors of metabolism, thalassemia and sickle cell disease. The primary toxicity of allogeneic HSCT, however, is GVHD in which the newly transplanted donor cells damage cells in the recipient’s gastrointestinal tract, liver and skin.

### **Future Potential Indications of orBec®**

Based on its pharmacological characteristics, orBec® may have utility in treating other conditions of the gastrointestinal tract having an inflammatory component. We have an issued U.S. patent (6,096,731) claiming the use of oral BDP as a method for preventing the tissue damage that is associated with both GI GVHD following hematopoietic cell transplantation, as well as GVHD, as occurs following organ allograft transplantation. We plan on initiating a Phase 2 trial of orBec® in the prevention of acute GVHD sometime in the second quarter of 2007. In addition, we are exploring the possibility of testing orBec® for local inflammation associated with Ulcerative Colitis, Crohn’s Disease, Lymphocytic Colitis, Irritable Bowel Syndrome and liver disease, among other indications.

### **Other Products in BioTherapeutics Pipeline**

The following is a brief description of other products in our pipeline. Due to past resource limitations, we have focused our R&D efforts on orBec®, RiVax® and BT-VACC™. However with the completion of our recent financing, we anticipate re-initiating development of some of these products, all of which are currently available for licensing or acquisition. These products consist of drug delivery technologies that facilitate the oral delivery of hydrophobic and hydrophilic drugs, including peptides, and macromolecules such as leuprolide. The drug delivery systems, LPM™, LPE™, PLP™, were developed internally and we have submitted and pursued patents on these products. We acquired an oral form of the immunosuppressant azathioprine (Oraprine™) as a result of the merger of Endorex and CTD in November 2001. We also acquired patent applications from Dr. Joel Epstein of the University of Washington. We conducted a Phase 1 study that established the feasibility of the oral drug to treat oral ulcerative lesions resulting from graft versus host disease.

### *LPM<sup>TM</sup> - Leuprolide*

Lipid Polymer Micelle (LPM<sup>TM</sup>). We are developing the LPM<sup>TM</sup> system for enhancing the intestinal absorption of water-soluble drugs/peptides that are not ordinarily absorbed or are degraded in the gastrointestinal tract. As the first example of a peptide drug that can be delivered orally, we are developing an oral formulation of the peptide drug Leuprolide, a hormone drug that is among the leading drugs used to treat prostate cancer and endometriosis. The oral dosage form utilizes a novel drug delivery system composed of safe and well characterized ingredients to enhance intestinal absorption. The LPM<sup>TM</sup> system incorporates biocompatible lipids and polymers and is potentially useful for a wide variety of molecular structures of water-soluble drugs, particularly those based on peptides. Although both small molecules and large molecules can be incorporated into our system, there is a molecular size cutoff for a commercially viable oral bioavailability enhancement, and this system is most effective with hydrophilic drugs/peptides below 5,000 Daltons in molecular weight. Utilizing a simple and scalable manufacturing process, aqueous solutions of peptides can be incorporated into lipid-polymer mixtures forming stable micelles.

Leuprolide is a potent analogue agonist of the Luteinizing Hormone Releasing Hormone (“LHRH”), currently used to treat hormone responsive prostate cancer in men, endometriosis in women, and precocious puberty in children. The current injected LHRH analog formulations are depot formulations that are designed to be injected under the skin and release Leuprolide in a controlled fashion over 1 to 4 months (Lupron® marketed by TAP Pharmaceuticals and Zoladex® marketed by Astra Zeneca) and for periods up to 6 months (Eligard®, marketed in the U.S. by Sanofi). Leuprolide is used in treating prostate cancer to slow the growth of the cancer. In children with central precocious puberty, Leuprolide reduces the levels of estrogen and testosterone. Estrogens promote the growth of abnormal uterine tissue that exists outside the uterus and thus Leuprolide is used to reduce the production of estrogen and treat both fibroids and endometriosis.

Based on promising preclinical data and high bioavailability achieved in animals with oral administration of Leuprolide in the LPM<sup>TM</sup> system, we believe that LPM<sup>TM</sup>-Leuprolide may have a competitive role in a segment of the current Leuprolide market and effectively compete with the depot formulations of Leuprolide. Specifically we believe that LPM<sup>TM</sup> -Leuprolide can be developed as a once-a-day oral formulation that can maintain blood levels of Leuprolide resulting in suppression of estrogen production in women suffering from endometriosis. We believe there is a need for a better formulation of a LHRH-like product, such as LPM<sup>TM</sup>-Leuprolide that will increase compliance and efficacy, with fewer side effects.

### *Research and Development*

In preclinical studies, we have been able to demonstrate significant intestinal absorption enhancement of both LPM<sup>TM</sup>-Leuprolide and Leuprolide in comparison to solution formulations of the peptides in rats and dogs. Based on these promising preclinical data, we plan further development of LPM<sup>TM</sup>-Leuprolide. Because of the wide applicability of Leuprolide in other medical conditions, such as in prostate cancer, it is possible that an oral formulation will prove to be acceptable for other indications. Obtaining marketing approval for further indications will require additional clinical testing in patients. In addition to LHRH and agonists, we plan to evaluate other classes of water-soluble drugs/peptides with the LPM<sup>TM</sup> system when resources permit.

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**Cost and Development analysis for LPM™ Leuprolide**

	2007	2008	2009	2010	2011
Pilot stability	\$50,000	\$150,000	\$-	\$-	\$-
Process Development Scale up	100,000	150,000			
Product characterization					
Acute toxicity studies	100,000	250,000			
Clinical supply manufacture		250,000			
Phase 1 Clinical studies	150,000	300,000			
Animal dosing studies (efficacy)		250,000			
Phase 2 clinical (dose ranging)			1,500,000	500,000	
Phase 3 (endometriosis)				2,500,000	1,000,000
Manufacture - Characterization				750,000	
<b>TOTALS</b>	<b>\$400,000</b>	<b>\$1,350,000</b>	<b>\$1,500,000</b>	<b>\$3,250,000</b>	<b>\$1,000,000</b>

We have completed proof of concept studies in rats and dogs. We first plan to conduct a small Phase 1 bioavailability study to compare the absorption of a enteric-coated gelatin capsule of LPM<sup>®</sup>-Leuprolide with an injected formulation. We anticipate initiating this trial in mid-2007. We then plan to conduct Phase 2 trials in volunteers to establish the proper dosing regimen before moving to Phase 3 trials in women with endometriosis when resources permit. Being able to move forward towards product launch and generation of revenue along the above timeline is highly dependent upon the results from the prior phase and ongoing interactions with the FDA. The scheduling of product launch is also highly dependent on being able to recruit sufficient numbers of patients for Phase 2 evaluation. We will have to raise additional funds in order to conduct later phase clinical trials. This may require partnering of the product at various stages during development.

The costs that we have incurred to develop LPM<sup>™</sup>-Leuprolide since 2000 total \$1,248,324. Research and development costs for LPM<sup>™</sup>-Leuprolide totaled \$3,900 in 2005 and \$5,679 in 2006. These costs are mainly legal costs in connection with maintenance of our patent positions. It is our intention to out-license this program to another pharmaceutical company. If we are unable to develop LPM<sup>™</sup>-Leuprolide on our own, it would not have a material adverse effect on us.

***Oraprine™***

Oraprine<sup>™</sup> is an oral suspension of azathioprine, which we believe may be bioequivalent to the oral azathioprine tablet currently marketed in the United States as Imuran<sup>®</sup>. We acquired the azathioprine drug (Oraprine<sup>™</sup>) as a result of the merger of Endorex and CTD in November 2001. Also acquired were patent applications licensed from Dr. Joel Epstein of the University of Washington. We conducted a Phase 1 bioequivalence trial following a trial conducted by Dr. Epstein that established the feasibility of the oral drug to treat oral ulcerative lesions resulting from graft versus



host disease. Azathioprine is one of the most widely used immunosuppressive medications in clinical medicine. Azathioprine is commonly prescribed to organ transplant patients to decrease their natural defense mechanisms to foreign bodies (such as the transplanted organ). The decrease in the patient's immune system increases the chances of preventing rejection of the transplanted organ in the patient. Oraprine™ may provide a convenient dosage form for patients who have difficulty swallowing pills or tablets, such as children.

Based on the outcomes of two Phase 1 clinical trials of Oraprine™, we are planning to reformulate AZA (Oraprine™) as a stable oral liquid suspension with the intent of demonstrating bioequivalence to the branded oral azathioprine tablets currently marketed in the United States (Imuran® and Azasan®). One Phase 1 bioequivalence trial was conducted with an early formulation and demonstrated bioequivalence to the marketed product.

#### *Research and Development*

Our research and development plans are primarily focused on obtaining sufficient stability data on the reformulated product to allow us to proceed into additional humans trials. We propose to position Oraprine™ initially in the market as a specialty generic product to be used by transplant or rheumatoid arthritis patients who cannot swallow medicines in tablet form. We anticipate that the market will include the pediatric transplant populations, the elderly, and cancer patients who have received stem cell transplants. We thus plan to file an abbreviated new drug application (“ANDA”) for Oraprine™ based on small bioequivalence trials in healthy humans accompanied by new manufacturing data on the characterization of the stable formulation and to obtain approval for use in pediatric patients when resources permit. If approval is received, we then plan to conduct additional studies when resources permit in patients with chronic oral ulcerations, such as oral graft versus host disease (GVHD) and other autoimmune diseases of the mouth and upper esophagus, where topical application of AZA may have an advantage in treatment of mucosal lesions whose underlying cause is mediated by activated T cells. The FDA has granted orphan drug status for our application for use of Oraprine™ for the treatment of oral GVHD.

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**Cost and timeline analysis of Oraprine™ development.**

	2007	2008	2009	2010	2011
Continued reformulation	\$75,000	\$-	\$-	\$-	\$-
Pilot stability	50,000				
Formal stability	75,000	225,000			
Bioequivalence (Clinical) Adults		250,000	500,000		
Bioequivalence (clinical) - pediatric			500,000		
Juvenile Rheumatoid arthritis (RA)			1,000,000	500,000	
Toxicology				400,000	
Manufacture-Quality control			750,000	750,000	500,000
<b>TOTALS</b>	<b>\$200,000</b>	<b>\$475,000</b>	<b>\$2,750,000</b>	<b>\$1,650,000</b>	<b>\$500,000</b>

The cost estimates in the table above are based upon conducting continued research into the development of a stable liquid formulation, which are planned to be completed before the end of 2007, with concurrent initiation of stability assessments. A series of bioequivalence studies are to be completed in adults and children by 2009, with trials to establish safety and efficacy in pediatric juvenile rheumatoid arthritis patients completed by 2010. Marketing approval with indications for kidney transplant and adult rheumatoid arthritis are anticipated by 2011, with generation of revenue by 2012. Market approval for Oraprine™ for juvenile rheumatoid arthritis is anticipated by 2012. The assumption in the above scenario is that we will develop the drug on our own without partners and market the drug through our own sales force. The premise behind the development of the drug under the ANDA strategy is that the technical objective of achieving a stable liquid formulation can be achieved in the light of the known chemical instability of azathioprine. Thus, the major milestone in 2007 is the completion of stability data with demonstration of acceptable drug stability. It is possible that, based on achievement of any of the milestones, we will achieve revenue through outlicensing and partnering arrangements.

The costs that we have incurred to develop Oraprine™ since 2000 total \$415,096. Research and development costs for Oraprine™ totaled \$8,100 in 2005 and \$6,996 in 2006. These costs are mainly legal costs in connection with maintenance of our patent positions. It is our intention to out-license this program to another pharmaceutical company. If we are unable to develop Oraprine™ on our own, it would not be material.

### ***LPE™ and PLP™ Systems for Delivery of Water-Insoluble Drugs***

We have also conducted initial research studies to identify drug delivery systems that promote the oral (intestinal) absorption of water insoluble drugs. One of the main difficulties in delivering drugs by the oral route is the low solubility of many therapeutic compounds. We have developed two novel delivery systems that we think will be useful for oral delivery of water insoluble drugs. One of these systems is based on emulsions composed of polymers (LPE, or lipid polymer emulsions) and another is a composed of solid lipid particles (PLP, or polymer lipid particles). We have conducted initial studies in animals that demonstrate that the LPE system used with the anticancer drug paclitaxel, the active drug in Taxol, promotes oral absorption with significant bioavailability in rodents in relationship to formulations of the injected drug. We believe that this example demonstrates the promise of using these systems for not only paclitaxel for further development but also for oral delivery of other water insoluble drugs. We anticipate that the general level of expenditure for pre-clinical research needed to advance oral LP-paclitaxel to Phase 1 studies, including preclinical toxicology evaluations, will be approximately \$0.8 million, and will take 1-1.5 years.

The LPE™ system is in the form of an emulsion or an emulsion pre-concentrate incorporating lipids, polymers and co-solvents. We have filed for patent applications on the use of perillyl alcohol as a solvent, surfactant and absorption enhancer for lipophilic compounds. The polymers used in these formulations can either be commercially available or proprietary polymerized lipids and lipid analogs.

### **BioDefense Programs**

In collaboration with two United States academic research institutions, we are developing vaccines to combat the threat posed by two potent biological toxins; ricin toxin and botulinum toxin. Both vaccines under development are recombinant products produced in bacterial hosts and both consist of nontoxic subunits of the native toxins. These subunits induce antibodies that neutralize the toxins from which they are derived. Through exclusive licenses with these Universities, we have secured intellectual property rights for these vaccines.

#### **Rivax™ - Ricin Toxin Vaccine**

The development of RiVax™, our ricin toxin vaccine, has progressed significantly this year. Our academic partner, The University of Texas Southwestern led by Dr. Ellen Vitetta, completed a Phase 1 safety and immunogenicity trial of RiVax™ in human volunteers. The results of the Phase 1 safety and immunogenicity dose-escalation study indicate that the vaccine is well tolerated and induces antibodies in humans that neutralize ricin toxin. Despite the absence of an adjuvant, antibodies were present in the blood of several volunteers for as long as 127 days after their last vaccination. The functional activity of the antibodies was confirmed by transferring serum globulins from the vaccinated individuals along with active ricin toxin to sensitive mice, which then survived subsequent exposure to ricin toxin. The outcome of the study was recently published in the Proceedings of the National Academy of Sciences. In January of 2005, we entered into a manufacturing and supply agreement for RiVax™ with Cambrex Corporation. In July of 2006, we announced successful completion of current Good Manufacturing Practices (“cGMP”) milestone for the production of RiVax™.

On September 29, 2006, we announced that we had been awarded a grant of approximately \$4,800,000 from the NIAID over a three year period for the continued development of RiVax™. This is in addition to the \$6,433,316 already awarded by the NIAID. This new grant will fund the development of animal models which will be used to correlate human immune response to the vaccine with protective efficacy in animals. This is necessary for ultimate licensure by the FDA, when human efficacy vaccine trials are not possible. This new grant also supports the further biophysical characterization of the vaccine containing a well-characterized adjuvant that is needed to enhance the immune response to recombinant proteins. These studies will be required to assure that the vaccine is stable and potent

over a period of years.

### Ricin Toxin

Ricin toxin is a heat stable toxin that is easily isolated and purified from the bean of the castor plant. As a bioterrorism agent, ricin could be disseminated as an aerosol, by injection, or as a food supply contaminant. The CDC have classified ricin as a Category B biological agent. Ricin works by first binding to glycoproteins found on the exterior of a cell, and then entering the cell and inhibiting protein synthesis leading to cell death. Once exposed to ricin toxin, there is no effective therapy available to reverse the course of the toxin. Currently, there is no FDA approved vaccine to protect against the possibility of ricin toxin being used in a terrorist attack, or its use as a weapon on the battlefield, nor is there a known antidote for ricin toxin exposure.

### *Research and Development*

RiVax™ is being developed as a conventional vaccine, to be administered by injections. We have secondary plans to develop RiVax™ as a nasally administered vaccine for the medical purpose of stimulating immunity in the lungs to prevent toxicity by the anticipated route of exposure through inhalation if ricin were to be used as a bio-weapon. At this point we are focusing our efforts on the development of the injectable vaccine, and have deferred the development of a nasal vaccine.

### **Cost and Development analysis for RiVax™**

	2007	2008	2009	2010	2011
cGMP stability	\$85,000	\$-	\$-	\$-	\$-
Adjuvant characterization	210,000				
Animal model development	500,000				
Vaccine/protection Inhaled ricin	295,000	295,000	295,000		
Clinical supply (3000 doses)	150,000				
Release and potency testing		250,000			
Human/animal correlation	130,000	130,000			
Phase 1/2 (dose determination)	150,000	1,250,000			
Pivotal animal studies (primates)			1,500,000		
Additional manufacture			750,000		
Other				50,000	50,000
<b>TOTALS</b>	<b>\$1,520,000</b>	<b>\$1,925,000</b>	<b>\$2,545,000</b>	<b>\$50,000</b>	<b>\$50,000</b>

The costs that we have incurred to develop RiVax™ since 2002 total \$6,360,523. Research and development costs for RiVax™ totaled \$2,422,196 in 2005 of which \$1,942,076 was for costs reimbursed under the NIH grant, and \$2,130,516

in the second quarter of 2006, of which \$1,128,257 was for costs reimbursed under this grant.

## **2. BT-VACC™ - Botulinum Toxin Vaccine**

Our botulinum toxin vaccine, called BT-VACC™, was developed through the research of Dr. Lance Simpson at Thomas Jefferson University in Philadelphia, Pennsylvania. Botulinum toxin is the product of the bacteria *Clostridium botulinum*. Botulinum toxin is one of the most poisonous natural substances known. Botulinum toxin causes acute, symmetric, descending flaccid paralysis due to its action on peripheral cholinergic nerves. Paralysis typically presents 12 to 72 hours after exposure. Death results from paralysis of the respiratory muscles. Current treatments include respiratory support and passive immunization with antibodies which must be administered before symptoms occur, which leaves little time post-exposure for effective treatment.

We are developing a multivalent vaccine against botulinum neurotoxins serotypes A, B and E, which account for almost all human cases of disease. Currently, the recombinant vaccines under development are given by intramuscular injections. Typically, vaccines given by mucosal routes are not immunogenic because they do not attach to immune inductive sites. In the case of the combination BT-VACC™ both the A and the B antigens were capable of attaching to cells in the mucosal epithelium and inducing an immune response with similar magnitude to the injected vaccine. The alternate route provides a self administration option, which will bypass the requirement for needles and personnel to administer the vaccine. We have identified lead antigens against Serotypes A, B and E consisting of the Hc50 fragment of the botulinum toxin. Our preclinical data to date suggests that a bivalent formulation of serotypes A and B is effective at low, mid and high doses as an intranasal vaccine and effective at the higher dose level orally in animal models. The animals were given a small quantity of the bivalent combination vaccine containing each of the type A and type B antigens (10 micrograms) three times a day at two week intervals. All of the animals developed equivalent immune responses to A and B types in the serum. Importantly, they were then protected against exposure to each of the native toxin molecules given at 1000 fold the dose that causes lethality. The immune responses were also comparable to the same vaccines when given by intramuscular injection.

Ongoing studies are focused on serotype E and multivalent immunization experiments using serotype A, B and E antigens given simultaneously to animals. Further, we are engaged in formulation work to create an oral dosage form, which we anticipate will improve immunogenicity and potency. We have been collaborating with Thomas Jefferson University to conduct vaccine efficacy experiments under a sponsored research agreement. We have applied for and intend to continue to apply for research grants and contracts from the U.S. government to continue development of this vaccine. We have also entered into a joint development agreement with Dowpharma, a business unit of the Dow Chemical Company. Dowpharma is providing process development leading to current Good Manufacturing Practices (cGMP) production services for BT-VACC™ using its Pfēnex Expression Technology™, a high yield expression system based on *Pseudomonas fluorescens*.

On September 29, 2006, we announced that we had been awarded a Small Business Innovation Research (“SBIR”) grant of approximately \$500,000 from the NIAID over a one year period for further work to combine antigens from different serotypes of botulinum toxin for a prototype multivalent vaccine. The grant funding will support further work in characterizing antigen formulations.

The government has classified botulinum toxin as a Category A biothreat and has allotted up to \$1.7 Billion under the current project BioShield bill. We are aware that the Department of Defense (“DoD”) has infused \$200 Million into advanced development of an injectable vaccine for botulinum toxin, which is still in early clinical phases of development.

### ***Research and Development***

We have conducted a series of studies in animals that have demonstrated that the key immunogenic antigen derived from botulinum toxin can be given to animals orally and elicit a protective immune response. This has been shown

with a single serotype of botulinum toxin and recently the observation has been expanded to a prototype mixture of three antigens given to animals by intranasal immunization. We have used our own capital to invest in the demonstration of product feasibility since the inception of this project in 2003, but now are using grant funding to advance further product development. We have received a Phase 1 \$0.5 Million SBIR grant from the NIH for project funding during 2007, and anticipate being able to obtain additional SBIR funding of \$1.0-3.0 Million for 2008.

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**Cost and Development analysis for BT-VACC™**

	2007	2008	2009	2010	2011
Definition of enteric formulation	\$130,000	\$-	\$-	\$-	\$-
S t a b i l i t y characterization	50,000				
Animal efficacy	150,000	250,000			
Process development 3 components		150,000	350,000		
Assay development		250,000			
S c a l e u p a n d production			500,000		
Toxicology evaluation			300,000		
Release/potency			200,000		
Phase 1 Safety/immunogenicity -volunteers			150,000		
Phase 2 +manufacture				5,000,000	4,000,000
Pivotal animal				1,500,000	500,000
<b>TOTALS</b>	<b>\$330,000</b>	<b>\$650,000</b>	<b>\$1,500,000</b>	<b>\$6,500,000</b>	<b>\$4,500,000</b>

The costs that we have incurred to develop BT-VACC™ from 2002 total \$2,104,767. Research and development costs for BT-VACC™ totaled \$979,247 in 2005 and \$130,381 in the second quarter of 2006.

**Strategy for development of BioDefense products**

Since 2001, the United States government has developed an initiative to stockpile countermeasures and vaccines for over 30 biological threats that could be used in bioterrorist attacks or on the battlefield. The CDC and the NIAID have recognized threats based on several factors: 1) public health impact based on illness and death; 2) ability for an agent to be disseminated, produced, and transmitted from person to person; 3) public perception and fear; and 4) special public health preparedness needs. This prioritization has resulted in classification into three threat categories: A, B, and C, where agents in Category A have the greatest potential for adverse public health impact, and agents in Category B have potential for large scale dissemination, but generally cause less illness and death. Biological agents that are not regarded to present a high public health risk but may emerge as future threats, as the scientific understanding of the agents develops, have been placed in Category C. Very few countermeasures or vaccines currently exist for Category A, B, or C agents. We believe that we have identified and will continue to identify products with relatively low development risk for addressing biological threats in Category A (e.g., botulinum toxin) and B (e.g., ricin toxin). Biodefense products can be developed and sold to the U.S. government before the FDA has licensed them for commercial use. Secondly, the FDA itself has facilitated the approval process, whereby portions of the human clinical development pathway can be truncated. Under the two animal rule, when it is not ethical to perform human efficacy trials, the FDA can rely on safety evidence in humans and evidence from animal studies to provide substantial proof of a product's effectiveness under circumstances where there is a reasonably well-understood mechanism for the toxicity of the agent and its prevention or cure by the product. This effect has to be demonstrated in more than one animal species expected to react with a response predictive of humans or in one animal species. The animal study endpoint must be clearly related to the desired benefit in humans and the information obtained from animal studies allows selection of an effective dose in humans. Biodefense products are eligible for priority review in cases where the product is a significant advance for a serious or life threatening condition. The government would also

purchase countermeasures upon expiration, so there is a recurrent market to replenish the stockpile. Under a \$5.6 Billion appropriation bill over 10 years, the BioShield Act of 2004 authorizes the government to procure new countermeasures. This bill also allows the NIH to use simplified and accelerated peer-review and contracting procedures for research and development and empowers the FDA to approve distribution of unapproved medical products on an emergency basis. Further, additional legislation, such as the recently enacted Biomedical Advanced Research and Development Authority (BARDA) bill, may help provide funding for products at an intermediate state of development.

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**Summary of Our Products in Development**

The following tables summarize the products that we are currently developing:

<b>BioTherapeutic Products</b>		
<b>Product</b>	<b>Therapeutic Indication</b>	<b>Stage of Development</b>
orBec®	Treatment of gastrointestinal Graft-versus-Host Disease	NDA and MAA filed and under review
LPM™ - Leuprolide	Endometriosis and Prostate Cancer	Phase 1
Oraprine™	Oral lesions resulting from Graft-versus-Host Disease	Phase 1/2
LPE™ and PLP™ Systems	Delivery of Water-Insoluble Drugs	Pre-Clinical

**Biodefense Products**

<b>Select Agent</b>	<b>Currently Available Countermeasure</b>	<b>DOR Biodefense Product</b>
Ricin Toxin	No vaccine or antidote currently FDA approved	Injectable Ricin Vaccine Phase I Clinical Trial Successfully Completed
Botulinum Toxin	No vaccine or antidote currently FDA approved	Oral/Nasal Botulinum Vaccine

## **The Drug Approval Process**

### **General**

Before marketing, each of our products must undergo an extensive regulatory approval process conducted by the FDA and applicable agencies in other countries. Testing, manufacturing, commercialization, advertising, promotion, export and marketing, among other things, of the proposed products are subject to extensive regulation by government authorities in the United States and other countries. All products must go through a series of tests, including advanced human clinical trials, which the FDA is allowed to suspend as it deems necessary.

Our products will require, prior to commercialization, regulatory clearance by the FDA and by comparable agencies in other countries. The nature and extent of regulation differs with respect to different products. In order to test, produce and market certain therapeutic products in the United States, mandatory procedures and safety standards, approval processes, manufacturing and marketing practices established by the FDA must be satisfied.

An Investigational New Drug Application (“IND”) is required before human clinical use in the United States of a new drug compound or biological product can commence. The IND includes results of pre-clinical animal studies evaluating the safety and efficacy of the drug and a detailed description of the clinical investigations to be undertaken.

Clinical trials are normally done in three Phases, although the phases may overlap. Phase 1 trials are concerned primarily with the safety of the product. Phase 2 trials are designed primarily to demonstrate effectiveness and safety in treating the disease or condition for which the product is indicated. These trials typically explore various doses and regimens. Phase 3 trials are expanded multi-center clinical trials intended to gather additional information on safety and effectiveness needed to clarify the product’s benefit-risk relationship, discover less common side effects and adverse reactions, and generate information for proper labeling of the drug, among other things. The FDA receives reports on the progress of each phase of clinical testing and may require the modification, suspension or termination of clinical trials if an unwarranted risk is presented to patients. When data is required from long-term use of a drug following its approval and initial marketing, the FDA can require Phase 4, or post-marketing, studies to be conducted.

With certain exceptions, once successful clinical testing is completed, the sponsor can submit an NDA for approval of a drug. The process of completing clinical trials for a new drug is likely to take a number of years and require the expenditure of substantial resources. Furthermore, the FDA or any foreign health authority may not grant an approval on a timely basis, if at all. The FDA may deny an NDA, in its sole discretion, if it determines that its regulatory criteria have not been satisfied or may require additional testing or information. Among the conditions for marketing approval is the requirement that the prospective manufacturer’s quality control and manufacturing procedures conform to good manufacturing regulations. In complying with standards contained in these regulations, manufacturers must continue to expend time, money and effort in the area of production, quality control and quality assurance to ensure full technical compliance. Manufacturing facilities, both foreign and domestic, also are subject to inspections by, or under the authority of, the FDA and by other federal, state, local or foreign agencies.

Even after initial FDA or foreign health authority approval has been obtained, further studies, including Phase 4 post-marketing studies, may be required to provide additional data on safety and will be required to gain approval for the use of a product as a treatment for clinical indications other than those for which the product was initially tested. Also, the FDA or foreign regulatory authority will require post-marketing reporting to monitor the side effects of the drug. Results of post-marketing programs may limit or expand the further marketing of the products. Further, if there are any modifications to the drug, including any change in indication, manufacturing process, labeling or manufacturing facility, an application seeking approval of such changes may be required to be submitted to the FDA or foreign regulatory authority.

In the United States, the Federal Food, Drug, and Cosmetic Act, the Public Health Service Act, the Federal Trade Commission Act, and other federal and state statutes and regulations govern or influence the research, testing, manufacture, safety, labeling, storage, record keeping, approval, advertising and promotion of drug, biological, medical device and food products. Noncompliance with applicable requirements can result in, among other things, fines, recall or seizure of products, refusal to permit products to be imported into the U.S., refusal of the government to approve product approval applications or to allow the Company to enter into government supply contracts, withdrawal of previously approved applications and criminal prosecution. The FDA may also assess civil penalties for violations of the Federal Food, Drug, and Cosmetic Act involving medical devices.

For development of biodefense vaccines and therapeutics, the FDA has instituted policies that are expected to result in accelerated approval. This includes approval for commercial use using the results of animal efficacy trials, rather than efficacy trials in humans. However, the Company will still have to establish that the vaccine and countermeasures it is developing are safe in humans at doses that are correlated with the beneficial effect in animals. Such clinical trials will also have to be completed in distinct populations that are subject to the countermeasures; for instance, the very young and the very old, and in pregnant women, if the countermeasure is to be licensed for civilian use. Other agencies will have an influence over the risk benefit scenarios for deploying the countermeasures and in establishing the number of doses utilized in the Strategic National Stockpile. We may not be able to sufficiently demonstrate the animal correlation to the satisfaction of the FDA, as these correlates are difficult to establish and are often unclear. Invocation of the two animal rule may raise issues of confidence in the model systems even if the models have been validated. For many of the biological threats, the animal models are not available and the Company may have to develop the animal models, a time-consuming research effort. There are few historical precedents, or recent precedents, for the development of new countermeasure for bioterrorism agents. Despite the two animal rule, the FDA may require large clinical trials to establish safety and immunogenicity before licensure and it may require safety and immunogenicity trials in additional populations. Approval of biodefense products may be subject to post-marketing studies, and could be restricted in use in only certain populations.

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## **Marketing Strategies**

We have had strategic discussions with a number of pharmaceutical companies regarding the partnering or sale of orBec<sup>®</sup> and sale or merger of all of our assets. We may seek a marketing partner in the U.S. and abroad in anticipation of commercialization of orBec<sup>®</sup>. We are actively seeking a partner for orBec<sup>®</sup> for territories outside North America. We are actively seeking a partner for the development of other potential indications of orBec<sup>®</sup> as well as for our Oraprine<sup>™</sup>, LPM<sup>™</sup> - Leuprolide, LPE<sup>™</sup> and PLP<sup>™</sup> Systems for Delivery of Water-Insoluble Drugs. We also are actively considering a strategy of a commercial launch of orBec<sup>®</sup> by ourselves in the U.S.

We have had strategic discussions with a number of pharmaceutical companies regarding the partnering or sale of our biodefense vaccine products. We may market our biodefense vaccine products directly to government agencies. We believe that both military and civilian health authorities of the United States and other countries will increase their stockpiling of therapeutics and vaccines to treat and prevent diseases and conditions that could ensue following a bioterrorism attack.

## **Competition**

Our competitors are pharmaceutical and biotechnology companies, most of whom have considerably greater financial, technical, and marketing resources than we currently have. Another source of competing technologies is universities and other research institutions, including the U.S. Army Medical Research Institute of Infectious Diseases, and we face competition from other companies to acquire rights to those technologies.

## **Biodefense Vaccine Competition**

We face intense competition in the area of biodefense from various public and private companies, universities and governmental agencies, such as the U.S. Army, some of whom may have their own proprietary technologies which may directly compete with the our technologies. Acambis, Inc., Avant Immunotherapeutics, Inc., Dynavax, Emergent Biosolution (formerly Bioport Corporation), VaxGen, Inc., Chimerix, Inc., GlaxoSmithKline through acquisition of ID Biomedical Corporation, Human Genome Sciences, Inc., CpG Immunotherapeutics, Inc., Avansir Pharmaceuticals, Inc., Dynport Vaccine Company, LLC., Pharmatheneand others have announced vaccine or countermeasure development programs for biodefense. Some of these companies have substantially greater human and financial resources than we do, and many of them have already received grants or government contracts to develop anti-toxins and vaccines against bioterrorism. VaxGen and Avecia Biotechnology, Inc. have both received NIH contracts to develop a next generation injectable anthrax vaccine. VaxGen has also received approximately \$900 million procurement order from the U.S. government to produce and deliver 75 million doses of Anthrax vaccine. This contract was recently withdrawn by the HHS because of the inability of Vaxgen to enter into Phase 2 clinical trials according to contract timelines. Several companies have received development grants from NIH for biodfense products. For example, CpG Immunotherapeutics, Inc. has received a \$6 million Department of Defense grant to develop vaccine enhancement technology. ID Biomedical Corporation, has entered into an \$8 million contract to develop a plague vaccine in conjunction with Dynport Vaccine Company, LLC, a prime contractor with the DoD. Dynport Vaccine Company currently has a \$200 million contract to develop vaccines for the U.S. Military, including a multivalent botulinum toxin vaccine. Although we have received significant grant funding to date for product development, we have not yet been obtained contract awards for government procurement of products.

## **orBec® Competition**

Competition is intense in the gastroenterology and transplant areas. Companies are attempting to develop technologies to treat GVHD by suppressing the immune system through various mechanisms. Some companies, including Sangstat, Abgenix, and Protein Design Labs, Inc., are developing monoclonal antibodies to treat graft-vs.-host disease. Novartis, Medimmune, and Ariad are developing both gene therapy products and small molecules to treat graft-vs.-host disease. All of these products are in various stages of development. For example, Novartis currently markets Cyclosporin, and Sangstat currently markets Thymoglobulin for transplant related therapeutics. We face potential competition from Osiris Therapeutics if their product Prochymal for the treatment of GI GVHD is successful in ongoing Phase 3 clinical trials and reaches market. We believe that orBec®'s unique release characteristics, intended to deliver topically active therapy to both the upper and lower gastrointestinal systems, should make orBec® an attractive alternative to existing therapies for inflammatory diseases of the gastrointestinal tract.

Competition is also intense in the therapeutic area of inflammatory bowel disease. Several companies, including Centocor, Immunex, and Celgene, have products that are currently FDA approved. For example, Centocor, a subsidiary of Johnson & Johnson, markets the drug product Remicade™ for Crohn's disease. Other drugs used to treat inflammatory bowel disease include another oral locally active corticosteroid called budesonide, which is being marketed by AstraZeneca in Europe and Canada and by Prometheus Pharmaceuticals in the U.S. under the tradename of Entocort®. Entocort is structurally similar to beclomethasone dipropionate, and the FDA approved Entocort for Crohn's disease late in 2001. In Italy, Chiesi Pharmaceuticals markets an oral formulation of beclomethasone dipropionate, the active ingredient of orBec® for ulcerative colitis and may seek marketing approval for their product in countries other than Italy including the United States. In addition, Salix Pharmaceuticals, Inc. markets an FDA-approved therapy for ulcerative colitis called Colazal®.

Several companies have also established various colonic drug delivery systems to deliver therapeutic drugs to the colon for treatment of Crohn's disease. These companies include Ivax Corporation, Inkin Pharmaceutical Corporation, and Elan Pharmaceuticals, Inc. Other approaches to treat gastrointestinal disorders include antisense and gene therapy. Isis Pharmaceuticals, Inc. is in the process of developing antisense therapy to treat Crohn's disease.

## **Patents and Other Proprietary Rights**

Our goal is to obtain, maintain and enforce patent protection for our products, formulations, processes, methods and other proprietary technologies, preserve our trade secrets, and operate without infringing on the proprietary rights of other parties, both in the United States and in other countries. Our policy is to actively seek to obtain, where appropriate, the broadest intellectual property protection possible for our product candidates, proprietary information and proprietary technology through a combination of contractual arrangements and patents, both in the U.S. and elsewhere in the world.

We also depend upon the skills, knowledge and experience of our scientific and technical personnel, as well as that of our advisors, consultants and other contractors, none of which is patentable. To help protect our proprietary knowledge and experience that is not patentable, and for inventions for which patents may be difficult to enforce, we rely on trade secret protection and confidentiality agreements to protect our interests. To this end, we require all employees, consultants, advisors and other contractors to enter into confidentiality agreements, which prohibit the disclosure of confidential information and, where applicable, require disclosure and assignment to us of the ideas, developments, discoveries and inventions important to our business.

We have "Orphan Drug" designations for orBec® in the United States and in Europe. Our Orphan Drug designations provide for seven years of post approval marketing exclusivity in the U.S. and ten years exclusivity in Europe for the use of orBec® in the treatment of GI GVHD. We have pending patent applications for this indication that, if granted, may extend our anticipated marketing exclusivity beyond the seven year post-approval exclusivity provided by the

Orphan Drug Act of 1983. We are the exclusive licensee of an issued U.S. patent that covers the use of orBec<sup>®</sup> for the prevention of GI GVHD.

Under the Waxman-Hatch Act, a patent which claims a product, use or method of manufacture covering drugs and certain other products may be extended for up to five years to compensate the patent holder for a portion of the time required for development and FDA review of the product. The Waxman-Hatch Act also establishes periods of market exclusivity, which are periods of time ranging from three to five years following approval of a drug during which the FDA may not approve, or in certain cases even accept, applications for certain similar or identical drugs from other sponsors unless those sponsors provide their own safety and efficacy data.

### **orBec<sup>®</sup> License Agreement**

In October 1998, our wholly-owned subsidiary, Enteron Pharmaceuticals, Inc. (“Enteron”), entered into an exclusive, worldwide, royalty bearing license agreement with George B. McDonald, M.D., including the right to grant sublicenses, for the rights to the intellectual property and know-how relating to orBec<sup>®</sup>. In addition, Dr. McDonald receives \$40,000 per annum as a consultant.

Enteron also executed an exclusive license to patent applications for "Use of Anti-Inflammatories to Treat Irritable Bowel Syndrome" from the University of Texas Medical Branch-Galveston. Under the license agreements, we will be obligated to make performance-based milestone payments, as well as royalty payments on any net sales of orBec<sup>®</sup>.

### **Ricin Vaccine Intellectual Property**

In January 2003, we executed a worldwide exclusive option to license patent applications with the University of Texas Southwestern Medical Center (“UTSW”) for the nasal, pulmonary and oral uses of a non-toxic ricin vaccine. In June 2004, we entered into a license agreement with UTSW for the injectable rights to the ricin vaccine for initial license fees of \$200,000 of our common stock and \$100,000 in cash. Subsequently, in October of 2004, we negotiated the remaining oral rights to the ricin vaccine for additional license fees of \$150,000 in cash. Our license obligates us to pay \$50,000 in annual license fees.

On March 1, 2005 we signed a sponsored research agreement with UTSW extending through March 31, 2007. The cost of this research is approximately \$190,000. We have additional sponsored research agreements with UTSW funded by two NIH grants. The research will grant us certain rights to such intellectual property. On December 7, 2006 we announced that the United States Patent and Trademark Office (“USPTO”) issued a Notice of Allowance of patent claims based on U.S. Patent Application #09/698,551 entitled “Ricin A chain mutants lacking enzymatic activity as vaccines to protect against aerosolized ricin.” This patent includes methods of use and composition claims for RiVax<sup>™</sup>.

### **Botulinum Toxin Vaccine Intellectual Property**

In 2003, we executed an exclusive license agreement with Thomas Jefferson University for issued U.S. Patent No. 6,051,239 and corresponding international patent applications broadly claiming the oral administration of nontoxic modified botulinum toxins as vaccines. The intellectual property also includes patent applications covering the inhaled and nasal routes of delivery of the vaccine. This license agreement required that we pay a license fee of \$160,000, payable in \$130,000 of restricted common stock and \$30,000 in cash. We also entered into a one-year sponsored research agreement with the execution of the license agreement with Thomas Jefferson University, renewable on an annual basis, under which we are providing \$300,000 in annual research support. In addition, we also executed a consulting agreement with Dr. Lance Simpson, the inventor of the botulinum toxin vaccine for a period of three years. Under this agreement, Dr. Simpson received options to purchase 100,000 shares of our common stock, vesting over two years. We are also required to pay a \$10,000 non-refundable license royalty fee no later than January 1 of each calendar year. We entered into an additional sponsored research agreement for \$37,500 thru August 31, 2007.



**Employees**

As of March 1, 2007, we had eight full-time employees, three of whom are Ph.D.s.

Information regarding our executive officers is set forth in Items 9 and 10 of this Annual Report, which information is incorporated herein by reference.

**Research and Development Spending**

We spent approximately \$4,800,000 and \$3,700,000 in 2006 and 2005, respectively on research and development.

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## **Description of Property**

We currently lease approximately 2,500 square feet of office space at 1101 Brickell Avenue, Suite 701-S, Miami, Florida 33131. The office space currently serves as our corporate headquarters located in Miami, Florida. We pay rent of approximately \$5,844 per month, or \$28 per square foot, on a ten-month lease, which was entered into on August 7, 2006 and expires on June 23, 2007. We believe that our current leased facilities are sufficient to meet our current needs. We do anticipate that we will seek a new facility in the second quarter of 2007.

## **Legal Proceedings**

From time-to-time, we are a party to claims and legal proceedings arising in the ordinary course of business. Our management evaluates our exposure to these claims and proceedings individually and in the aggregate and allocates additional monies for potential losses on such litigation if it is possible to estimate the amount of loss and if the amount of the loss is probable.

On October 26, 2006, we received a summons in a civil case (Case No. 06-22629-CIV-COOKE/Brown, United States District Court for the Southern District of Florida) from Michael T. Sember, our former President and Chief Executive Officer. The complaint claims that we breached the employment agreement entered into with Mr. Sember on December 7, 2004, specifically in the payment of his bonus. We have paid his severance and accrued vacation according to the terms of his employment agreement. Under the terms of this agreement, we have paid Mr. Sember \$150,000 in severance and \$28,383 for accrued vacation time, over a six month period beginning in August 2006. We deny the merit of the claim, as it is contrary to what is specifically stated in the agreement. On August 25, 2006, Mr. Sember was dismissed without "Just Cause" (as such term is defined in the agreement). Our position is that, upon termination of Mr. Sember without Just Cause, he was to be paid six months severance, any unpaid bonuses, and any vacation time accrued but not taken. The complaint contends that a minimum annual bonus of \$100,000 was due. In addition, Mr. Sember is also seeking costs and attorney's fees incurred for this action. We deny that we owe Mr. Sember any bonus and will vigorously defend against Mr. Sember's claim that he is entitled to a bonus of \$100,000.

On October 28, 2005, we entered into a letter of intent to acquire Gastrotech Pharma A/S ("Gastrotech"), a private, Danish biotechnology company developing therapeutics based on gastrointestinal peptide hormones to treat gastrointestinal and cancer diseases and conditions. The letter of intent provided for a \$1,000,000 breakup fee in the event either party notified the other of its intention not to proceed with the transaction. On January 26, 2006, we advised Gastrotech that we were not renewing our letter of intent with Gastrotech, which had expired in accordance with its terms on January 15, 2006. The attorney representing Gastrotech has advised us that if we are not willing to comply with the terms in the letter of intent, we will be in material breach of our obligations under the letter of intent and will be obligated to pay Gastrotech a break-up fee of \$1,000,000. As of the date of this prospectus, no claim or complaint has been filed by Gastrotech as to the obligation to pay a break-up fee of \$1,000,000. Our position is that it does not owe Gastrotech any break-up fee pursuant to not renewing its letter of intent to acquire Gastrotech.

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## **Management's Discussion and Analysis or Plan of Operation.**

*The following discussion and analysis provides information that we believe is relevant to an assessment and understanding of our results of operation and financial condition. You should read this analysis in conjunction with our audited consolidated financial statements and related notes. This discussion and analysis contains statements of a forward-looking nature relating to future events or our future financial performance. These statements are only predictions, and actual events or results may differ materially. In evaluating such statements, you should carefully consider the various factors identified in this Annual Report which could cause actual results to differ materially from those expressed in, or implied by, any forward-looking statements, including those set forth in "Item 1. Description of Business-Risk Factors" in this Annual Report. See "Item 1. Description of Business-Cautious Note Regarding Forward-Looking Statements."*

## **Business Overview and Strategy**

We are a research and development biopharmaceutical company focused on the development of oral therapeutic products intended for areas of unmet medical need and biodefense vaccines. We have filed a new drug application ("NDA") for our lead product orBec® (oral beclomethasone dipropionate) with the U.S. Food and Drug Administration (the "FDA") for the treatment of gastrointestinal Graft-versus-Host-Disease ("GI GVHD"), and have received a Prescription Drug User Fee Act ("PDUFA") date for the FDA to complete its review of all materials regarding orBec® of July 21, 2007. In addition, the FDA's Oncologic Drugs Advisory Committee ("ODAC") will review the NDA for orBec® on May 10, 2007. We also have filed a Marketing Authorization Application ("MAA") with the European Central Authority, European Medicines Evaluation Agency ("EMA") for orBec® which has been filed and validated for review.

Our business strategy is to: (a) prepare for the potential marketing approval of orBec® by the FDA and the EMA; (b) conduct prophylactic use clinical trials of orBec® for the prevention of GI GVHD; (c) evaluate and initiate additional clinical trials to explore the effectiveness of oral BDP (orBec®) in other therapeutic indications involving inflammatory conditions of the gastrointestinal tract; (d) reinstate development of our other biotherapeutics products namely LPM™-Leuprolide, and Oraprine™; (e) explore acquisition strategies under which the Company may be acquired by another company with oncologic or GI symmetry; (f) identify a sales and marketing partner for orBec® for territories outside of the U.S., and potentially inside the U.S.; (g) secure government funding for each of our biodefense programs through grants, contracts, and procurements; (h) convert our biodefense vaccine programs from early stage development to advanced development and manufacturing with the potential to collaborate and/or partner with other companies in the biodefense area; and (i) acquire or in-license new clinical-stage compounds for development. We were incorporated in 1987. We maintain two active segments: BioTherapeutics and BioDefense.

On January 17, 2007, we received an unsolicited non-binding expression of interest from Cell Therapeutics, Inc. ("CTIC") to acquire us. After due deliberation and consideration by a committee of independent Board members established by our Board of Directors (the "Independent Committee") and further deliberation and consideration by our full Board of Directors, on April 9, 2007, the Independent Committee as well as our full Board of Directors each unanimously resolved to reject as inadequate for stockholders the expression of interest by CTIC to acquire us and notified CTIC of such resolutions.

On January 3, 2007 we received \$3 million under a non-binding letter of intent with Sigma-Tau Pharmaceuticals, Inc. ("Sigma-Tau"), which granted Sigma-Tau an exclusive right to negotiate terms and conditions for a possible business transaction or strategic alliance regarding orBec® and potentially other DOR private offering compounds until March 1, 2007. Sigma-Tau is a pharmaceutical company that creates novel therapies for the unmet needs of patients with rare diseases. They have both prescription and consumer products in metabolic, oncology, renal and supplements. Under the terms of the letter of intent, Sigma-Tau purchased \$1 million of our common stock at the market price of \$0.246 per share, representing approximately four million shares. Sigma-Tau paid an additional \$2 million, which was to be

considered an advance payment to be deducted from upfront monies due to us by Sigma-Tau pursuant to any future orBec<sup>®</sup> commercialization arrangement reached between the two parties. Because no agreement was reached by March 1, 2007, we are obligated to return \$2 million to Sigma-Tau by April 30, 2007. If we do not pay Sigma-Tau back in cash by May 31, 2007, interest will accrue at a rate of 6% compounded annually and Sigma-Tau will have the option in its sole discretion of converting the accrued amount into common stock at a price per share equal to 80% of the market price at the time the payment is made. We are currently under active discussions regarding a potential European partnership.

### **orBec<sup>®</sup>**

Our lead therapeutic product orBec<sup>®</sup>, is an orally administered corticosteroid that exerts a potent, local anti-inflammatory effect within the mucosal tissue of the gastrointestinal tract. We filed an NDA on September 21, 2006 for orBec<sup>®</sup> with the FDA for the treatment of GI GVHD. The NDA was accepted on November 21, 2006, and in accordance with the PDUFA the FDA will complete its review of all materials related to orBec<sup>®</sup> by July 21, 2007. Additionally, on May 10, 2007 the FDA's Oncology Drug Advisory Committee will review the NDA. We also filed an MAA with the EMEA on November 3, 2006, which was validated for review on November 28, 2006. We have assembled an experienced team of consultants and contractors who worked on all aspects of the NDA preparation, including data management, data analysis, and biostatistics medical writing. Manufacturing of the requisite batches of drug product (registration batches) is completed and these batches are currently undergoing stability testing.

We anticipate the market potential for orBec<sup>®</sup> for the treatment of gastrointestinal GI GVHD to be approximately 70 percent of the approximately 12,000 bone marrow and stem cell transplants that occur each year in the U.S.

We have had strategic discussions with a number of pharmaceutical companies regarding the partnering or sale of orBec<sup>®</sup>. We may seek a marketing partner in the U.S. and abroad in anticipation of commercialization of orBec<sup>®</sup>. We also intend to seek a partner for the other potential indications of orBec<sup>®</sup>. We are also actively considering an alternative strategy of a commercial launch of orBec<sup>®</sup> by ourselves in the U.S.

### **RiVax<sup>™</sup>**

The development of RiVax<sup>™</sup>, our ricin toxin vaccine, has progressed significantly this year. Our academic partner, The University of Texas Southwestern led by Dr. Ellen Vitetta, completed a Phase 1 safety and immunogenicity trial of RiVax<sup>™</sup> in human volunteers. The results of the Phase 1 safety and immunogenicity dose-escalation study indicate that the vaccine is well tolerated and induces antibodies in humans that neutralize ricin toxin. Despite the absence of an adjuvant, antibodies were present in the blood of several volunteers for as long as 127 days after their last vaccination. The functional activity of the antibodies was confirmed by transferring serum globulins from the vaccinated individuals along with active ricin toxin to sensitive mice, which then survived subsequent exposure to ricin toxin. The outcome of the study was recently published in the *Proceedings of the National Academy of Sciences*. In January of 2005, we entered into a manufacturing and supply agreement for RiVax<sup>™</sup> with Cambrex Corporation. In July of 2006, we announced the successful completion of the current Good Manufacturing Practices ("cGMP") milestone for the production of RiVax<sup>™</sup>.

### **BT-VACC<sup>™</sup>**

Our botulinum toxin vaccine, called BT-VACC<sup>™</sup>, was developed through the research of Dr. Lance Simpson at Thomas Jefferson University in Philadelphia, Pennsylvania. Botulinum toxin is the product of the bacteria *Clostridium botulinum*. Botulinum toxin is one of the most poisonous natural substances known. Botulinum toxin causes acute, symmetric, descending flaccid paralysis due to its action on peripheral cholinergic nerves. Paralysis typically presents 12 to 72 hours after exposure. Death results from paralysis of the respiratory muscles. Current treatments include respiratory support and passive immunization with antibodies which must be administered before symptoms occur,

which leaves little time post-exposure for effective treatment. We are developing a multivalent vaccine against botulinum neurotoxins serotypes A, B and E, which account for almost all human cases of disease. We have identified lead antigens against Serotypes A, B and E consisting of the Hc50 fragment of the botulinum toxin. Typically, vaccines given by mucosal routes are not immunogenic because they do not attach to immune inductive sites. In the case of the combination BT-VACC™ both the A and the B antigens were capable of attaching to cells in the mucosal epithelium and inducing an immune response with similar magnitude to the injected vaccine. Our preclinical data to date suggests that a bivalent formulation of serotypes A and B are completely effective at low, mid and high doses as an intranasal vaccine and completely effective at the higher dose level orally in animal models. The animals were given a small quantity of the bivalent combination vaccine containing each of the type A and type B antigens (10 micrograms) three times a day at two week intervals. All of the animals developed equivalent immune responses to A and B types in the serum. Importantly, they were then protected against exposure to each of the native toxin molecules given at 1000 fold the dose that causes lethality. The immune responses were also comparable to the same vaccines when given by intramuscular injection.

### **LPM™ - Leuprolide**

Lipid Polymer Micelle (LPM™)-Leuprolide is an oral dosage formulation of the peptide drug leuprolide, a hormone-based drug that is among the leading drugs used to treat endometriosis and prostate cancer, which utilizes a novel drug delivery system composed of safe and well characterized ingredients to enhance intestinal absorption. The LPM™ system incorporates biocompatible lipids and polymers and is potentially useful for a wide variety of molecular structures of water-soluble drugs, particularly those based on peptides. Although both small molecules and large molecules can be incorporated into our system, there is a molecular size cutoff for a commercially viable oral bioavailability enhancement, and this system is most effective with hydrophilic drugs/peptides below 5,000 Daltons in molecular weight. Utilizing a simple and scaleable manufacturing process, aqueous solutions of peptides can be incorporated into lipid-polymer mixtures forming stable micelles.

### **Oraprine™**

Oraprine™ is an oral suspension of azathioprine, which we believe may be bioequivalent to the oral azathioprine tablet currently marketed in the United States as Imuran®. We acquired the azathioprine drug (Oraprine™) as a result of the merger of Endorex and CTD in November 2001. Also acquired were patent applications licensed from Dr. Joel Epstein of the University of Washington. We conducted a Phase 1 bioequivalence trial following a trial conducted by Dr. Epstein that established the feasibility of the oral drug to treat oral ulcerative lesions resulting from graft versus host disease. Azathioprine is one of the most widely used immunosuppressive medications in clinical medicine. Azathioprine is commonly prescribed to organ transplant patients to decrease their natural defense mechanisms to foreign bodies (such as the transplanted organ). The decrease in the patient's immune system increases the chances of preventing rejection of the transplanted organ in the patient. Oraprine™ may provide a convenient dosage form for patients who have difficulty swallowing pills or tablets, such as children.

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**LPE<sup>TM</sup> and PLP<sup>TM</sup> Systems for Delivery of Water-Insoluble Drugs**

We may develop two lipid-based systems, LPE<sup>TM</sup> and PLP<sup>TM</sup>, to support the oral delivery of small molecules of water insoluble drugs. Such drugs include most kinds of cancer chemotherapeutics currently delivered intravenously. The LPE<sup>TM</sup> system is in the form of an emulsion or an emulsion pre-concentrate incorporating lipids, polymers and co-solvents. We have filed for patent applications on the use of perillyl alcohol as a solvent, surfactant and absorption enhancer for lipophilic compounds. The polymers used in these formulations can either be commercially available or proprietary polymerized lipids and lipid analogs.

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## Critical Accounting Policies

Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate these estimates and judgments.

### Intangible Assets

Currently, the most significant estimate or judgment that we make is whether to capitalize or expense patent and license costs. We make this judgment based on whether the technology has alternative future uses, as defined in SFAS 2, "Accounting for Research and Development Costs". Based on this consideration, we capitalized all outside legal and filing costs incurred in the procurement and defense of patents.

These intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. If the sum of the expected undiscounted cash flows is less than the carrying value of the related asset or group of assets, a loss is recognized for the difference between the fair value and the carrying value of the related asset or group of assets.

We capitalize and amortize intangibles over a period of 11 to 16 years. We capitalize payments made to legal firms that are engaged in filing and protecting our rights to our intellectual property and rights for our current products in both the domestic and international markets.

We capitalize intangible assets that have alternative future uses; this is common in the pharmaceutical development industry. Of the intangible asset balance, \$1,025,000 is for up-front license costs. We purchased a license from the University of Texas Southwestern Medical Center, for the license to the RiVax™ vaccine for \$425,000. We also purchased a license from a "pharmaceutical company" namely Southern Research Institute/Brookwood Pharmaceuticals, for a license of microsphere technology for \$600,000. We capitalize license costs because they have alternative future use as referred to in paragraph 11 c. of SFAS No.2. We believe that both of these intangible assets purchased have alternative future uses.

We capitalize legal costs associated with the protection and maintenance of our patents. We have drug and vaccine products in an often lengthy basic and clinical research process, we believe that patent rights form one of our most valuable assets. Patents and patent applications are a key currency of intellectual property, especially in the early stage of product development, as their purchase and maintenance gives us access to key product development rights from our academic and industrial partners. These rights can also be sold or sub-licensed as part of our strategy to partner our products at each stage of development. The legal costs incurred for these patents consist of work designed to protect, preserve, maintain and perhaps extend the lives of the patents. Therefore, our policy is to capitalize these costs and amortize them over the remaining useful life of the patents. We capitalize intangible assets alternative future use as referred to in SFAS No.142 and in paragraph 11 c. of SFAS No. 2.

During 2006, we capitalized \$206,004 in patent related costs. This amount is represented in the cash flow statement, in the section for investing activities presented in the 2006 10-KSB financial statements. On the balance sheet this amount is presented on the line intangible assets, net in the amount of \$1,073,239.

### Research and Development Costs

Research and Development costs are charged to expense when incurred. Research and development includes costs such as clinical trial expenses, contracted research and license agreement fees with no alternative future use, supplies

and materials, salaries and employee benefits, equipment depreciation and allocation of various corporate costs. Purchased in-process research and development expense (IPR&D) represents the value assigned or paid for acquired research and development for which there is no alternative future use as of the date of acquisition.

**Revenue Recognition**

All of our revenues are from government grants which are based upon subcontractor costs and internal costs covered by the grant, plus a facilities and administrative rate that provides funding for overhead expenses. Revenues are recognized when expenses have been incurred by subcontractors or when we incur internal expenses that are related to the grant.

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## Material Changes in Results of Operations

We are a research and development company. The 2006 revenues and associated expenses were from NIH Grants received in September 2004 and September 2006, and for an FDA grant which we received in September 2005. The NIH grants were associated with our ricin and botulinum vaccines. The original amount of the first NIH grant was \$5,173,298. This was increased on May 6, 2005, to \$6,433,316. The increase of \$1,260,018 was awarded based on a new renegotiated F&A (facilities and administrative) rate with the NIH. Part of this increase was attributed to the NIH reimbursement for overhead expenses for 2004 in the amount of \$285,891 in the second quarter of 2005. This new rate provided a fixed rate for facilities and administrative costs (overhead expenditures) that is applied against all costs associated with the grant awarded. The new rate was a provisional rate and the final rate has not yet been finalized but the expectations are that the rate will be lower. In anticipation of this, we estimated that a charge in the amount of approximately \$390,000 was necessary. The second NIH grant was received for ricin in September 2006 for \$5,203,405. The NIH SBIR grant for botulinum was received in September 2006 for \$465,191. We were awarded a one year FDA grant on September 23, 2005 for the "Oral BDP for the Treatment of GI GVHD" in the amount of \$318,750.

For the year ended December 31, 2006 we had grant revenues of \$2,313,020 as compared to \$3,075,736 in the 12 months ended December 31, 2005, a decrease of \$762,716, or 25%. We also incurred expenses related to revenues in 2006 and 2005 of \$1,965,074 and \$2,067,034, respectively, a decrease of \$101,960, or 5%. These costs relate to payments made to subcontractors and universities in connection with the grants. The decrease in revenues and related expenses from 2005 are related to the accelerated progress made on the grants in late 2005 and early 2006. Additionally, the decrease is related to a charge in the amount of \$390,000 for the expectations of a lower overhead rate and that the 2005 revenues included \$285,891 that was attributed to the NIH reimbursement for overhead expenses for 2004 but which was received in the second quarter of 2005.

For the year ended December 31, 2006 the gross profit was \$347,946 as compared to \$1,008,702, in the 12 months ended December 31, 2005, a decrease of \$660,756, or 66%. This was due to the decreased grant revenues in the year ended 2006 that were eligible for the F&A rate and the expected decrease in the final F&A rate.

Research and development spending increased by \$121,702, or 3%, to \$3,638,493, for the year ended December 31, 2006 as compared to \$3,516,791 for the corresponding period ended December 31, 2005. Expenses remained consistent as we continue the regulatory and filing costs associated with the preparation and completion of the NDA filing for orBec®.

In-process research and development expenditures were \$981,819 as compared to zero for year ended December 31, 2006 an increase of 100% for the same period ended December 31, 2005. This was due to the purchase of all of the remaining outstanding common stock of its majority owned subsidiary Enteron that the Company did not already own.

Impairment expense for intangibles was \$816,300 as compared to \$164,246 for the year ended December 31, 2006 an increase of 397% for the same period ended December 31, 2005. This was due to the impairment of the Southern Research Institute/Brookwood Pharmaceuticals, license of microsphere technology.

General and administrative expenses for the 12 months ended December 31, 2006 were \$3,110,882 as compared to \$2,162,616 for the 12 months ended December 31, 2005, an increase of \$948,266, or 44%. The increase was due to stock option expense of \$557,182 for stock options vested and issued in the year ended December 31, 2006 under the new accounting treatment under SFAS No. 123R. Additionally, we had non-recurring acquisition costs of approximately \$116,000 associated with the unconsummated acquisition of Gastrotech Pharma A/S. This increase was also in part attributed to a recovery of \$284,855 in 2005 from reported income in 2004 for the variable accounting treatment of options granted to new employees under the stock option plan that exceeded the number of allowed stock



options under the plan which expenses did not occur in 2006.

Interest income for the 12 months ended December 31, 2006 was \$41,510 as compared to \$78,242 for the 12 months ended December 31, 2005, a decrease of \$36,733 or 47%. This decrease was primarily due to a lower cash balance in 2006 as compared to 2005.

Interest expense for the 12 months ended December 31, 2006 was \$5,308 as compared to \$36,549 credit for the 12 months ended December 31, 2005, a decrease of \$41,857 or 115%. This decrease was primarily due to recovery of interest because of an agreement reached with a pharmaceutical company for settlement of a note payable in 2005. This agreement required a payment of \$41,865 in lieu of the \$83,729 of interest we had accrued.

For the 12 months ended December 31, 2006, we had a net loss of \$8,163,346 as compared to a \$4,720,260 net loss for the 12 months ended December 31, 2005, a decrease of \$3,443,086, or 73%. This increase is primarily attributed to the greater regulatory and filing costs associated with the preparation of the NDA filing for orBec<sup>®</sup>, the in-process research and development expense of \$981,819 for acquiring all of the outstanding common stock of Enteron the Company did not already own, adjustments to revenue as described in the preceding paragraphs of \$390,000 and \$285,891, and an impairment expense for intangibles of \$816,300.

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## Financial Condition

### *Cash and Working Capital*

As of December 31, 2006, we had cash of \$119,636 as compared to \$821,702 as of December 31, 2005 and negative working capital of \$2,211,387 as compared to negative working capital of \$319,675 as of December 31, 2005. For the 12 months ended December 31, 2006, our cash used in operating activities was approximately \$4,100,000, versus approximately \$4,700,000 in 2005.

As of March 1, 2007 we had cash of \$7,089,092 of which \$2,000,000 is currently obligated to Sigma-Tau.

### *Expenditures*

We expect our expenditures for 2006, under existing product development agreements and license agreements pursuant to letters of intent and option agreements to approximate \$3,600,000. We anticipate grant revenues in the next twelve months to offset research and development expenses for the development of our ricin toxin vaccine and botulinum toxin vaccine in the amount of approximately \$3,600,000 with \$800,000 contributing towards our overhead expenses.

The table below details our costs for 2006 and 2005 by project.

	2006	2005
<b><i>Projects-Research &amp; Development</i></b>		
<b><i>Expenses</i></b>		
orBec®	\$ 3,060,778	\$ 2,045,424
RiVax™	274,635	480,120
BT-VACC™	290,405	979,247
Oraprine™	6,996	8,100
LPM™-Leuprolide	5,679	3,900
Research & Development Expense	\$ 3,638,493	\$ 3,516,791
<b><i>Projects-Reimbursed under Grant</i></b>		
orBec®	\$ -	\$ 124,958
RiVax™	1,961,074	1,942,076
BT-VACC™	4,000	-
Oraprine™	-	-
LPM™-Leuprolide	-	-
Reimbursed under Grant	\$ 1,965,074	\$ 2,067,034
<b>TOTAL</b>	<b>\$ 5,603,567</b>	<b>\$ 5,583,825</b>

### ***Debt***

We had no notes payable at December 31, 2006 or at December 31, 2005. During 2005, we paid a note payable of \$115,948, which represented the remaining balance to a pharmaceutical company in connection with our joint ventures.

*Leases*

The following summarizes our contractual obligations at December 31, 2006, and the effect those obligations are expected to have on our liquidity and cash flow in future periods.

<b>Contractual Obligation</b>	<b>Year 2007</b>	<b>Year 2008</b>	<b>Year 2009</b>
Non-cancelable obligation (1)	\$ 33,706	\$ -	\$ -
<b>TOTALS</b>	<b>\$ 33,703</b>	<b>\$ -</b>	<b>\$ -</b>

(1) On August 7, 2006 we signed a 10 month lease at a new location.

*Equity Transactions*

Subsequent to year-end, on February 9, 2007, we completed the sale of 11,680,850 shares of our common stock to institutional investors and certain of our officers and directors for a purchase price of \$5,490,000. We are filing a registration statement with the Securities and Exchange Commission covering the shares of common stock issued.

Subsequent to year-end, on January 3, 2007, in consideration for entering into an exclusive letter of intent, Sigma-Tau agreed to purchase \$1,000,000 of the Company's common stock at the market price of \$0.246 per share, representing 4,065,041 shares of common stock, and has contributed an additional \$2 million in cash. The \$2 million contribution was to be considered an advance payment to be deducted from future payments due to the Company by Sigma-Tau pursuant to any future orBec® commercialization arrangement reached between the two parties. Because of this transaction's dilutive nature, all investors in the April 2006 private placement had their warrants repriced to \$0.246. Additionally, certain shareholders who still held shares of the Company's common stock were issued additional shares as a cost basis adjustment from \$0.277 to \$0.246 per share of the Company's common stock. Because no agreement was reached by March 1, 2007, we are obligated to return the \$2 million to Sigma-Tau by April 30, 2007. If we do not repay Sigma-Tau by May 31, 2007, interest will accrue at a rate of 6% compounded annually and Sigma Tau will have the option, at its sole discretion, of converting the accrued amount into common stock at a price per share equal to 80% of the market price at the time payment is made.

On April 10, 2006, we completed the sale of 13,099,964 shares of our common stock to institutional and other accredited investors for gross proceeds of \$3,630,000. The investors also received warrants to purchase an aggregate of 13,099,964 shares of our common stock at an exercise price of \$0.45 per share. The warrants are exercisable for a period of three years commencing on April 10, 2006. We filed a registration statement with the Securities and Exchange Commission covering the shares of common stock issued and issuable pursuant to the exercise of the warrants, and it was declared effective on May 25, 2006.

On January 17, 2006, we entered into a common stock purchase agreement with Fusion Capital Fund II, LLC ("Fusion"). The Fusion facility allowed them to purchase on each trading day \$20,000 of our common stock up to an aggregate of \$6,000,000 million over approximately a 15-month period. As part of this agreement we issued Fusion 512,500 shares of common stock as a commitment fee. During 2006 Fusion purchased 329,540 common shares for \$ 124,968. At this point in time we have no plans to utilize the Fusion facility.

In February 2005, we increased our cash position by the issuance and sale of 8,396,100 shares of our common stock at \$0.45 per share in a private placement to institutional investors. These investors also received warrants to purchase 6,297,075 shares of our common stock at an exercise price of \$0.505 per share. The proceeds after related expenses and closing costs were approximately \$3.5 million. We do not believe these warrants require application of

SFAS No. 133. We determined this based on two interpretations of SFAS No. 133. First, the warrants have no initial allocable investment (paragraph 8 of SFAS No. 133). All three classes of warrants in question were issued in connection with private placements whose participants purchased units that included upfront shares as well as a certain percentage of out-of-the-money warrants deemed to have some future benefit. Second, all three classes of warrants are “regular-way” security trades as described in paragraph 10 of SFAS No. 133. Once exercised for cash, the warrant holders are issued common stock shares within three business days as required by public exchanges.

For the February 2005 private placement, the warrants provide that if the shares are not registered and are available for sale by the effectiveness date as specified in the respective registration rights agreements, then the holders of the warrants can do a cashless exercise. Both conditions were met so the cashless feature expired. In the April 2006 private placement, warrant holders could only exercise the warrants on a cashless basis if the registration statement for the shares was not declared effective by the SEC by the first anniversary date of the closing of the transaction. The registration statement was declared effective in May 2006.

All classes of warrants are classified as equity instrument under EITF No. 00-19 because they bear:

1. Physical settlement method - That is we will issue shares for cash, and
2. The contracts are freestanding - As described in paragraphs 1, 2, 8, 38 and 39 of EITF No. 00-19.

If these warrants were hedging relationships as described in SFAS No. 133, paragraph 21, the warrants are not required to be accounted for as an asset or a liability because of our call option. See EITF 00-19, paragraph 7. Also, specifically for the April 2006 Private Placement, the warrants issued would require that we deliver shares. This classification requires it to be classified as equity. See (EITF 00-19, paragraph 9).

Based on our current rate of cash outflows, we believe that our cash will be sufficient to meet our anticipated cash needs for working capital and capital expenditures into first quarter of 2008. It is possible that within the upcoming twelve months we will seek additional capital in the private and/or public equity markets to expand our operations, to respond to competitive pressures, to develop new products and services and to support new strategic partnerships. We may obtain capital pursuant to one or more corporate partnerships relating to orBec<sup>®</sup>. If we obtain additional funds through the issuance of equity or equity-linked securities, shareholders may experience significant dilution and these equity securities may have rights, preferences or privileges senior to those of our common stock. The terms of any debt financing may contain restrictive covenants which may limit our ability to pursue certain courses of action. We may not be able to obtain such financing on acceptable terms or at all. If we are unable to obtain such financing when needed, or to do so on acceptable terms, we may be unable to develop our products, take advantage of business opportunities, respond to competitive pressures or continue our operations.

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**Off-Balance Sheet Arrangements**

We currently have no off-balance sheet arrangements.

**Effects of Inflation and Foreign Currency Fluctuations**

We do not believe that inflation or foreign currency fluctuations significantly affected our financial position and results of operations as of and for the fiscal year ended December 31, 2006.

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### Directors and Executive Officers

The following table contains information regarding the current members of the Board of Directors and executive officers:

Name	Age	Position
<b>James S. Kuo, M.D., M.B.A.</b>	42	Chairman of the Board
<b>Steve H. Kanzer, C.P.A., J.D.</b>	43	Vice Chairman
<b>Christopher J. Schaber, Ph.D.</b>	40	Chief Executive Officer, President, and Director
<b>Evan Myriantopoulos</b>	42	Chief Financial Officer, and Director
<b>James Clavijo, C.P.A., M.A.</b>	41	Controller, Treasurer, and Corporate Secretary

**James S. Kuo, M.D., M.B.A.**, has been a director since 2004 and currently serves as the non-executive Chairman of the Board. Since 2006, he has served as President and Chief Executive Officer of Cysteine Pharma, Inc. From 2003 to 2006, he served as founder, Chairman and Chief Executive Officer of BioMicro Systems, Inc. a private venture-backed, microfluidics company. From 2001 to 2002, he served as President and Chief Executive Officer of Microbiotix, Inc., a private, anti-infectives drug development company. Prior to that time, Dr. Kuo was co-founder, President and Chief Executive Officer of Discovery Laboratories, Inc., a public specialty pharmaceutical company developing respiratory therapies, where he raised over \$22 million in initial private funding and took the company public. He has held senior licensing and business development positions at Pfizer, Inc. and Myriad Genetics, Inc. Dr. Kuo has also been the Managing Director of Venture Analysis at HealthCare Ventures, LLC and Vice President at Paramount Capital Investments, LLC. Dr. Kuo is further a founder of ArgiNOx Pharmaceuticals, Inc., and Monarch Labs, LLC. Dr. Kuo simultaneously received his M.D. from the University of Pennsylvania School of Medicine and his M.B.A. from the Wharton School of Business.

**Steve H. Kanzer, C.P.A., J.D.**, has been a director since 1996 and currently serves as the non-executive Vice Chairman of the Board. Mr. Kanzer served as our Interim President from June 30, 2002 through January 4, 2003. Since February 2001, Mr. Kanzer has served as Chairman and Chief Executive Officer, and from February 2001 until May 2006 also as President, of Pipex Therapeutics, Inc. (“Pipex”), a specialty pharmaceutical company in Ann Arbor, Michigan developing oral late stage drug candidates for CNS and fibrotic diseases. He also serves as President and/or a member of the board of directors of several of Pipex’s subsidiaries, including CD4 Biosciences, Inc., Effective Pharmaceuticals, Inc., Putney Drug Corp. and Solovax, Inc. Since December 2000, he has served as Chairman of Accredited Ventures Inc. and Accredited Equities Inc., respectively, a venture capital firm and NASD member investment bank specializing in the biotechnology industry. From January 2001 until October 2003, Mr. Kanzer also served as President of Developmental Therapeutics, Inc. until its acquisition by Titan Pharmaceuticals, Inc. in October 2003. Prior to founding Accredited Ventures and Accredited Equities in December 2000, Mr. Kanzer was a co-founder of Paramount Capital, Inc. in 1992 and served as Senior Managing Director - Head of Venture Capital of

Paramount Capital until December 2000. While at Paramount Capital, Mr. Kanzer was involved in the formation and financing of a number of biotechnology companies, including our company as well as a private biopharmaceutical company, Corporate Technology Development, Inc. ("CTD"). Mr. Kanzer was full-time Chief Executive Officer of CTD from March 1998 until December 2000 and part-time Chief Executive Officer from December 2000 until our company completed its acquisition of CTD in November 2001. From 1995 until June 1999, Mr. Kanzer was a founder and Chairman of Discovery Laboratories, Inc., a public biotechnology company. Prior to joining Paramount Capital in 1992, Mr. Kanzer was an attorney at the law firm of Skadden, Arps, Slate, Meagher & Flom in New York. Mr. Kanzer received his J.D. from New York University School of Law and a B.B.A. in accounting from Baruch College where he was a Baruch Scholar.

**Christopher J. Schaber, Ph.D.**, has been a director since August 2006 and is the President and Chief Executive Officer. Prior to joining, Dr. Schaber served from 1998 to 2006 as Executive Vice President and Chief Operating Officer of Discovery Laboratories, Inc. where he was responsible for their operations including all drug development and commercial launch activities. From 1996 to 1998, Dr. Schaber was a co-founder of Acute Therapeutics, Inc., and served as Vice President of Regulatory Compliance and Drug Development. From 1994 to 1996, Dr. Schaber was employed by Ohmeda PPD, Inc., as Worldwide Director of Regulatory Affairs and Operations. From 1989 to 1994, Dr. Schaber held a variety of regulatory, development and operations positions with The Liposome Company, Inc., and Elkins-Sinn Inc., a division of Wyeth-Ayerst Laboratories. Dr. Schaber received his B.A. from Western Maryland College, a M.S. in Pharmaceutics from Temple University School of Pharmacy and a Ph.D. in Pharmaceutical Sciences from The Union Graduate School.

**Evan Myriantopoulos**, has been a director since 2002 and is currently the Chief Financial Officer after joining in November of 2004 as President and Acting Chief Executive Officer. From November 2001 to November 2004, he was President and founder of CVL Advisors, Group, Inc., a financial consulting firm specializing in the biotechnology sector. Prior to founding CVL Advisors Group, Inc., Mr. Myriantopoulos was a co-founder of Discovery Laboratories, Inc. During his tenure at Discovery from June 1996 to November 2001, Mr. Myriantopoulos held the positions of Chief Financial Officer and Vice President of Finance, where he was responsible for raising approximately \$55 million in four private placements. He also negotiated and managed Discovery's mergers with Ansan Pharmaceuticals and Acute Therapeutics, Inc. Prior to co-founding Discovery, Inc., Mr. Myriantopoulos was a Technology Associate at Paramount Capital Investments, L.L.C., a New York City based biotechnology venture capital and investment banking firm. Prior to joining Paramount Capital, Mr. Myriantopoulos was a managing partner of S + M Capital Management, a hedge fund which specialized in syndicated stock offerings and also engaging in arbitrage of municipal and mortgage bonds. Prior to that, Mr. Myriantopoulos held senior positions in the treasury department at the National Australia Bank where he was employed as a spot and derivatives currency trader. Mr. Myriantopoulos holds a B.S. in Economics and Psychology from Emory University.

**James Clavijo, C.P.A., M.A.** has been with the Company since October 2004 and is currently our Controller, Treasurer, and Corporate Secretary. He brings 15 years of senior financial management experience, involving both domestic and international entities, and participating in over \$100 Million in equity and debt financing. Prior to joining DOR, Mr. Clavijo, held the position of Chief Financial Officer for Cigarette Racing Team (Miami, FL), from July 2003 to October 2004. During his time with Cigarette he was instrumental in developing a cost accounting manufacturing tracking system and managed the administration and development of an IRB Bond related to a 10 acre, 100,000 square foot facility purchase. Prior to joining Cigarette Racing Team, Mr. Clavijo held the position of Chief Financial Officer for Gallery Industries, from November 2001 to July 2003, a retail and manufacturing garment company. Prior to joining, Gallery, he served as Corporate Controller, for A Novo Broadband, from December 2000 to November 2001, a repair and manufacturing telecommunications company where he managed several mergers and acquisitions and corporate restructuring. Prior to joining A Novo Broadband, he served as Chief Financial Officer of AW Industries, from August 1997 to December 2000, a computer parts manufacturer. He also, held the position of Finance Manager for Wackenhut Corporation in the U.S. Governmental Services Division. In addition, he served in the U.S. Army from 1983 to 1996 in both a reserve and active duty capacity for personnel and medical units. Mr. Clavijo holds a Master in Accounting degree from Florida International University, a Bachelor in Accounting degree

from the University of Nebraska, and a Bachelor in Chemistry degree from the University of Florida. Mr. Clavijo is a licensed Certified Public Accountant in the state of Florida.

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

We are required to identify each person who was an officer, director or beneficial owner of more than 10% of our registered equity securities during our most recent fiscal year and who failed to file on a timely basis reports required by Section 16(a) of the Securities Exchange Act of 1934.

To our knowledge, based solely on review of these filings and written representations from the certain reporting persons, we believe that during the fiscal year ended December 31, 2006, our officers, directors and significant stockholders have timely filed the appropriate form under Section 16(a) of the Exchange Act, except a Form 4 for Evan Myrianthopoulos (one filing) and a Form 4 for James Clavijo (one filing).

### **Code of Ethics**

We have adopted a code of ethics that applies to all of our executive officers and senior financial officers (including our chief executive officer, chief financial officer, chief accounting officer, controller, and any person performing similar functions). A copy of our code of ethics is publicly available on our website at <http://www.dorbiopharma.com> under the caption "Investors." If we make any substantive amendments to our code of ethics or grant any waiver, including any implicit waiver, from a provision of the code to our chief executive officer, chief financial officer, chief accounting officer or controller, we will disclose the nature of such amendment or waiver in a report on Form 8-K.

### **Audit Committee Financial Expert**

We have an audit committee comprised of Dr. Kuo and Mr. Kanzer. The board of directors has determined that both Dr. Kuo and Mr. Kanzer qualify as an "audit committee financial expert," as defined under the rules of the Securities and Exchange Commission. The board of directors has also determined that all of the members of the Audit Committee are qualified to serve on the committee and have the experience and knowledge to perform the duties required of the committee.

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**Item 10. Executive Compensation.****Summary Compensation**

The following table contains information concerning the compensation paid during our fiscal years ended December 31, 2006, to the persons who served as our Chief Executive Officers, and each of the two other most highly compensated executive officers during 2006 (collectively, the “Named Executive Officers”).

**Summary Compensation**

<b>Name</b>	<b>Position</b>	<b>Year</b>	<b>Salary</b>	<b>Bonus</b>	<b>Option Awards</b>	<b>All Other Compensation</b>	<b>Total</b>
<b>Christopher J. Schaber (1)</b>	CEO & President	2006	\$104,700	\$33,333	\$185,403	\$16,895	\$340,331
<b>Michael Sember (2)</b>	CEO & President	2006	\$192,500	-	\$82,060	\$229,827	\$504,387
<b>Evan Myriantopoulos (3)</b>	CFO	2006	\$195,724	\$55,000	\$103,064	\$49,257	\$398,045
<b>James Clavijo (4)</b>	Controller, Treasurer & Secretary	2006	\$144,999	\$40,000	\$42,836	-	\$222,835

(1) Dr. Schaber began his employment with us on August 29, 2006. Dr. Schaber deferred payment of his 2006 prorated annual bonus of \$33,333. Option Awards include the value of stock option awards of vested shares of common stock as required by FASB No. 123R. Other Compensation includes costs for transportation, travel and lodging.

(2) Mr. Sember’s employment was terminated without “just cause” on August 25, 2006. Option Awards include the value of stock option awards of vested shares of common stock as required by FASB No. 123R. Other Compensation includes \$150,000 in accrued severance payments and \$28,383 for accrued vacation time, as well as costs for transportation, travel and lodging.

(3) Mr. Myriantopoulos joined in November 2004 as President and Acting Chief Executive Officer and then in December 2004 he accepted the position of Chief Financial Officer. Mr. Myriantopoulos deferred payment of his 2006 annual bonus of \$55,000. Option Awards include the value of stock option awards of vested shares of common stock as required by FASB No. 123R. Other Compensation includes costs for transportation, travel and lodging.

(4) Mr. Clavijo joined in October 2004. Mr. Clavijo deferred payment of his 2006 annual bonus of \$40,000. Option Awards include the value of stock option awards of vested shares of common stock as required by FASB No. 123R.

## Potential Issuance of Shares

On February 28, 2007, our Board of Directors approved the issuance of 2,700,000 shares of our common stock to certain employees and a consultant. Such shares will be issued immediately prior to the completion of a transaction, or series or combination of related transactions, negotiated by our Board of Directors whereby, directly or indirectly, a majority of our capital stock or a majority of our assets are transferred from us and/or our stockholders to a third party (an "Acquisition Event"). Of the shares of common stock to be issued upon an Acquisition Event, 1,000,000 shares will be issued to Christopher J. Schaber, a director and our Chief Executive Officer and President; 750,000 shares will be issued to Evan Myriantopoulos, a director and our Chief Financial Officer; and 300,000 shares will be issued to James Clavijo, our Controller, Treasurer, and Corporate Secretary. We expect to enter into agreements with Dr. Schaber, Mr. Myriantopoulos and Mr. Clavijo with regard to the arrangement described above. We expect that such agreements will include terms and conditions customary to agreements of such type.

## Employment and Severance Agreements

During August 2006, we entered into a three year employment agreement with Christopher J. Schaber, Ph. D. Pursuant to this employment agreement we agreed to pay Dr. Schaber a base salary of \$300,000 per year and a minimum annual bonus of \$100,000. We agreed to issue him options to purchase 2,500,000 shares of our common stock, with one third immediately vesting and the remainder vesting over three years. Upon termination without "Just Cause" as defined by this agreement, we would pay Dr. Schaber six months severance, as well as any accrued bonuses, accrued vacation, and we would provide health insurance and life insurance benefits for Dr. Schaber and his dependants. No unvested options shall vest beyond the termination date.

During December 2004, we entered into a three year employment agreement with Michael T. Sember, Pursuant to this employment agreement we agreed to pay Mr. Sember a base salary of \$300,000 per year. After one year of service Mr. Sember would be entitled to a minimum annual bonus of \$100,000. We agreed to issue him options to purchase 2,000,000 shares of our common stock, with one third immediately vesting and the remainder vesting over three years. This option grant was subject to shareholder approval. Upon termination without "Just Cause" as defined by this agreement, we would pay Mr. Sember six months severance, as well as any unpaid bonuses and accrued vacation. No unvested options shall vest beyond the termination date. On August 25, 2006 we terminated the employment agreement with Mr. Sember without "Just Cause." Mr. Sember remained with us as a director until he resigned on September 25, 2006. We have paid his severance and accrued vacation according to the terms of his employment agreement. His employment agreement required us to pay him \$150,000 in severance and \$28,383 in accrued vacation. At the time of Mr. Sember's termination he had vested options to purchase 1,340,000 of our common stock. Mr. Sember did not have any unpaid bonuses at the time of his termination.

In December 2004, we entered into a three year employment agreement with Mr. Myriantopoulos. Pursuant to this employment agreement we agreed to pay Mr. Myriantopoulos a base salary of \$185,000 per year. After one year of service Mr. Myriantopoulos would be entitled to a minimum annual bonus of \$50,000. We agreed to issue him options to purchase 500,000 shares of our common stock, with the options vesting over three years. This option grant is subject to shareholder approval. Upon termination without "Just Cause" as defined by this agreement, we would pay Mr. Myriantopoulos six months severance subject to setoff, as well as any unpaid bonuses and accrued vacation would become payable. No unvested options shall vest beyond the termination date. Mr. Myriantopoulos also received 150,000 options, vested immediately when he was hired in November 2004, as President and Acting Chief Executive Officer.

During May 2006, we increased Evan Myrianthopoulos' base salary to \$200,000. We also agreed to issue him 400,000 options of our common stock, with 100,000 options immediately vesting and the remainder vesting over three years.

During May 2006, we entered into an amendment to the February 2005 employment agreement with James Clavijo. Pursuant to the amendment we agreed to pay Mr. Clavijo a base salary of \$150,000 per year and a minimum annual bonus of \$35,000. Additionally we agreed to issue him options to purchase 200,000 options of our common stock, with 50,000 options immediately vesting and the remainder vesting over three years. In the February 2005 employment agreement, we agreed to issue 150,000 shares of our common stock, with one third immediately vesting and the remainder vesting over three years. Upon termination without "Just Cause" as defined by this agreement, we would pay Mr. Clavijo three months severance, as well as any unpaid bonuses and accrued vacation would become payable. No unvested options shall vest beyond the termination date. Mr. Clavijo also received 100,000 options, vesting over three years when he was hired in October 2004, as Controller, Treasurer and Corporate Secretary.

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

The following table contains information concerning unexercised options, stock that has not vested, and equity incentive plan awards for the Named Executive Officers during the fiscal year ended December 31, 2006. We have never issued Stock Appreciation Rights.

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

Name	Number of Securities Underlying Unexercised Options (#)		Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#)	Option Exercise Price (\$)	Option Expiration Date
	Exercisable	Unexercisable			
Christopher J. Schaber(1)	972,223	1,527,777	1,527,777	\$0.27	8/28/2016
Michael T. Sember(2)	1,340,000	-	-	\$0.46	8/24/2007
Evan Myriantopoulos	150,000	-	-	\$0.35	11/14/2012
	50,000	-	-	\$0.90	9/15/2013
	50,000	-	-	\$0.58	6/11/2014
	150,000	-	-	\$0.47	11/10/2014
	333,336	166,664	166,664	\$0.49	12/13/2014
	150,000	250,000	250,000	\$0.35	5/10/2016
James Clavijo	66,666	33,334	33,334	\$0.45	10/22/2014
	116,664	33,336	33,336	\$0.45	2/22/2015
	87,500	112,500	112,500	\$0.33	5/10/2016

(1) Dr. Schaber began his employment with us on August 29, 2006.

(2) Mr. Sember's employment was terminated without "Just Cause" on August 25, 2006.

**Compensation of Directors**

The following table contains information concerning the compensation of the non-employee directors during the fiscal year ended December 31, 2006.

**Director Compensation**

<b>Name</b>	<b>Fees Earned of Paid in Cash (\$) (1)</b>	<b>Option Awards (\$) (2)</b>	<b>Total (\$)</b>
<b>Steve H. Kanzer</b>	\$25,000	\$11,270	\$36,270
<b>James S. Kuo</b>	\$25,000	\$11,270	\$36,270

- (1) Directors who are compensated as full-time employees receive no additional compensation for service on our Board of Directors or its committees. Each director who is not a full-time employee is paid \$2,000 for each board or committee meeting attended (\$1,000 if such meeting was attended telephonically).
- (2) We maintain a stock option grant program pursuant to the nonqualified stock option plan, whereby members of our Board of Directors who are not full-time employees receive an initial grant of fully vested options to purchase 50,000 shares of common stock, and subsequent annual grants of fully vested options to purchase 50,000 shares of common stock after re-election to our Board of Directors.
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**Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.**

The table below provides information regarding the beneficial ownership of the Common Stock as of April 11, 2007 of (1) each person or entity who owns beneficially 5% or more of the shares of our outstanding common stock, (2) each of our directors, (3) each of the Named Executive Officers, and (4) our directors and officers as a group. Except as otherwise indicated, and subject to applicable community property laws, we believe the persons named in the table have sole voting and investment power with respect to all shares of common stock held by them. Except as otherwise indicated, each stockholder's percentage ownership of our common stock in the following table is based on 91,913,336 as of April 5, 2007 shares of common stock outstanding.

Name of Beneficial Owner	Shares of Common Stock Beneficially Owned	Percent of Class
SouthPointe Master Fund, LP (1)	8,510,638	9.3%
Cyrill F. Buhrman(2)	4,900,020	5.2%
Platinum Partners Long Term Growth III (3)	4,604,306	4.9%
Sigma Tau Pharmaceuticals, Inc. (4)	4,065,041	4.4%
Paolo Cavazza (4)	5,611,911	6.1%
Claudio Cavazza (4)	4,065,041	4.4%
Christopher J. Schaber (5)	1,542,769	1.7%
Steve H. Kanzer (6)	2,398,401	2.6%
James S. Kuo (7)	205,000	*
Evan Myrianthopoulos (8)	1,406,382	1.5%
James Clavijo (9)	344,865	*
All directors and executive officers as a group (5 persons)	5,897,417	6.1%

\* Indicates less than 1%.

\*\* Beneficial ownership is determined in accordance with the rules of the SEC. Shares of common stock subject to options or warrants currently exercisable or exercisable within 60 days of April 11, 2007 are deemed outstanding for computing the percentage ownership of the stockholder holding the options or warrants, but are not deemed outstanding for computing the percentage ownership of any other stockholder. Percentage of ownership is based on 91,913,336 shares of common stock outstanding as of April 11, 2007.

(1) On February 16, 2007, SouthPointe Master Fund, LP (the "master fund") filed a Schedule 13G with the SEC. Southpoint Capital Advisors LLC ("Southpoint CA LLC") is the general partner of Southpoint Capital Advisors LP ("Southpoint Advisors"). Southpoint GP LLC ("Southpoint GP LLC") is the general partner of Southpoint GP, LP ("Southpoint GP"). Southpoint GP is the general partner of Southpoint Fund LP, (the "Fund"), Southpoint Qualified Fund LP (the "Qualified Fund") and the Master Fund. Southpoint Offshore Fund, Ltd. (the "Offshore Fund") is also a general partner of the Master Fund. According to the Schedule 13 G, Southpoint CA LLC, Southpoint GP LLC, Southpoint GP, Southpoint Advisors, Robert W. Butts and John S. Clark II have the sole power to vote and dispose of the 8,510,638 shares of common stock beneficially owned. The address of the master fund is 623 Fifth Avenue, Suite 2503, New York, NY 10022.

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(2) Includes 3,095,617 shares of common stock within 60 days of April 11, 2007. The address of Mr. Buhrman is c/o Pacific Healthcare (Thailand) Co., Ltd. 229/1 South Sathorn Road Bangkok 10120 Thailand.

(3) Includes 2,439,023 shares of common stock and warrants to purchase 2,165,283 shares of common stock within 60 days of April 11, 2007. The address of Platinum Partners Long Term Growth III is 152 West 57<sup>th</sup> Street, 54<sup>th</sup> Floor, New York, NY 10019.

(4) On January 12, 2007, Sigma-Tau, Paolo Cavazza and Claudio Cavazza filed a Schedule 13G as a group, within the meaning of Section 13(d)(3) of the Securities Exchange Act of 1934, with the SEC. According to this Schedule 13G, Paolo Cavazza and Claudio Cavazza beneficial own of all of the shares held by Sigma-Tau and possess shared voting and dispositive power with regard to these shares. Paolo Cavazza individually owns 1,546,870 shares of common stock and possesses sole voting and dispositive power with regard to these shares. The address for Sigma-Tau is 800 South Frederick Avenue, Suite 300, Gaithersburg, Maryland 20877. The address for Paolo Cavazza is Via Tesserete 10, Lugano, Switzerland. The address for Claudio Cavazza is Via Sudafrica, 20, Rome, Italy 00144.

(5) Includes 292,766 shares of common stock owned by Dr. Schaber, and options to purchase 1,250,003 shares of common stock within 60 days of April 11, 2007. The address of Dr. Schaber is c/o DOR BioPharma, 1101 Brickell Avenue, Suite 701-S, Miami, Florida 33131.

(6) Includes 1,282,203 shares of common stock owned by Mr. Kanzer, warrants to purchase 349,398 shares of common stock and options to purchase 766,800 shares of common stock within 60 days of April 11, 2007. The address of Mr. Kanzer is c/o DOR BioPharma, 1101 Brickell Avenue, Suite 701-S, Miami, Florida 33131.

(7) Includes options to purchase 200,000 shares of common stock and warrants to purchase 5,000 shares of common stock within 60 days of April 11, 2007. The address of Dr. Kuo is c/o DOR BioPharma, 1101 Brickell Avenue, Suite 701-S, Miami, Florida 33131.

(8) Includes 154,780 shares of common stock owned by Mr. Myriantopoulos and his wife, options to purchase 975,003 shares of common stock and warrants to purchase 276,562 shares of common stock within 60 days of April 11, 2007. The address of Mr. Myriantopoulos is c/o DOR BioPharma, 1101 Brickell Avenue, Suite 701-S, Miami, Florida 33131.

(9) Includes 53,191 shares of common stock owned by Mr. Clavijo, options to purchase 291,663 shares of common stock within 60 days of April 11, 2007. The address of Mr. Clavijo is c/o DOR BioPharma, 1101 Brickell Avenue, Suite 701-S, Miami, Florida 33131.

**Equity Compensation Plan Information**

In December 2005 our Board of Directors approved the 2005 Equity Incentive Plan, which was approved by stockholders on December 29, 2005. The following table provides information, as of December 31, 2006, with respect to options outstanding under our 1995 Amended and Restated Omnibus Incentive Plan and our 2005 Equity Incentive Plan

Plan Category	Number of Securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-Average Exercise Price Outstanding options, warrants and rights	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (excluding securities reflected in the first column)
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Equity compensation plans approved by security holders (1)	11,639,339	\$ 0.50	2,936,032
Equity compensation plans not approved by security holders	-	-	-
<b>TOTAL</b>	<b>11,639,339</b>	<b>\$0.50</b>	<b>2,936,032</b>

(1) Includes our 1995 Amended and Restated Omnibus Incentive Plan and our 2005 Equity Incentive Plan. Our 1995 Plan expired in 2005 and thus no securities remain available for future issuance under that plan. Under the 2005 equity incentive plan, we issued 728,968 shares to individuals as payment for services in the amount of \$232,533 as allowed in the plan.

### SELLING STOCKHOLDERS

The following table presents information as of April 11, 2007 and sets forth the number of shares of common stock beneficially owned by each of the Selling Stockholders. We are not able to estimate the amount of shares that will be held by each Selling Stockholder after the completion of this offering because: (1) the Selling Stockholders may sell less than all of the shares registered under this prospectus; (2) the Selling Stockholders may exercise less than all of their warrants; and (3) to our knowledge, the Selling Stockholders currently have no agreements, arrangements or understandings with respect to the sale of any of their shares. The following table assumes that all of the shares being registered pursuant to this prospectus will be sold. The Selling Stockholders are not making any representation that any shares covered by this prospectus will be offered for sale. Except as otherwise indicated, based on information provided to us by each Selling Stockholder, the Selling Stockholders have sole voting and investment power with respect to their shares of common stock. Except as otherwise noted, none of the Selling Stockholders nor any of their affiliates have held a position or office, or had any other material relationship, with us.

<b>Name of Selling Stockholder</b>	<b>Number of Shares of Common Stock Owned Before the Offering (1)</b>	<b>Percent of Common Stock Owned Before the Offering</b>	<b>Shares Available for Sale Under This Prospectus (1)</b>	<b>Number of Shares of Common Stock To Be Owned After Completion of the Offering</b>	<b>Percent of Common Stock to be Owned After Completion of the Offering</b>
Sigma-Tau Pharmaceuticals, Inc. (2)	4,065,041	4.4%	4,065,041	-	*
Alpha Capital AG (3)	3,743,587	4.1%	134,781	-	*
Platinum Partners Long Term Growth III (4)	4,604,306	4.9%	272,861	-	*
Iroquois Master Fund	256,873	*	204,545	-	*



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LTD (5)					
Little Gem Life Sciences Fund, LLC (6)	1,429,139	1.6%	45,477	-	*
Ed Burke	478,431	*	72,073	-	*
Steven Mark	91,369	*	11,369	-	*
Michael Sember	1,532,741	1.7%	6,301	-	*
Kim Alberstadt	76,724	*	4,548	-	*
Emmanuelle M. Voisin	312,500	*	312,500	-	*
Adam Rumage	60,000	*	60,000	-	*
BMC Communications Group LLC (7)	142,857	*	142,857	-	*
Bristol Investment Partners LPI (8)	62,500	*	62,500	-	*
Arthur B. Whitcomb	37,500	*	37,500	-	*
Crystal Research, Inc. (9)	150,000	*	150,000	-	*
Keith Lippert	85,000	*	85,000	-	*
John Heilshorn	85,000	*	85,000	-	*
Jeffrey Kraws	40,000	*	40,000	-	*
Karen Goldfarb	40,000	*	40,000	-	*
Southpoint Master Fund LP (10)	8,510,638	9.3%	8,510,638	-	*
Christopher J. Schaber and Cathleen Schaber	1,542,769	1.7%	212,766	-	*
Evan Myriantopoulos & Konstantina Myriantopoulos JTWROS	1,406,382	1.5%	64,560	-	*
Vasili Myriantopoulos and Elizabeth Myriantopoulos JTWROS	197,543	*	62,286	-	*
James Clavijo	344,865	*	53,191	-	*
Steve H. Kanzer	2,398,401	2.6%	212,766	-	*

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Cyrille F. Buhrman	4900,020	5.2%	1,291,214	-	*
Firebird Global Master Fund II, Ltd. (11)	1,063,830	1.2%	1,063,830	-	*
Victor P. Thompson	479,743	*	106,383	-	*
David Gentile	251,804	*	131,516	-	*
Bernard Pismeny	234,251	*	113,963	-	*
Kyle Brengel	234,251	*	113,963	-	*
Anthony G. Bianchi	31,915	*	31,915	-	*
Windward Capital Advisors, LLC (12)	1,466,556	1.6%	257,979		*
HefCap Holdings, LLC (13)	1,466,554	1.6%	257,978		*
Jeffrey Benison	100,000	*	100,000		*
George McDonald	150,000	*	150,000		*
Timothy Rodell	100,000	*	100,000		*
Scott Cruickshank	50,000	*	50,000		*

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\* Less than 1%.

\*\*Beneficial ownership is determined in accordance with the rules of the SEC. Shares of common stock subject to options or warrants currently exercisable or exercisable within 60 days of April 11, 2007, are deemed outstanding for computing the percentage ownership of the stockholder holding the options or warrants, but are not deemed outstanding for computing the percentage ownership of any other stockholder. Percentage of ownership is based on 91,913,336 shares of common stock outstanding as of April 11, 2007.

(1) The shares of common stock issuable upon the exercise of warrants are as follows: Bristol Investment Partners LPI, 62,500 shares; Arthur B. Whitcomb, 37,500 shares; Crystal Research, 150,000 shares; Keith Lippert, 85,000 shares; John Heilshorn, 85,000 shares; Jeffrey Kraws, 40,000 shares; Karen Goldfarb, 40,000 shares; Michael Sember, 180,440 shares; Evan Myriantopoulos, 276,562 shares; Steven H. Kanzer, 349,398 shares; David Gentile, 17,553 shares; Ed Burke, 26,596 shares; Cyrille F. Buhrman, 1,804,403 shares; Steven Mark, 60,000 shares; Windward Capital Advisors, LLC, 1,466,556 shares; HefCap Holdings, LLC, 1,466,554 shares; Jeffrey Benison, 100,000 shares. The number of shares issuable upon the exercise of options are as follows: Michael Sember 1,340,000 shares; Christopher J. Schaber, 1,111,113 shares; Evan Myriantopoulos, 950,003 shares; Steven H. Kanzer, 766,800 shares; James Clavijo, 270,830 shares; Cyrille F. Buhrman, 3,095,617 shares.

(2) Gregg Lapointe, Paolo Cavazza and Claudio Cavazza are the natural person who exercise voting or dispositive power with respect to the shares held of record by Sigma-Tau Pharmaceuticals, Inc. Sigma-Tau Pharmaceuticals, Inc. is not a broker-dealer, nor is it affiliated with one. The amount does not include 1,546,870 shares of common stock

held by Paolo Cavazza.

(3) Konrad Ackerman is the natural person who exercises sole voting or dispositive power with respect to the shares held of record by Alpha Capital AG. Alpha Capital AG is not a broker-dealer, nor is it affiliated with one.

(4) Mark Norducht is the natural person who exercises sole voting or dispositive power with respect to the shares held of record by Platinum Partners Long Term Growth III. Platinum Partners Long Term Growth III is not a broker-dealer, nor is it affiliated with one.

(5) Joshua Silverman is the natural person who exercises sole voting or dispositive power with respect to the shares held of record by Iroquois Master Fund LTD. Iroquois Master Fund LTD is not a broker dealer, nor is it affiliated with one.

(6) Jeffrey Benison is the natural person who exercises sole voting or dispositive power with respect to the shares held of record by Little Gem Life Sciences Fund, LLC. Little Gem Life Sciences Fund, LLC is not a broker dealer, nor is it affiliated with one.

(7) Brad Miles is the natural person who exercises sole voting or dispositive power with respect to the shares held of record by BMC Communications Group LLC. BMC Communications Group LLC is not a broker-dealer, nor is it affiliated with one.

(8) Alan P. Donenfeld is the natural person who exercises sole voting or dispositive power with respect to the shares held of record by Bristol Investment Partners LPI. Bristol Investment Partners LPI is not a broker-dealer, nor is it affiliated with one.

(9) Jeff Kraws the natural person who exercises sole voting or dispositive power with respect to the shares held of record by Crystal Research, Inc. Crystal Research, Inc. is not a broker-dealer, nor is it affiliated with one.

(10) Robert W. Butts and John S. Clark II are the natural person who exercises voting or dispositive power with respect to the shares held of record by Southpoint Master Fund LP. Southpoint Master Fund LP is not a broker-dealer, nor is it affiliated with one.

(11) Harvery Sawikin and James Passin are the natural persons who exercise voting or dispositive power with respect to the shares held of record by Firebird Global Master Fund II, Ltd. Firebird Global Master Fund II, Ltd. is not a broker-dealer, nor is it affiliated with one.

(12) David Cowherd is the natural person who exercises sole voting or dispositive power with respect to the shares held of record by Windward Capital Advisors, LLC. Windward Capital Advisors, LLC is a broker-dealer, or is it affiliated with one.

(13) Robert L. Rosenstein is the natural person who exercises sole voting or dispositive power with respect to the shares held of record by HefCap Holdings, LLC. HefCap Holdings, LLC is not a broker-dealer, nor is it affiliated with one.

### **USE OF PROCEEDS**

This prospectus relates to shares of our common stock that may be offered and sold from time to time by the Selling Stockholders. We will receive no proceeds from the sale of shares of common stock in this offering. However, we may receive up to approximately \$24,000,000 in proceeds from the exercise of the Warrants to purchase our common stock. We intend to use the net proceeds from the exercise of the Warrants as working capital to cover costs associated with the completion of the NDA and MAA for orBec®, other research and development expenses, and general overhead costs including salaries until such time, if ever, as we are able to generate a positive cash flow from operation.

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## PLAN OF DISTRIBUTION

The selling stockholders and any of their pledgees, donees, transferees, assignees and successors-in-interest may, from time to time, sell any or all of their shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. The selling stockholders may use any one or more of the following methods when selling shares:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits investors;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
  - purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
  - an exchange distribution in accordance with the rules of the applicable exchange;
  - privately negotiated transactions;
- to cover short sales and other hedging transactions made after the date that the registration statement of which this prospectus is a part is declared effective by the Securities and Exchange Commission;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
  - a combination of any such methods of sale; and
  - any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares under Rule 144 under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the investor of shares, from the purchaser) in amounts to be negotiated. The selling stockholders do not expect these commissions and discounts to exceed what is customary in the types of transactions involved.

The selling stockholders may from time to time pledge or grant a security interest in some or all of the Shares owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell shares of common stock from time to time under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act of 1933 amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus.

Upon our being notified in writing by a selling stockholder that any material arrangement has been entered into with a broker-dealer for the sale of common stock through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, a supplement to this prospectus will be filed, if required, pursuant to Rule 424(b) under the Securities Act, disclosing (i) the name of each such selling stockholder and of the participating broker-dealer(s), (ii) the number of shares involved, (iii) the price at which such shares of common stock were sold, (iv) the commissions paid or discounts or concessions allowed to such broker-dealer(s), where applicable, (v) that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus, and (vi) other facts material to the transaction. In addition, upon our being notified in writing by a selling stockholder that a donee or pledgee intends to sell more than 500 shares of common stock, a supplement to this prospectus will be filed if then required in accordance with applicable securities law.

The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The selling stockholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Discounts, concessions, commissions and similar selling expenses, if any, that can be attributed to the sale of securities will be paid by the selling stockholders and/or the purchasers of the securities.

Each selling stockholder that is affiliated with a registered broker-dealer has confirmed to us that, at the time it acquired the securities subject to the registration statement of which this prospectus is a part, it did not have any agreement or understanding, directly or indirectly, with any person to distribute any of such securities. The Company has advised each selling stockholder that it may not use shares registered on the registration statement of which this prospectus is a part to cover short sales of our common stock made prior to the date on which such registration statement was declared effective by the SEC.

We are required to pay certain fees and expenses incident to the registration of the shares. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act. We agreed to keep this prospectus effective until the earlier of (i) the date on which the shares may be resold by the selling stockholders without registration and without regard to any volume limitations by reason of Rule 144(e) under the Securities Act or any other rule of similar effect and (ii) such time as all of the shares have been publicly sold.

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## DESCRIPTION OF SECURITIES

Our authorized capital stock consists of 255,000,000 shares of capital stock, of which 250,000,000 shares are common stock, par value \$.001 per share, 4,600,000 shares are preferred stock, par value \$0.001 per share, 200,000 are Series B Convertible Preferred Stock, par value \$.05 per share, and 200,000 shares are Series C Convertible Preferred Stock, par value \$.05 per share. As of April 11, 2007, there were issued and outstanding 91,913,336 shares of common stock, options to purchase approximately 11,900,000 shares of common stock and warrants to purchase approximately 34,400,000 shares of common stock. The amount outstanding includes the 17,557,195 shares of common stock issued to the Selling Stockholders.

### **Common Stock**

Holders of our common stock are entitled to one vote for each share held in the election of directors and in all other matters to be voted on by the stockholders. There is no cumulative voting in the election of directors. Holders of common stock are entitled to receive dividends as may be declared from time to time by our board of directors out of funds legally available therefor. In the event of liquidation, dissolution or winding up of the corporation, holders of common stock are to share in all assets remaining after the payment of liabilities. Holders of common stock have no pre-emptive or conversion rights and are not subject to further calls or assessments. There are no redemption or sinking fund provisions applicable to the common stock. The rights of the holders of the common stock are subject to any rights that may be fixed for holders of preferred stock. All of the outstanding shares of common stock are fully paid and non-assessable.

### **Preferred Stock**

Our Certificate of Incorporation authorizes the issuance of 4,600,000 shares of preferred stock with designations, rights, and preferences as may be determined from time to time by the board of directors. The board of directors is empowered, without stockholder approval, to designate and issue additional series of preferred stock with dividend, liquidation, conversion, voting or other rights, including the right to issue convertible securities with no limitations on conversion, which could adversely affect the voting power or other rights of the holders of our common stock, substantially dilute a common stockholder's interest and depress the price of our common stock.

No shares of the Series B Convertible Preferred Stock or the Series C Convertible Preferred Stock are outstanding.

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

Our common stock is presently quoted on the Over-the-Counter Bulletin Board (“OTCBB”) under the symbol “DORB.” The table below sets forth the high and low sales prices, as provided by the American Stock Exchange, in each quarter for the period from January 1, 2004 through March 31, 2006. Until April 18, 2006, our common stock was listed on the American Stock Exchange. The amounts represent inter-dealer quotations without adjustment for retail markup, markdowns or commissions and do not represent the prices of actual transactions.

<b>Period</b>	<b>Price Range</b>	
	<b>High</b>	<b>Low</b>
<i><b>Fiscal Year Ended December</b></i>		
<i><b>31, 2005:</b></i>		
First Quarter	\$0.67	\$0.35
Second Quarter	\$0.42	\$0.29
Third Quarter	\$0.45	\$0.32
Fourth Quarter	\$0.36	\$0.22
<i><b>Fiscal Year Ended December</b></i>		
<i><b>31, 2006:</b></i>		
First Quarter	\$0.69	\$0.26
Second Quarter	\$0.40	\$0.23
Third Quarter	\$0.33	\$0.20
Fourth Quarter	\$0.30	\$0.21

On April 18, 2006, our common stock was delisted from the American Stock Exchange and began to be quoted on the OTCBB. As of April 11, 2007, the last reported price of our common stock quoted on the OTCBB was \$0.62 per share. The OTCBB price quoted reflects inter-dealer prices, without retail mark-up, mark-down or commission, and may not represent actual transactions. We have approximately 1,089 registered holders of record.

**Dividend Policy**

We have never declared nor paid any cash dividends, and currently intend to retain all our cash and any earnings for use in our business and, therefore, do not anticipate paying any cash dividends in the foreseeable future. Any future determination to pay cash dividends will be at the discretion of the Board of Directors and will be dependant upon our consolidated financial condition, results of operations, capital requirements and such other factors as the Board of Directors deems relevant.



## **DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES**

Section 102(b)(7) of the Delaware General Corporation Law allows companies to limit the personal liability of its directors to the company or its stockholders for monetary damages for breach of a fiduciary duty. Article IX of the Company's Certificate of Incorporation, as amended, provides for the limitation of personal liability of the directors of the Company as follows:

“A Director of the Corporation shall have no personal liability to the Corporation or its stockholders for monetary damages for breach of his fiduciary duty as a Director; provided, however, this Article shall not eliminate or limit the liability of a Director (i) for any breach of the Director's duty of loyalty to the Corporation or its stockholders; (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law; (iii) for the unlawful payment of dividends or unlawful stock repurchases under Section 174 of the General Corporation Law of the State of Delaware; or (iv) for any transaction from which the Director derived an improper personal benefit. If the General Corporation Law is amended after approval by the stockholders of this Article to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law of the State of Delaware, as so amended.”

Article VIII of the Company's Bylaws, as amended and restated, provide for indemnification of directors and officers to the fullest extent permitted by the Delaware General Corporation Law.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers or persons controlling the registrant pursuant to the foregoing provisions, the registrant has been informed that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is therefore unenforceable.

### **EXPERTS**

The audited consolidated financial statements of DOR BioPharma, Inc. and subsidiaries included herein in the Registration Statement have been audited by Sweeney, Gates & Co., an independent registered public accounting firm, for the years ended December 31, 2006 and 2005 as set forth in their report appearing herein and elsewhere in the Registration Statement. Such financial statements have been so included in reliance upon the reports of such firm given upon their authority as experts in accounting and auditing.

### **LEGAL MATTERS**

The validity of the shares of our common stock offered by the Selling Stockholder will be passed upon by the law firm of Edwards Angell Palmer & Dodge LLP, Fort Lauderdale, Florida.

future issuance under that plan. Under the 2005 equity incentive plan, we issued 728,968 shares to individuals as payment for services in the amount of \$232,533 as allowed in the plan.

**DOR BIOPHARMA, Inc. AND SUBSIDIARIES**

**CONSOLIDATED FINANCIAL STATEMENTS**

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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors of DOR BioPharma, Inc.,

We have audited the accompanying consolidated balance sheet of DOR BioPharma, Inc. and subsidiaries at December 31, 2006 and the related consolidated statements of operations, changes in shareholders' deficiency and cash flows for the years ended December 31, 2006 and 2005. These consolidated financial statements are the responsibility of the Company'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 misstatement. 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 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 financial position of the Company, as of December 31, 2006 and the results of its operations and its cash flows for the years ended December 31, 2006 and 2005, in conformity with United States generally accepted accounting principals.

*/s/ Sweeney, Gates & Co.*

Fort Lauderdale, Florida  
March 1, 2007

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**DOR BioPharma, Inc.**  
**Consolidated Balance Sheet**  
**December 31, 2006**

**Assets**

## Current assets:

Cash	\$ 119,636
Grants receivable	89,933
Prepaid expenses	94,470
Total current assets	304,039

Office and laboratory equipment, net	29,692
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Intangible assets, net	1,073,239
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Total assets	\$ 1,406,970
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**Liabilities and shareholders' (deficiency)**

## Current liabilities:

Accounts payable	\$ 2,112,479
Accrued compensation	402,947
Total current liabilities	2,515,426

## Shareholders' (deficiency):

Common stock, \$.001 par value. Authorized 250,000,000 shares; 68,855,794 issued and outstanding	68,855
Additional paid-in capital	91,553,766
Accumulated deficit	( 92,731,077)

Total shareholders' (deficiency)	(1,108,456)
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Total liabilities and shareholders' deficiency	\$ 1,406,970
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The accompanying notes are an integral part of these financial statements

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**DOR BioPharma, Inc.**  
**Consolidated Statements of Operations**  
**For the years ended December 31,**

	2006	2005
Revenues	\$ 2,313,020	\$ 3,075,736
Cost of revenues	( 1,965,074)	( 2,067,034)
Gross profit	347,946	1,008,702
Operating expenses:		
Research and development	3,638,493	3,516,791
In-process research and development	981,819	-
Impairment of intangible assets	816,300	164,346
General and administrative	3,110,882	2,162,616
Total operating expenses	8,547,494	5,843,753
Loss from operations	( 8,199,548)	( 4,835,051)
Other income (expense):		
Interest income	41,510	78,242
Interest (expense) reversal	(5,308)	36,549
Total other income (expense)	36,202	114,791
Net loss	\$ ( 8,163,346)	\$ ( 4,720,260)
Basic and diluted net loss per share	\$ ( 0.13)	\$ ( 0.09)
Basic and diluted weighted average common shares outstanding	63,759,092	49,726,249

The accompanying notes are an integral part of these financial statements

**DOR BioPharma, Inc.**  
**Consolidated Statements of Changes in Shareholders' (Deficiency)**  
**For the years ended December 31, 2006 and 2005**

	Common Stock		Additional Paid-In capital	Accumulated Deficit	Treasury Stock	
	Shares	Par Value			Shares	Cost
<b>Balance, January 1, 2005</b>	<b>42,218,404</b>	<b>\$42,218</b>	<b>\$83,216,533</b>	<b>(\$79,847,471)</b>	<b>120,642</b>	<b>(\$427,697)</b>
<b>Issuance of common stock</b>	<b>8,396,100</b>	<b>8,396</b>	<b>3,539,897</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Treasury stock retired</b>	<b>(2,000)</b>	<b>(2)</b>	<b>(426,383)</b>	<b>-</b>	<b>(120,642)</b>	<b>427,697</b>
<b>Reversal of non-cash compensation</b>	<b>-</b>	<b>-</b>	<b>(284,855)</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Net loss</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(4,720,260)</b>	<b>-</b>	<b>-</b>
<b>Balance, December 31, 2005</b>	<b>50,612,504</b>	<b>50,612</b>	<b>86,045,192</b>	<b>(\$84,567,731)</b>	<b>-</b>	<b>-</b>
<b>Issuance of common stock</b>	<b>13,429,504</b>	<b>13,430</b>	<b>3,521,570</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Issuance of common stock for exercise of options</b>	<b>504,100</b>	<b>504</b>	<b>112,816</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Issuance of common stock to vendors</b>	<b>506,942</b>	<b>507</b>	<b>134,171</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Issuance of warrants to vendors</b>	<b>-</b>	<b>-</b>	<b>121,965</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Issuance of common stock for an equity commitment fee</b>	<b>512,500</b>	<b>512</b>	<b>( 512)</b>	<b>-</b>	<b>-</b>	<b>-</b>

<b>Issuance of common stock to employees</b>	<b>222,061</b>	<b>222</b>	<b>82,632</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Issuance of common stock to minority shareholders</b>	<b>3,068,183</b>	<b>3,068</b>	<b>978,750</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Stock option expense</b>	<b>-</b>	<b>-</b>	<b>557,182</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Net loss</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(8,163,346)</b>	<b>-</b>	<b>-</b>
<b>Balance, December 31, 2006</b>	<b>68,855,794</b>	<b>\$68,855</b>	<b>\$91,553,766</b>	<b>(\$92,731,077)</b>	<b>-</b>	<b>\$ -</b>

The accompanying notes are an integral part of these financial statements

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**DOR BioPharma, Inc.**  
**Consolidated Statements of Cash Flows**  
**For the years ending December 31,**

	2006	2005
<b>Operating activities</b>		
Net loss	\$ (8,163,346)	\$ (4,720,260)
Adjustments to reconcile net loss to net cash used by operating activities:		
Amortization and depreciation	137,044	194,284
Non-cash stock compensation	896,680	(284,855)
Non-cash stock purchase of in-process research and development	981,819	-
Impairment expense for intangibles	816,300	164,346
Change in operating assets and liabilities:		
Grants receivable	474,397	178,657
Prepaid expenses	44,324	(71,191)
Accounts payable	476,605	(167,039)
Accrued compensation	254,347	83,356
Accrued royalties	(60,000)	(40,000)
Total adjustments	4,021,516	49,558
Net cash used by operating activities	(4,141,830)	(4,670,702)
<b>Investing activities:</b>		
Purchases of office and laboratory equipment	(2,552)	(21,561)
Acquisition of intangible assets	(206,004)	(250,570)
Net cash used by investing activities	(208,556)	(272,131)
<b>Financing activities:</b>		
Net proceeds from issuance of common stock	3,535,000	3,548,293
Repayments of note payable	-	(115,948)
Proceeds from exercise of options	113,320	-
Net cash provided by financing activities	3,648,320	3,432,345
Net (decrease) in cash and cash equivalents	(702,066)	(1,510,488)
Cash and cash equivalents at beginning of period	821,702	2,332,190
Cash and cash equivalents at end of period	\$ 119,636	\$ 821,702
<b>Supplemental disclosure of cash flow:</b>		
Cash paid for interest	\$ 3,170	\$ 41,865
<b>Non-cash transactions:</b>		
Non-cash stock option expense (reversal)	\$ -	\$ (284,855)
Non-cash payment to an institutional investor	220,374	-

The accompanying notes are an integral part of these financial statements



**DOR BioPharma, Inc.**  
**Notes to Consolidated Financial Statements**

**1. Nature of Business**

**Nature of Business**

The Company is a biopharmaceutical company incorporated in 1987, focused on the development of biodefense vaccines and biotherapeutic products intended for areas of unmet medical need. DOR's biodefense business segment consists of converting biodefense vaccine programs from early stage development to advanced development and manufacturing. DOR's biotherapeutic business segment consists of development of orBe<sup>®</sup> and other biotherapeutics products namely Oraprine<sup>™</sup>, LPM<sup>™</sup>-Leuprolide, and LPE<sup>™</sup> and PLP<sup>™</sup> Systems for Delivery of Water-Insoluble Drugs.

During the year ending December 31, 2006, the Company had one customer, the U.S. Federal Government. All revenues were generated from two U.S. Federal Government Grants. As of December 31, 2006 all outstanding receivables were from the U.S. Federal Government, National Institute of Health and The Food and Drug Administration.

**2. Summary of Significant Accounting Policies**

**Principles of Consolidation**

The consolidated financial statements include DOR BioPharma Inc., and its wholly owned subsidiaries ("DOR" or the "Company"). All significant intercompany accounts and transactions have been eliminated in consolidation.

**Segment Information**

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated on a regular basis by the chief operating decision maker, or decision making group, in deciding how to allocate resources to an individual segment and in assessing the performance of the segment.

**Grants Receivable**

Receivables consist of unbilled amounts due from grants from the U.S. Federal Government, National Institute of Health and The Food and Drug Administration. The amounts were billed in the month subsequent to year end. The Company considers the grants receivable to be fully collectible; accordingly, no allowance for doubtful accounts has been established. If accounts become uncollectible, they are charged to operations when that determination is made.

**Intangible Assets**

Currently, the most significant estimate or judgment that we make is whether to capitalize or expense patent and license costs. We make this judgment based on whether the technology has alternative future uses, as defined in SFAS 2, "Accounting for Research and Development Costs". Based on this consideration, we capitalized all outside legal and filing costs incurred in the procurement and defense of patents.

These intangible assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. If the sum of the expected undiscounted cash flows is less than the carrying value of the related asset or group of assets, a loss is recognized for the difference between the fair value and the

carrying value of the related asset or group of assets.

The Company capitalizes and amortizes intangibles over a period of 11 to 16 years. The Company capitalizes payments made to legal firms that are engaged in filing and protecting rights to intellectual property and rights for our current products in both the domestic and international markets. The Company believes that patent rights form one of its most valuable assets. Patents and patent applications are a key currency of intellectual property, especially in the early stage of product development, as their purchase and maintenance gives the Company access to key product development rights from DOR's academic and industrial partners. These rights can also be sold or sub-licensed as part of its strategy to partner its products at each stage of development. The legal costs incurred for these patents consist of work designed to protect, preserve, maintain and perhaps extend the lives of the patents. Therefore, DOR capitalizes these costs and amortizes them over the remaining useful life of the patents. DOR capitalizes intangible assets based on alternative future use.

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### **Impairment of Long-Lived Assets**

Office and laboratory equipment and intangible assets are evaluated and reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. The Company recognizes impairment of long-lived assets in the event the net book value of such assets exceeds the estimated future undiscounted cash flows attributable to such assets. If the sum of the expected undiscounted cash flows is less than the carrying value of the related asset or group of assets, a loss is recognized for the difference between the fair value and the carrying value of the related asset or group of assets. Such analyses necessarily involve significant judgment.

The Company recorded impairment of intangible assets of \$816,300 and \$164,346 for the years ended December 31, 2006 and 2005, respectively.

### **Fair Value of Financial Instruments**

Accounting principles generally accepted in the United States of America require that fair values be disclosed for the Company's financial instruments. The carrying amounts of the Company's financial instruments, which include grants receivable and current liabilities are considered to be representative of their respective fair values.

### **Revenue Recognition**

All of the Company's revenues are from government grants which are based upon subcontractor costs and internal costs covered by the grant, plus a facilities and administrative rate that provides funding for overhead expenses. Revenues are recognized when expenses have been incurred by subcontractors or when DOR incurs internal expenses that are related to the grant.

### **Research and Development Costs**

Research and Development costs are charged to expense when incurred. Research and development includes costs such as clinical trial expenses, contracted research and license agreement fees with no alternative future use, supplies and materials, salaries and employee benefits, equipment depreciation and allocation of various corporate costs. Purchased in-process research and development expense (IPR&D) represents the value assigned or paid for acquired research and development for which there is no alternative future use as of the date of acquisition.

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**Stock Based Compensation**

The Company adopted Statement of Financial Accounting Standards (SFAS) No. 123R, "Share-Based Payment," effective January 1, 2006, which requires companies to record compensation expense for stock options issued to employees or non-employee directors at an amount determined by the fair value of options. SFAS No. 123R is effective for annual periods beginning after December 15, 2005.

The Company has adopted SFAS No. 123R using the "modified prospective application" and therefore, financial statements from periods ending prior to January 1, 2006 have not been restated. As a result of adopting SFAS No. 123R, the Company's net loss for the year ended December 31, 2006 was \$557,182, higher than if it had continued to account for share-based compensation under APB No. 25. Basic and diluted earnings per share for the year ended December 31, 2006 would have changed by \$0.01 if the Company had not adopted SFAS No. 123R.

The fair value of each option grant at the year ended December 31, 2006 is estimated on the date of each grant using the Black-Scholes option pricing model and amortized ratably over the option's vesting periods. 4,360,000 stock options were granted for the year ended December 31, 2006.

Pro forma information, assuming the Company had accounted for its employee and director stock options granted under the fair value method prescribed by SFAS No. 123R for the year ended December 31, 2005 is presented below:

Net loss as reported	\$ ( 4,720,260)
Add stock-based employee compensation expense related to stock options determined under fair value method	( 393,226)
Amounts (credited) charged to income	( 284,855)
Pro forma net loss according to SFAS 123	5,398,341
<b><u>Net loss per share:</u></b>	
As reported, basic and diluted	\$ ( 0 .09)
Pro forma, basic and diluted	\$ ( 0 .11)

The weighted average fair value of options granted with an exercise price equal to the fair market value of the stock was \$0.30 and \$0.48 for 2006 and 2005, respectively.

The fair value of options in accordance with SFAS 123 was estimated using the Black-Scholes option-pricing model and the following weighted-average assumptions: dividend yield 0%, expected life of four years, volatility of 105% and 121% in 2006 and 2005, respectively and average risk-free interest rates of 4.76% and 3.75% in 2006 and 2005, respectively.

Stock compensation expense for options granted to non-employees has been determined in accordance with SFAS 123 and Emerging Issues Task Force ("EITF") 96-18, and represents the fair value of the consideration received, or the fair value of the equity instruments issued, whichever may be more reliably measured. For options that vest over future periods, the fair value of options granted to non-employees is amortized as the options vest.

### **Income Taxes**

The Company files a consolidated federal income tax return and utilizes the asset and liability method of accounting for income taxes. Under this method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. A valuation allowance is established when it is more likely than not that all or a portion of a deferred tax asset will not be realized. A review of all available positive and negative evidence is considered, including the Company's current and past performance, the market environment in which the Company operates, the utilization of past tax credits, length of carryback and carryforward periods. Deferred tax assets and liabilities are measured utilizing tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. No current or deferred income taxes have been provided through December 31, 2006 because of the net operating losses incurred by the Company since its inception.

### **Net Loss Per Share**

In accordance with accounting principles generally accepted in the United States of America, basic and diluted net loss per share has been computed using the weighted-average number of shares of common stock outstanding during the respective periods (excluding shares that are not yet issued). The effect of stock options, and warrants are antidilutive for all periods presented.

### **Use of Estimates and Assumptions**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts in the financial statements and accompanying notes. Actual results could differ from those estimates.

### **New Accounting Pronouncements**

In May 2005, the FASB issued SFAS No. 154, "Accounting Changes and Error Corrections" which provides guidance on the accounting for and reporting of accounting changes and correction of errors. This statement changes the requirements for the accounting for and reporting of a change in accounting principle and applies to all voluntary changes in accounting principle. It also applies to changes required by an accounting pronouncement in the unusual instance that the pronouncement does not include specific transition provisions.

In September 2006, the FASB issued SFAS No. 157, "Fair Value Measurements" ("SFAS No. 157") which defines fair value, establishes a framework for measuring fair value and expands disclosure about fair value measurements. SFAS No. 157 is effective for fiscal years beginning after November 15, 2007. The Company will adopt SFAS No. 157 on January 1, 2008, as required, and is currently evaluating the impact of such adoption on its financial statements.

In June 2006, the FASB issued FASB Interpretation No. 48, "Accounting for Uncertainty in Income Taxes" ("FIN 48"), which is an interpretation of SFAS No. 109, "Accounting for Income Taxes." FIN 48 prescribes a recognition threshold and a measurement attribute for the financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. For those benefits to be recognized, a tax position must be more-likely-than-not to be sustained upon examination by taxing authorities. The amount recognized is measured as the largest amount of benefit that is greater than 50 percent likely of being realized upon ultimate settlement. The Company will adopt the provisions of FIN 48 effective January 1, 2007, and is currently evaluating the impact of such adoption on its financial statements.

In February 2007, the FASB issued SFAS 159, "The Fair Value Option for Financial Assets and Financial Liabilities" ("SFAS 159"). SFAS 159 permits entities to choose to measure many financial assets and financial liabilities

at fair value. Unrealized gains and losses on items for which the fair value option has been elected are reported in earnings. SFAS 159 is effective for fiscal years beginning after November 15, 2007. The Company is currently assessing the impact of SFAS 159 on its consolidated financial position and results of operations.

### 3. Management's Plan

The Company has incurred continuing losses since its inception in 1987. At December 31, 2006, the Company had negative working capital of \$ 2,211,387, and a net loss of \$ 8,163,346. Subsequent to year end the Company has raised approximately \$ 6,500,000 through equity financing. The Company expects to sustain additional losses over the next 12 months. The Company's ability to raise additional funding may be compromised should the Food and Drug Administration deny approval of orBec® for sale in the United States.

Management's plan to generate positive cash flows either from operations or financing includes the following:

- The Company is exploring outlicensing opportunities for orBec® both in the US and Europe and for its BioDefense programs.
- The Company plans to continue seeking grant funds from governmental sources. In September 2006, the Company received two grants totaling approximately \$5,300,000 to support the development of its BioDefense vaccine programs.
- The Company believes that its current cash position will allow it to operate over the next 12 months. However, several factors could affect this with the outcome of the NDA and MAA filings. Therefore, if there were no other sources of financing and it is not able to utilize the funding from the investment banking organization, reductions or discontinued operations of several of the Company's programs may be required. If this should occur, the Company believes it could continue to operate over the next eight quarters at a reduced level and only continue with the existing grant projects.

There is no assurance that the Company will be able to successfully implement its plan or will be able to generate cash flows from either operations, partnerships, or from equity financings.

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#### 4. Office and Laboratory Equipment

Office and laboratory equipment are stated at cost. Depreciation is computed on a straight-line basis over five years. Office and laboratory equipment consisted of the following at December 31, 2006:

Office equipment	<b>\$ 117,660</b>
Laboratory equipment	<b>23,212</b>
<b>Total</b>	<b>140,872</b>
Accumulated depreciation	<b>( 111,180)</b>
	<b>\$ 29,692</b>

Depreciation expense was \$17,593 and \$25,443 for the years ended December 31, 2006 and 2005.

#### 5. Intangible Assets

The following is a summary of intangible assets which consists of licenses and patents:

	<b>Weighted Average Amortization period (years)</b>	<b>Cost</b>	<b>Accumulated Amortization</b>	<b>Net Book Value</b>
December 31, 2006	10.1	\$ 1,739,391	\$ 666,152	\$ 1,073,239
December 31, 2005	10.2	\$ 2,605,472	\$ 802,452	\$ 1,803,020

Amortization expense was \$119,451 in 2006 compared to \$168,841 for 2005.

Based on the balance of licenses and patents at December 31, 2006, the annual amortization expense for each of the succeeding five years is estimated to be as follows:

	<b>Amortization Amount</b>
2007	\$ 106,000
2008	106,000
2009	106,000
2010	106,000
2011	106,000

License fees and royalty payments in connection with the below agreements are expensed annually.

In July 2003, the Company entered into an exclusive license agreement with University of Texas South Western (UTSW) for administering the ricin vaccine via the intramuscular route for initial license fees of 250,000 shares valued at \$200,000 of DOR common stock and \$200,000 in cash. Subsequently, the Company negotiated the remaining intranasal and oral rights to the ricin vaccine for \$50,000 in annual license fees in subsequent years. On March 1, 2005, the Company signed a sponsored research agreement with UTSW extending through March 31, 2007 for \$190,000 which will grant the Company certain rights to intellectual property.

In October 2003, the Company executed an exclusive license agreement with the University of Texas System (UTMB) for the use of luminally-active steroids, including beclomethasone dipropionate (BDP) in the treatment of irritable bowel syndrome. Pursuant to this agreement, the Company paid UTMB a license fee of \$10,000 and also

agreed to pay an additional \$10,000 license fee expense each year. The Company also agreed to pay past and future patent maintenance costs. The cost for 2006 and 2005 were \$14,012 and \$12,728, respectively. The Company acquired a sublicense agreement and may receive payments on this sublicense in the event of the sublicensee reaching certain milestones.

In July 2006, the Company signed a sponsored research agreement for \$37,500 with Thomas Jefferson University (TJU). In 2005, the Company signed a sponsored research agreement for \$150,000. In May 2003, the Company signed a license agreement with TJU for the licensure of detoxified botulinum toxin for use as a vaccine. The Company paid TJU \$30,000 in cash and issued 141,305 shares of common stock valued at \$130,000. The Company also agreed to reimburse TJU for past and future patent maintenance. The patent maintenance expense for 2006 and 2005 was \$35,665 and \$157,293, respectively. The patent costs are capitalized. The Company is also responsible for a license maintenance fee of \$10,000 in 2005 and \$15,000 in 2006 and each year thereafter. These costs are expensed as incurred. The Company must also pay TJU \$200,000, upon the first filing of any New Drug Application (“NDA”) with the United States Food and Drug Administration (“FDA”) and \$400,000 upon first approval of an NDA relating to the first licensed product by FDA.

## **6. Shareholders' Equity**

### **Preferred Stock**

The Company has 5 million authorized shares of preferred stock, none are issued or outstanding.

### **Common Stock**

On May 10, 2006, the Company completed a merger pursuant to which Enteron Pharmaceutical, Inc. (“Enteron”), the common stock of which the Company held 88.13% prior to the merger, was merged into a wholly-owned subsidiary of the Company. Pursuant to this transaction, the Company issued 3,068,183 shares of common stock to the Enteron minority shareholders in exchange for all of the outstanding common stock of Enteron that the Company did not already own. This transaction was accounted for as a purchase, and accordingly the Company recorded an in-process research and development expense of \$981,819. The common stock was recorded at the shares' fair market value on the date of the merger.

On April 10, 2006, the Company completed the sale of 13,099,964 shares of common stock to institutional and other accredited investors for a purchase price, net of expenses, of \$3,410,032. The investors also received warrants to purchase 13,099,964 shares of common stock at an exercise price of \$0.45 per share. The warrants are exercisable for a period of three years commencing on April 10, 2006. The Company filed a registration statement with the Securities and Exchange Commission and it was declared effective on May 25, 2006.

On January 17, 2006, the Company entered into a common stock purchase agreement with Fusion Capital Fund II, LLC. The Fusion facility allowed them to purchase on each trading day \$20,000 of DOR common stock up to an aggregate of \$6,000,000 million over approximately a 15-month period. As part of this agreement DOR issued Fusion 512,500 shares of common stock as a commitment fee, the non-cash payment for this was \$220,374 valued at the shares' fair market value. During 2006 Fusion purchased 329,540 common shares for \$ 124,968. The Company does not intend to use the Fusion facility.

In February 2005, the Company sold 8,396,100 shares of common stock at \$0.45 per share for proceeds, net of expenses, of \$3,548,293 in a private placement to institutional investors. Investors also received warrants to purchase 6,297,075 shares of common stock at an exercise price of \$0.505 per share. These warrants expire on August 8, 2010 and are callable when the price reaches \$1.52 for 20 consecutive days. The placement agent was paid cash of \$188,912, and warrants to purchase 629,708 shares of the Company's common stock exercisable by August 8, 2010 at \$0.625. The warrants are callable when the price reaches \$1.88 for 20 consecutive days.



In 2005, the Company retired 120,640 shares of treasury stock.

### Stock Compensation to Employees and Non-employees

During the year ended December 31, 2006, the Company issued 506,942 shares of common stock as payment to vendors for consulting services. An expense of \$134,679 was recorded which approximated the shares' fair market value on the date of issuance. Additionally, the Company issued 193,413 shares of common stock as part of severance payments to terminated employees and 28,648 shares of common stock to employees. An expense of \$75,979 and \$6,875, respectively was recorded, which approximated the shares' fair market value on the date of issuance. These shares of common stock issued were covered by the Company's Form S-8 Registration Statement filed with the SEC on December 30, 2005. Also, 504,100 stock options 1995 Omnibus Option Plan were exercised to purchase shares of common stock which provided proceeds of \$113,320.

### 7. Stock Option Plans and Warrants

The 2005 Equity Incentive Plan is divided into four separate equity programs: 1) the Discretionary Option Grant Program, under which eligible persons may, at the discretion of the Plan Administrator, be granted options to purchase shares of common stock, 2) the Salary Investment Option Grant Program, under which eligible employees may elect to have a portion of their base salary invested each year in options to purchase shares of common stock, 3) the Automatic Option Grant Program, under which eligible nonemployee Board members will automatically receive options at periodic intervals to purchase shares of common stock, and 4) the Director Fee Option Grant Program, under which non-employee Board members may elect to have all, or any portion, of their annual retainer fee otherwise payable in cash applied to a special option grant. In addition under the plan the Board may elect to pay certain consultants, directors, and employees in common stock. The 2006 column in the table below only accounts for transactions occurring as part of the 2005 Equity Incentive Plan.

	<b>December 31,</b>	
	<b>2006</b>	2005
Shares available for grant at beginning of year	<b>7,000,000</b>	( 1,979,339)
Increase in shares available	-	10,000,000
Options granted	<b>( 4,360,000)</b>	( 3,500,000)
Options forfeited or expired	<b>1,325,000</b>	2,479,339
Common stock payment for services	<b>( 728,968)</b>	-
Shares available for grant at end of year	<b>3,236,032</b>	7,000,000

In 2006, 504,100 options were exercised that were covered under the 1995 plan.

In 2004, the Company granted options to employees and directors that were conditional upon stockholder approval of an amendment to the 1995 Omnibus Option Plan. Accordingly, a measurement date did not exist at the approval date. The Company recorded an expense of approximately \$285,000. This expense was reversed in 2005.

Option activity for the years ended December 31, 2006 and 2005 was as follows:

	<b>Options</b>	<b>Weighted Average Options Exercise Price</b>
Balance at January 1, 2005	11,979,339	\$ 0.64
Granted	500,000	0.41
Forfeited	( 2,465,000)	0.83

<b>Balance at December 31, 2005</b>	<b>10,014,339</b>	<b>0.59</b>
Granted	4,360,000	0.30
Forfeited	( 2,230,900)	0.83
Exercised	( 504,100)	
<b>Balance at December 31, 2006</b>	<b>11,639,339</b>	<b>\$ 0.59</b>

The weighted-average exercise price, by price range, for outstanding options at December 31, 2006 was:

<b>Price Range</b>	<b>Weighted Average Remaining Contractual Life in Years</b>	<b>Outstanding Options</b>	<b>Exercisable Options</b>
\$0.20-\$0.50	7.99	9,335,000	6,565,763
\$0.51-\$1.00	6.47	1,662,839	1,662,839
\$1.01-\$6.00	3.59	641,500	641,500
<b>Total</b>	<b>7.53</b>	<b>11,639,339</b>	<b>8,870,102</b>

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From time to time, the Company grants warrants to consultants and grants warrants to purchase common stock in connection with private placements.

Warrant activity for the years ended December 31, 2006 and 2005 was as follows:

	Warrants	Weighted Average Warrant Exercise Price
Balance at January 1, 2005	15,692,718	\$ 1.24
Granted	6,926,783	0.52
Expired	( 452,383)	5.91
<b>Balance at December 31, 2005</b>	<b>22,167,118</b>	<b>0.92</b>
Granted	14,961,672	0.25
<b>Balance at December 31, 2006</b>	<b>37,128,790</b>	<b>\$ 0.65</b>

500,000 warrants to purchase common stock were issued to vendors in the amount of \$121,965.

The weighted-average exercise price, by price range, for outstanding warrants at December 31, 2006 was:

Price Range	Weighted Average Remaining Contractual Life in Years	Outstanding Warrants	Exercisable Warrants
\$0.24-\$0.75	2.54	24,541,175	24,541,175
\$0.76-\$1.50	1.81	10,141,733	10,141,733
\$1.51-\$8.50	1.29	2,445,882	2,445,882
<b>Total</b>	<b>2.26</b>	<b>37,128,790</b>	<b>37,128,790</b>

**8. Income Taxes**

Deferred tax assets as of December 31, 2006 were as follows:

**Deferred tax assets:**

Net operating loss carryforwards	\$25,000,000
Orphan drug and research and development credit carryforwards	3,000,000
Other	3,000,000
<b>Total</b>	31,000,000
Valuation allowance	( 31,000,000)
Net deferred tax assets	\$ -

At December 31, 2006, the Company had net operating loss carryforwards of approximately \$67,000,000 for Federal and state tax purposes, which are currently expiring each year until 2025.

The net change in the valuation allowance for the year ended December 31, 2006 and 2005, was an increase of approximately \$5,000,000 and \$2,000,000, respectively, resulting primarily from net operating losses generated. Based on ownership changes that have and may occur, future utilization of the net operating loss carryforwards may be limited.

The following is the approximate amount of the Company's net operating losses that expire over the next five years:

2007	\$ 981,000
2008	910,000
2009	1,328,000
2010	1,711,000
2011	870,000

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Reconciliations of the difference between income tax benefit computed at the federal and state statutory tax rates and the provision for income tax benefit for the years ended December 31, 2006 and 2005 was as follows:

	2006	2005
Income tax loss at federal statutory rate	(34.00)%	(34.00)%
State taxes, net of federal benefit	(3.63)	(3.63)
Permanent differences, principally purchased in-process research and development	3.30	-
Valuation allowance	34.33	37.63
Provision for income taxes (benefit)	- %	- %

## 9. Risks and Uncertainties

The Company is subject to risks common to companies in the biotechnology industry, including, but not limited to, litigation, product liability, development of new technological innovations, dependence on key personnel, protections of proprietary technology, and compliance with FDA regulations.

During the year ended December 31, 2006, the Company had one vendor that constituted approximately 28% of the outstanding payables.

At December 31, 2006 and 2005, the Company had deposits in financial institutions that exceeded the amount covered by the Federal Deposit Insurance Company. The excess amounts at December 31, 2006 and 2005 were \$19,636 and \$721,702, respectively.

## 10. Contingencies

On October 26, 2006, the Company received a summons in a civil case from Michael T. Sember, the Company's former Chief Executive Officer. The complaint claims that the Company breached the employment agreement entered into with Mr. Sember on December 7, 2004, specifically in the payment of his bonus. The Company has paid his severance and accrued vacation according to the terms of his employment agreement. Under the terms of this agreement, and as of August 2006, the Company began paying Mr. Sember \$150,000 in severance and \$28,383 in vacation over the subsequent six months from the date of his termination in the normal payroll cycles. The Company denies the merit of the claim as it is contrary to what is specifically stated in the agreement. On August 25, 2006, Mr. Sember was terminated without Just Cause (as such term is defined in the agreement). The Company's position is that, upon termination of Mr. Sember without Just Cause, he was to be paid six months severance, any unpaid bonuses, and any vacation accrued but not taken. The complaint contends that a minimum annual bonus of \$100,000 was due. In addition, Mr. Sember is also seeking costs and attorney's fees incurred for this action. The Company denies that it owes Mr. Sember any bonus and will vigorously defend against Mr. Sember's claim that he is entitled to a bonus of \$100,000. The Company has not recorded this contingency.

The October 28, 2005 letter of intent with Gastrotech, as amended on December 29, 2005, expired in accordance with its terms on January 15, 2005 without being extended or renewed. Additionally, on January 15, 2006 the Company notified Gastrotech Pharma that it would not be renewing the letter of intent. The breakup fee of \$1,000,000 is only payable if a party breaches the terms of the letter of intent or terminates the letter of intent. In accordance with SFAS No. 5, the Company disclosed a potential liability in that Gastrotech advised the Company that if it were not willing to comply with the terms of the letter of intent, DOR would be in material breach of its obligations and would be obligated to pay Gastrotech the break up fee of \$1,000,000. However, pursuant to SFAS No. 5, paragraph 33b, the

Company has not recorded a loss provision because it does not believe there will be any monetary damages since there is no pending litigation, the Company cannot reasonably determine the amount of loss, and does not believe it has any liability to Gastrotech for allowing the letter of intent to expire. In addition, the Company has not recorded an accrual for the potential loss, because it does not believe as described in item 8(a) and 8(b) of SFAS No. 5 that any loss has not been confirmed, nor has any outcome or judgment occurred. Moreover, the Company does not feel that it is probable that a liability has been incurred. Perhaps more importantly, Gastrotech has not brought any legal action against the Company. No potential loss is estimatable at this time. As of the date of this report, no claim or complaint has been filed by Gastrotech Pharma A/S (“Gastrotech”) as to the obligation to pay a break-up fee of \$1,000,000. The Company’s position is that it does not owe Gastrotech any break-up fee pursuant to not renewing its letter of intent to acquire Gastrotech.

## **11. Subsequent Events**

On February 21, 2007, Sigma-Tau Pharmaceuticals, Inc. (“Sigma-Tau”) relinquished its exclusive rights granted to it on January 3, 2007, under a letter of intent with regard to acquisition discussions. However, all other terms of the letter of intent remained in effect, and the Company and Sigma-Tau are engaged in discussions for a European collaboration relating to orBec®. In consideration for entering into an exclusive letter of intent, Sigma-Tau agreed to purchase \$1,000,000 of the Company’s common stock at the market price of \$0.246 per share, representing 4,065,041 shares of common stock, and has paid an additional \$2,000,000 in cash. The \$2,000,000 payment was to be considered an advance payment to be deducted from future payments due to the Company by Sigma-Tau pursuant to any future orBec® commercialization arrangement reached between the two parties. Because of this transaction’s dilutive nature, all prior investors in the April 2006 private placement had their warrants repriced to \$0.246. Additionally, certain shareholders who still held shares of the Company’s common stock were issued additional shares of the Company’s common stock. Because no agreement was reached by March 1, 2007, the Company is obligated to return the \$2 million to Sigma-Tau by April 30, 2007. If the Company does not repay Sigma Tau by May 31, 2007, interest will accrue at a rate of 6% compounded annually and Sigma Tau will have the option, at its sole discretion of converting the accrued amount into common stock at a price per share equal to 80% of the market price at the time the payment is made.

On February 9, 2007, the Company completed the sale of 11,680,850 shares of DOR common stock to institutional and other accredited investors for a purchase price of \$5,490,000.

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**12. Business Segments**

The Company had two active segments for the year ended December 31, 2006 and 2005: BioDefense and BioTherapeutics. Summary data:

	December 31,	
	2006	2005
<b>Net Revenues</b>		
BioDefense	\$ 2,173,128	\$ 2,896,878
BioTherapeutics	139,892	178,858
<b>Total</b>	<b>\$ 2,313,020</b>	<b>\$ 3,075,736</b>
<b>Loss from Operations</b>		
BioDefense	\$ ( 1,943,732)	\$ ( 847,830)
BioTherapeutics	( 5,061,664)	( 1,665,812)
Corporate	( 1,164,152)	( 2,321,409)
<b>Total</b>	<b>\$ ( 8,199,548)</b>	<b>\$ ( 4,835,051)</b>
<b>Identifiable Assets</b>		
BioDefense	\$ 849,295	\$ 2,189,216
BioTherapeutics	343,876	420,250
Corporate	213,799	763,108
<b>Total</b>	<b>\$ 1,406,970</b>	<b>\$ 3,372,574</b>
<b>Amortization and Depreciation Expense</b>		
BioDefense	\$ 103,855	\$ 63,212
BioTherapeutics	24,395	118,351
Corporate	8,794	12,721
<b>Total</b>	<b>\$ 137,044</b>	<b>\$ 194,284</b>

**PART II**  
**INFORMATION NOT REQUIRED IN PROSPECTUS**

**ITEM 13. Other Expenses of Issuance and Distribution.**

The following table sets forth the estimated costs and expenses of the Registrant in connection with the offering described in the registration statement.

SEC registration fee	\$ 357
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Legal fees and expenses	\$20,000
Accounting fees and expenses	\$ 2,000
Miscellaneous	\$ 1,000
<b>TOTAL</b>	<b>\$23,357</b>

**ITEM 14. Indemnification of Directors and Officers.**

Section 102(b)(7) of the Delaware General Corporation Law grants the Registrant the power to limit the personal liability of its directors to the Registrant or its stockholders for monetary damages for breach of a fiduciary duty. Article X of the Registrant's Certificate of Incorporation, as amended, provides for the limitation of personal liability of the directors of the Registrant as follows:

"A Director of the Corporation shall have no personal liability to the corporation or its stockholders for monetary damages for breach of his fiduciary duty as a Director; provided, however, this Article shall not eliminate or limit the liability of a Director (i) for any breach of the Director's duty of loyalty to the Corporation or its stockholders; (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law; (iii) for the unlawful payment of dividends or unlawful stock repurchases under Section 174 of the General Corporation Law of the State of Delaware; or (iv) for any transaction from which the Director derived an improper personal benefit. If the General Corporation Law is amended after approval by the stockholders of this Article to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law of the State of Delaware, as so amended."

Article VIII of the Registrant's Bylaws, as amended and restated, provide for indemnification of directors and officers to the fullest extent permitted by Section 145 of the Delaware General Corporation Law.

The Registrant has a directors' and officers' liability insurance policy.

The above discussion is qualified in its entirety by reference to the Registrant's Certificate of Incorporation and Bylaws.

**ITEM 15. Recent Sales of Unregistered Securities.**

During March 2004, the Registrant completed a private placement in which it issued (i) 4,113,925 shares of common stock at \$0.79 per share and (ii) warrants exercisable for 1,645,570 shares of its common stock at an exercise price of \$0.87 per share, resulting in net proceeds of approximately \$3.0 million. The warrants have a five-year term. Also, as part of the compensation received for its assistance in the private placement, the placement agent received warrants to purchase an aggregate of 257,120 shares of the Registrant's common stock at an exercise price of \$0.87 per share. The shares of common stock and warrants were issued in transactions exempt from registration under the Securities Act of 1933, as amended (the "Securities Act") in reliance upon Rule 506 of Regulation D under Section 4(2) of the Securities Act, as transactions not involving a public offering.



During February 2005, the Registrant completed a private placement in which it issued (i) 8,396,100 shares of common stock at \$0.45 per share and (ii) warrants exercisable for 6,247,075 shares of its common stock at an exercise price of \$0.505 per share, resulting in net proceeds of approximately \$3.5 million. The warrants have a five-year term. Also, as part of the compensation received for its assistance in the private placement, the placement agent received warrants to purchase an aggregate of 629,708 shares of the Registrant's common stock at an exercise price of \$0.625 per share. The shares of common stock and warrants were offered in transactions exempt from registration under the Securities Act in reliance upon Rule 506 of Regulation D under Section 4(2) of the Securities Act, as transactions not involving a public offering.

In January 2006, the Registrant entered into a common stock purchase agreement with Fusion Capital Fund II, LLC. Fusion Capital agreed to purchase on each trading day \$20,000 of common stock up to a total of \$6,000,000 over approximately a 15-month period. The Registrant may elect to sell less common stock to Fusion Capital than the daily amount and may increase the daily amount as the market price of the stock increases. The purchase price of the shares of common stock will be equal to a price based upon the market price of the common stock at date of purchase without any fixed discount to the market price. Fusion Capital does not have the right to purchase shares of common stock in the event that the price of the common stock is less than \$0.12. The Registrant has the right to sell \$20,000 per trading day under the agreement with Fusion Capital unless the stock price equals or exceeds \$0.40, in which case the daily amount may be increased under certain conditions as the price of the Registrant's common stock price increases.

Under the terms of a Securities Purchase Agreement dated as of April 6, 2006 among the Registrant and the institutional and other accredited investors named therein, the Registrant issued 13,099,964 shares of its common stock to the investors, for aggregate gross proceeds of \$3,630,000, and warrants, exercisable for three years, to purchase an aggregate of 13,099,964 shares of the Registrant's common stock at an exercise price of \$0.45 per share. Such securities were issued pursuant to an exemption provided by Section 4(2) of the Securities Act of 1933, as amended, and Rule 506 of Regulation D promulgated thereunder.

On January 3, 2007, the Registrant completed a private placement in which it issued 4,065,041 shares of common stock at \$0.246 per share, resulting in net proceeds of \$1 million. The shares of common stock were issued in transactions exempt from registration under the Securities Act, in reliance upon Rule 506 of Regulation D under Section 4(2) of the Securities Act, as transactions not involving a public offering.

Under the terms of a Securities Purchase Agreement dated as of February 9, 2007 among the Registrant and institutional investors and certain of its officers and directors named therein, the Registrant issued 11,680,850 shares of its common stock to the investors, for aggregate gross proceeds of \$5,490,000. Also, as part of the compensation received for its assistance in the private placement, the placement agent received \$259,950 cash and warrants to purchase an aggregate of 560,106 shares of the Registrant's common stock at an exercise price of \$0.59 per share. Such securities were issued pursuant to an exemption provided by Section 4(2) of the Securities Act of 1933, as amended, and Rule 506 of Regulation D promulgated thereunder.

#### **ITEM 16. Exhibits.**

- 2.1 Agreement and Plan of Merger, dated May 10, 2006 by and among the Company, Corporate Technology Development, Inc., Enteron Pharmaceuticals, Inc. and CTD Acquisition, Inc (incorporated by reference to Exhibit 2.1 included in our Registration Statement on Form SB-2 (File No. 333-133975) filed on May 10, 2006).
- 3.1 Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 3.1 included in our Quarterly Report on Form 10-QSB, as amended,

for the fiscal quarter ended September 30, 2003).

- 3.2 Certificate of Amendment to Amended and Restated Certificate of Incorporation (incorporated by reference to Exhibit 4.2 included in our Registration Statement on Form S-8 (File No. 333-130801) filed on December 30, 2005).
- 3.3 Certificate of Amendment to Amended and Restated Certificate of Incorporation (incorporated by reference to Annex A to our Proxy Statement filed December 12, 2006).
- 3.4 By-laws (incorporated by reference to Exhibit 3.1 included in our Quarterly Report on Form 10-QSB, as amended, for the fiscal quarter ended June 30, 2003).
- 4.1 Form of Investor Warrant issued to each investor dated as of April 12, 2000 (incorporated by reference to Exhibit 4.4 included in our Registration Statement on Form S-3 (File No. 333- 36950), as amended on December 29, 2000).
- 4.2 Finder Warrant issued to Paramount Capital, Inc. dated as of April 12, 2000 (incorporated by reference to Exhibit 4.5 included in our Registration Statement on Form S-3 (File No. 333- 36950), as amended on December 29, 2000).
- 4.3 Warrant issued to Aries Fund dated as of May 19, 1997 (incorporated by reference to Exhibit 4.6 included in our Registration Statement on Form S-3 (File No. 333- 36950), as amended on December 29, 2000).
- 4.4 Warrant issued to Aries Domestic Fund, L.P. dated as of May 19, 1997 (incorporated by reference to Exhibit 4.7 included in our Registration Statement on Form S-3 (File No. 333- 36950), as amended on December 29, 2000).
- 4.5 Warrant issued to Paramount Capital, Inc. dated as of October 16, 1997 (incorporated by reference to Exhibit 4(i)(c) included in our Quarterly Report on Form 10-QSB, as amended, for the fiscal quarter ended September 30, 1997).
- 4.6 Warrant issued to Paramount Capital, Inc. dated as of October 16, 1997 (incorporated by reference to Exhibit 4(i)(d) included in our Quarterly Report on Form 10-QSB, as amended, for the fiscal quarter ended September 30, 1997).
- 4.7 Warrant issued to Élan International Services, Ltd. Dated January 21, 1998 (incorporated by reference to Exhibit 4.4 included in our Annual Report on Form 10-KSB, as amended, for the fiscal year ended December 31, 1997).
- 4.8 Form of Warrant to be issued to CTD warrant holders (incorporated by reference to Exhibit 4.12 include in our Registration Statement on Form S-4 filed on October 2, 2001).

- 4.9 Form of Warrant issued to each investor in the December 2002 private placement (incorporated by reference to Exhibit 4.9 included in our Annual Report on Form 10-KSB, as amended, for the fiscal year ended December 31, 2003).
- 4.10 Form of Warrant issued to each investor in the September 2003 private placement (incorporated by reference to Exhibit 99.4 included in our current report on Form 8-K filed on July 18, 2003).
- 4.11 Form of Warrant issued to each investor in the March 2004 private placement (incorporated by reference to Exhibit 99.4 included in our current report on Form 8-K filed on March 4, 2004).
- 4.12 Form of Warrant issued to each investor in the February 2005 private placement (incorporated by reference to Exhibit 10.2 included in our current report on Form 8-K filed on February 3, 2005).
- 4.13 Form of Warrant issued to each investor in the April 2006 private placement (incorporated by reference to Exhibit 10.2 included in our current report on Form 8-K filed on April 7, 2006).
- 4.14 Form of Warrant issued to finders in connection with the February 2007 private placement.\*
- 5.1 Opinion of Edwards Angell Palmer & Dodge LLP.\*
- 10.1 Amended and Restated 1995 Omnibus Incentive Plan (incorporated by reference to Exhibit 10.1 included in our Quarterly Report on Form 10-QSB, as amended, for the fiscal quarter ended September 30, 2003).
- 10.2 Form of Affiliate Agreement dated as of August 15, 2001 by and between the Company and the affiliates of CTD (incorporated by reference to Exhibit 10.3 included in our current report on Form 8-K filed on December 14, 2001).
- 10.3 Noncompetition and Nonsolicitation Agreement entered into by and among the Company, CTD and Steve H. Kanzer dated as of November 29, 2001 (incorporated by reference to Exhibit 10.30 included in our Annual Report on Form 10-KSB as amended for the fiscal year ended December 31, 2002).
- 10.4 Termination of the Endorex Newco joint venture between the Company, Élan Corporation, Élan International Services, and Elan Pharmaceutical Investments dated December 12, 2002 (incorporated by reference to Exhibit 10.37 included in our Annual Report on Form 10-KSB as amended for the fiscal year ended December 31, 2002).
- 10.5 Option Agreement with General Alexander M. Haig Jr. (incorporated by reference to Exhibit 10.39 included in our Annual Report on Form 10-KSB as amended for the fiscal year ended December 31, 2002).
- 10.6

Separation agreement and General Release between the Company and Ralph Ellison dated July 9, 2004 (incorporated by reference to Exhibit 10.7 included in our Annual Report on Form 10-KSB, as amended, for the fiscal year ended December 31, 2004).

- 10.7 License Agreement between the Company and The University of Texas Southwestern Medical Center (incorporated by reference to Exhibit 10.8 included in our Annual Report on Form 10-KSB, as amended, for the fiscal year ended December 31, 2004).
- 10.8 License Agreement between the Company and Thomas Jefferson University (incorporated by reference to Exhibit 10.9 included in our Annual Report on Form 10-KSB, as amended, for the fiscal year ended December 31, 2004).
- 10.9 License Agreement between the Company and The University of Texas Medical Branch (incorporated by reference to Exhibit 10.10 included in our Annual Report on Form 10-KSB, as amended, for the fiscal year ended December 31, 2004).
- 10.10 Consulting Agreement between the Company and Lance Simpson of Thomas Jefferson University. (incorporated by reference to Exhibit 10.43 included in our Annual Report on Form 10-KSB as amended for the fiscal year ended December 31, 2002).
- 10.11 Form of Subscription Agreement between the Company and each investor dated July 18, 2003 (incorporated by reference to Exhibit 99.3 included in our current report on Form 8-K filed on July 18, 2003).
- 10.12 Form of Securities Purchase Agreement between the Company and each investor dated March 4, 2004 (incorporated by reference to Exhibit 99.3 included in our current report on Form 8-K filed on March 4, 2004).
- 10.13 Employment agreement between the Company and Mike Sember dated December 7, 2004 (incorporated by reference to Exhibit 10.16 included in our Annual Report on Form 10-KSB, as amended, for the fiscal year ended December 31, 2004).
- 10.14 Employment agreement between the Company and Evan Myriantopoulos dated December 7, 2004 (incorporated by reference to Exhibit 10.17 included in our Annual Report on Form 10-KSB, as amended, for the fiscal year ended December 31, 2004).
- 10.15 Employment agreement between the Company and James Clavijo dated February 18, 2005 (incorporated by reference to Exhibit 10.18 included in our Annual Report on Form 10-KSB, as amended, for the fiscal year ended December 31, 2004).
- 10.16 Form of Securities Purchase Agreement between the Company and each investor dated February 1, 2005 (incorporated by reference to Exhibit 10.1 included in our current report on Form 8-K filed on February 3, 2005).

- 10.17 Amendment No. 1 dated February 17, 2005 to the Securities Purchase Agreement between the Company and each investor dated February 1, 2005 (incorporated by reference to Exhibit 10.20 included in our Annual Report on Form 10-KSB, as amended, for the fiscal year ended December 31, 2004).
- 10.18 Form Registration Rights agreement between the Company and each investor dated February 1, 2005 (incorporated by reference to Exhibit 10.3 included in our current report on Form 8-K filed on February 3, 2005).
- 10.19 2005 Equity Incentive Plan (incorporated by reference to Appendix D to our Proxy Statement filed December 12, 2005).
- 10.20 Form S-8 Registration of Stock Options Plan dated December 30, 2005 (incorporated by reference to our registration statement on Form S-8 filed on December 30, 2005).
- 10.21 Form of Securities Purchase Agreement between the Company and each investor dated January 17, 2006 (incorporated by reference to Exhibit 10.1 included in our current report on Form 8-K filed on January 20, 2006).
- 10.22 Form of Registration Rights agreement between the Company and each investor dated January 17, 2006 (incorporated by reference to Exhibit 4.1 included in our current report on Form 8-K filed on January 20, 2006).
- 10.23 Securities Purchase Agreement dated as of April 6, 2006 among the Company and the investors named therein (incorporated by reference to Exhibit 10.1 included in our current report on Form 8-K filed on April 7, 2006).
- 10.24 Registration Rights Agreement dated as of April 6, 2006 among the Company and the investors named therein (incorporated by reference to Exhibit 10.3 included in our current report on Form 8-K filed on April 7, 2006).
- 10.25 Employment Agreement, dated as of August 29, 2006, between Christopher J. Schaber, Ph.D., and the Company (incorporated by reference to Exhibit 10.1 included in our current report on Form 8-K filed on August 30, 2006).
- 10.26 Letter of Intent dated January 3, 2007 by and between DOR BioPharma, Inc. and Sigma-Tau Pharmaceuticals, Inc (incorporated by reference to Exhibit 10.1 included in our current report on Form 8-K filed on January 4, 2007).
- 10.27 January 17, 2007 letter from Cell Therapeutics, Inc. to DOR BioPharma, Inc (incorporated by reference to Exhibit 10.1 included in our current report on Form 8-K filed on January 19, 2007).
- 10.28 Securities Purchase Agreement dated February 7, 2007 by and among the Company and the investors named therein (incorporated by reference to Exhibit 10.1 included in our current report on Form 8-K filed on February 12, 2007).
- 10.29 Registration Rights Agreement dated February 7, 2007 by among the Company and the investors named therein (incorporated by reference to Exhibit 10.2

included in our current report on Form 8-K filed on February 12, 2007).

10.30 Letter from Sigma-Tau Pharmaceuticals, Inc. dated February 21, 2007 (incorporated by reference to Exhibit 10.1 included in our current report on Form 8-K filed on February 23, 2007).

23.1 Consent of Sweeney, Gates & Co., independent registered public accounting firm.\*

23.2 Consent of Edwards Angell Palmer & Dodge LLC (contained in the opinion filed as Exhibit 5.1 hereto) .\*

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\* Filed herewith.

#### **ITEM 17. Undertakings.**

(a) The undersigned Registrant hereby undertakes as follows:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) to include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) to reflect in the prospectus any facts or events, which individually or together, represent a fundamental change in the information set forth in this 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 Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) to include any additional or changed material information on the plan of distribution.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To file a post-effective amendment to remove from registration any of the securities that remain unsold at the end of the offering.

(4) That, for the purpose of determining liability of the undersigned small business issuer under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned small business issuer undertakes that in a primary offering of securities of the undersigned small business issuer pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned small business issuer will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned small business issuer relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned small business issuer or used or referred to by the undersigned small business issuer;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned small business issuer or its securities provided by or on behalf of the undersigned small business issuer; and

(iv) Any other communication that is an offer in the offering made by the undersigned small business issuer to the purchaser.

(b) Insofar as indemnification for liabilities arising under the Securities Act of 1933 (the "Act") may be permitted to directors, officers and controlling persons of the small business issuer pursuant to the foregoing provisions, or otherwise, the small business issuer has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable.

In the event that a claim for indemnification against such liabilities (other than the payment by the small business issuer of expenses incurred or paid by a director, officer or controlling person of the small business issuer 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 small business issuer will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

(c) The undersigned Registrant hereby undertakes that:

(1) For determining any liability under the Securities Act, treat the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the small business issuer under Rule 424(b)(1), or (4) or 497(h) under the Securities Act as part of this registration statement as of the time the Commission declared it effective.

(2) For determining any liability under the Securities Act, treat each post-effective amendment that contains a form of prospectus as a new registration statement for the securities offered in the registration statement, and that offering of the securities at that time as the initial bona fide offering of those securities.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form SB-2 and has duly caused this Amendment No. 1 to the registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Miami, State of Florida, on the 16th day of April 2007.

DOR BIOPHARMA, INC.

By: /s/ Christopher J. Schaber  
 Christopher J. Schaber  
 President and Chief Executive Officer

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

<b>Signature</b>	<b>Title</b>	<b>Date</b>
<u>/s/ Christopher J. Schaber</u> Christopher J. Schaber	Director, President and Chief Executive Officer (Principal Executive Officer)	April 16, 2007
<u>/s/ Evan Myriantopoulos</u> Evan Myriantopoulos	Director, Chief Financial Officer (Principal Financial and Accounting Officer)	April 16, 2007
<u>*</u> Steve H. Kanzer	Vice-Chairman of the Board	April 16, 2007
<u>*</u> James S. Kuo	Chairman of the Board	April 16, 2007

\*By: s/ Evan Myriantopoulos      April 16, 2007  
 Evan Myriantopoulos  
 Attorney-in-fact