2008 Annual Report

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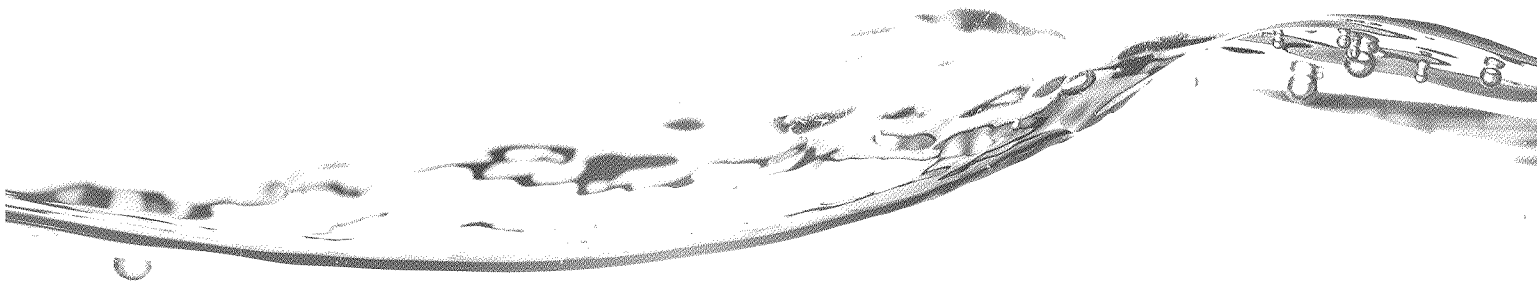
Optimer Pharmaceuticals, Inc., in transition



Optimer Pharmaceuticals, Inc. strives to improve health and quality of life by discovering, developing, and commercializing innovative, anti-infective drugs to address unmet medical needs in challenging infectious diseases.

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2008 Highlights

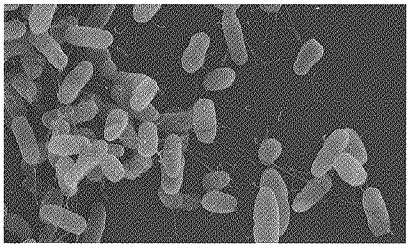
- Achieved the primary objective in first of two Phase 3 fidaxomicin studies
- Achieved the primary objective in first of two Phase 3 prulifloxacin studies
- Strengthened fidaxomicin intellectual property with issuance of key polymorph patent in U.S. and key process patent in Australia
- Strengthened balance sheet by raising $14.8 million in a registered direct offering
- Showed fidaxomicin activity against the increasingly prevalent NAP1 hyper-virulent strain of *Clostridium difficile* in a Phase 2A clinical study

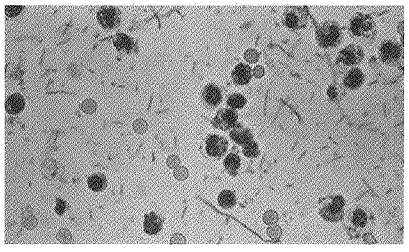
Recent Highlights in 2009

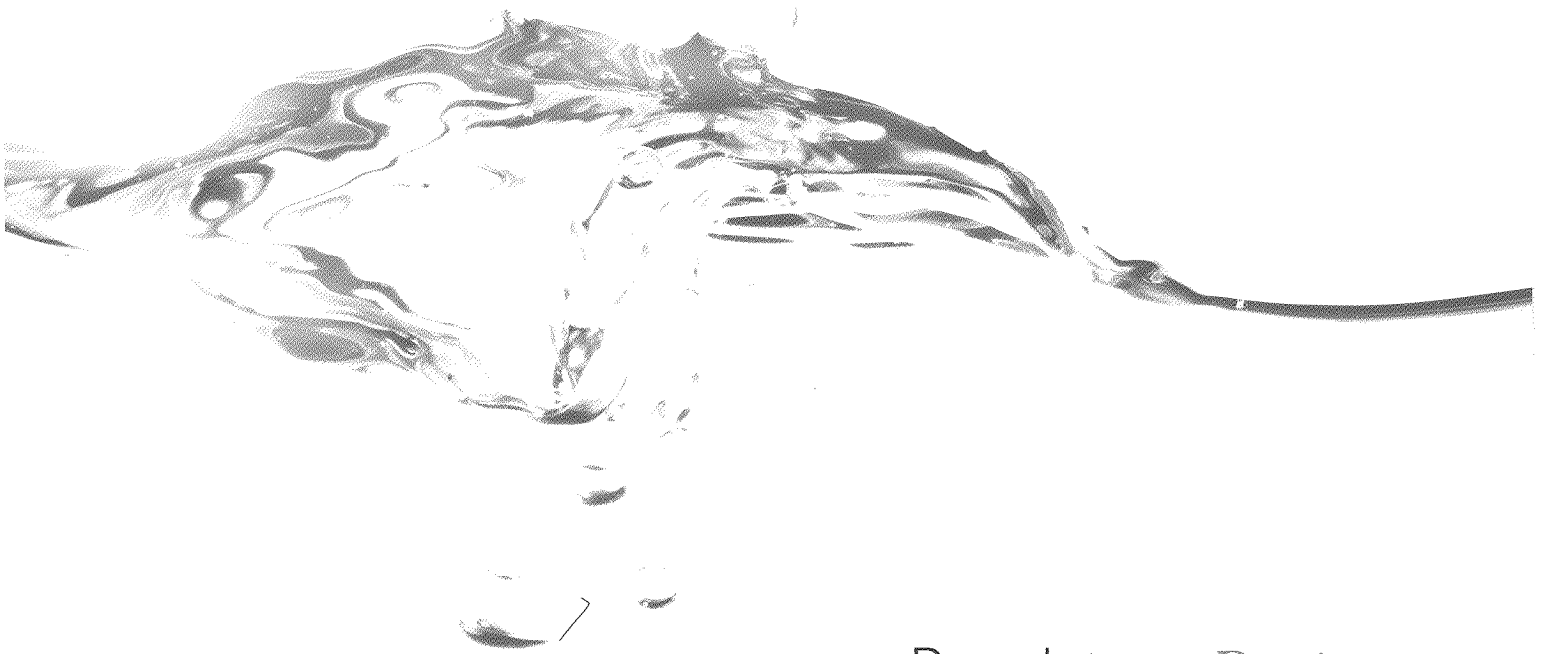
- Raised $32.9 million in a registered direct offering
- Initiated plan to accelerate European filing of fidaxomicin based on a single, recently completed Phase 3 study
- Achieved the primary objective in the second of two Phase 3 prulifloxacin studies

Clinical Phase

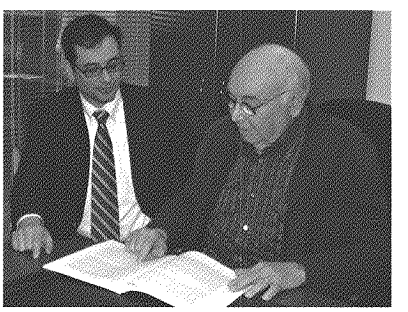
Clostridium difficile infection (CDI) has become a significant global health problem. Recent reports consider it to be the next "Superbug". Alarmingly, no new drugs have been approved for the treatment of CDI since Vancocin®. CDI has spread throughout hospitals, nursing homes, and the community with increasing mortality rates. In 2005, the U.S. Agency for Healthcare Research and Quality reported 28,600 deaths from CDI. It costs healthcare systems in the U.S. and Europe a combined $7.0 billion annually. Fidaxomicin is the first to show a similar cure rate and a significantly better recurrence rate over the current treatment in a large Phase 3 study. Fidaxomicin shows promise to be the best-in-class therapy for CDI.







Regulatory Review

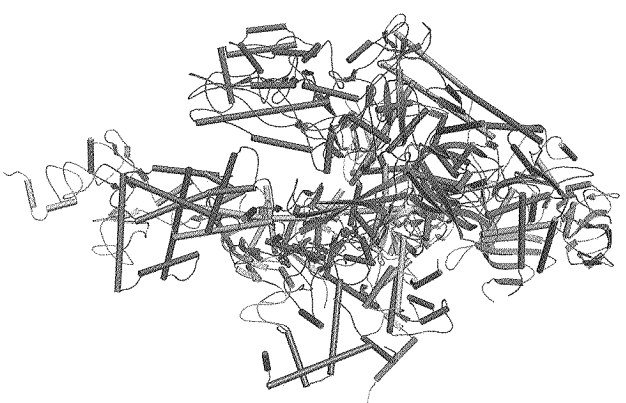


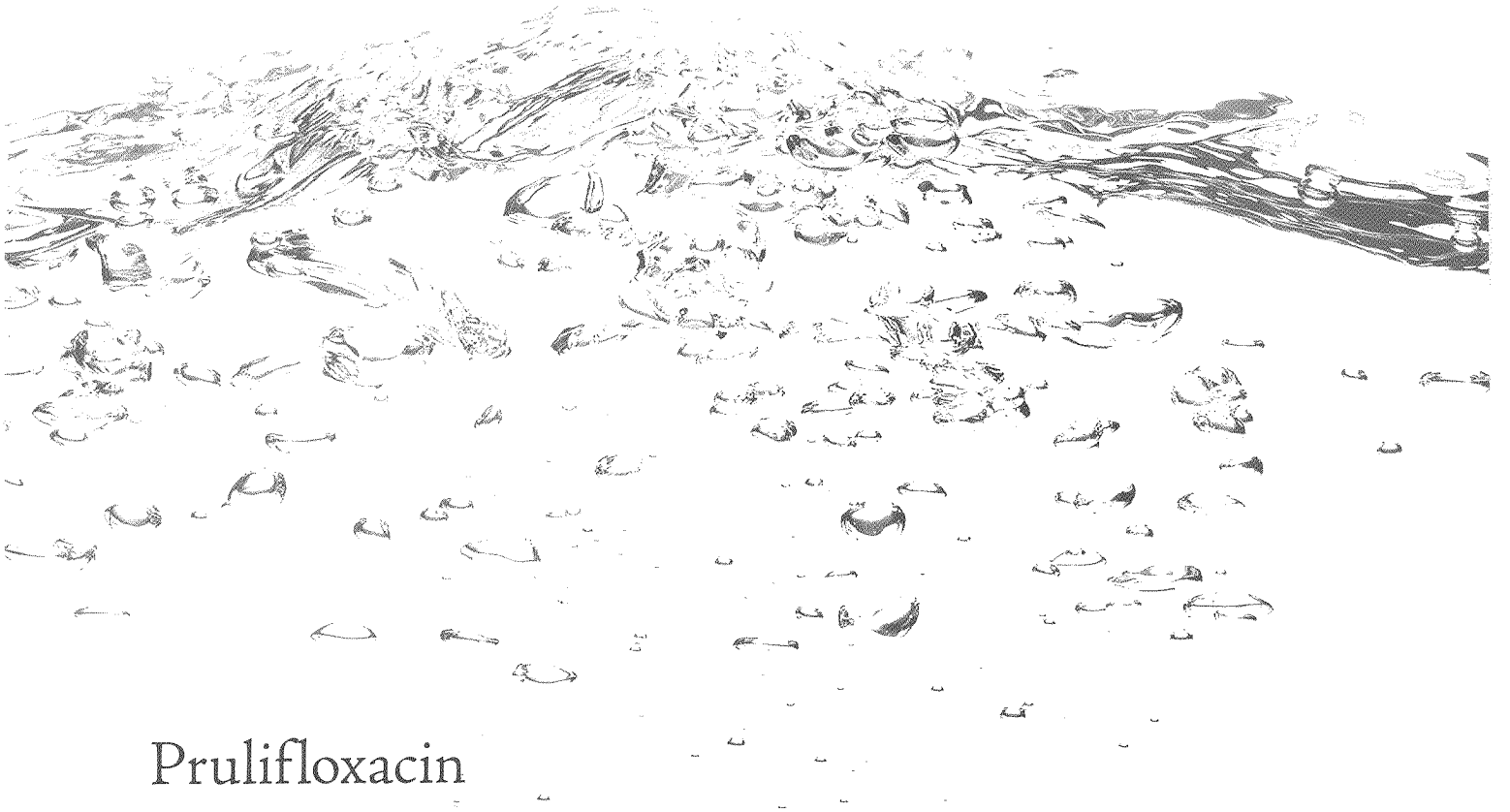
Optimer has completed three of its four Phase 3 clinical trials with success. The Company's focus is now on preparing a New Drug Application for the market approval of prulifloxacin, as well as a Marketing Authorization Application for market approval of fidaxomicin. We anticipate completing the second fidaxomicin trial in the second half of 2009 and filing an NDA soon after. Fidaxomicin was the sole program selected to participate in the Continuous Marketing Application Pilot 2 Program, allowing frequent informal discussions with FDA and priority review of the NDA submission.

Fidaxomicin

Fidaxomicin, formerly called OPT-80, is the first experimental drug in a new class of antibiotics. While many antibiotics aim to stop the growth of infectious bacteria, fidaxomicin induces the death of *Clostridium difficile* by inhibiting a bacterial enzyme called RNA polymerase. Fidaxomicin has a narrow-spectrum of activity believed to selectively eradicate *Clostridium difficile* with minimal disruption to the normal intestinal flora. Leaving healthy flora unharmed may reduce the recurrence of *Clostridium difficile* infection (CDI).

In November 2008, we reported positive data from the first fidaxomicin Phase 3 trial, the largest single comparative study ever conducted against Vancocin® in CDI. Our study showed that patients treated with fidaxomicin achieved similar rates of clinical cure and showed a significantly lower recurrence rate compared to Vancocin. Fidaxomicin is currently in its second Phase 3 clinical trial for the treatment of CDI. We expect to complete enrollment and report data for the second trial later this year. Optimer has worldwide rights to fidaxomicin.





Prulifloxacin

Prulifloxacin is a broad-spectrum fluoroquinolone antibiotic being developed for infectious diarrhea. Infectious diarrhea is primarily caused by a bacterial infection, and affects approximately 23 million travelers each year. Prulifloxacin has been widely used as a safe and effective drug in Japan, Korea and several European countries for the treatment of various bacterial diseases including gastrointestinal, respiratory and urinary tract infections. Optimer acquired exclusive rights to develop and commercialize prulifloxacin in the U.S. from Nippon Shinyaku Co., Ltd., in 2004.

Prulifloxacin achieved the primary endpoint with a p-value of less than 0.0001 in both pivotal Phase 3 trials. Patients treated with prulifloxacin in the first trial were cured in 24.0 hours and 32.8 hours in the second trial. The two Phase 3 clinical studies of prulifloxacin will provide the basis for filing a New Drug Application with the U.S. Food and Drug Administration later this year.

Dear Shareholders,

2008 was a rewarding year for Optimer Pharmaceuticals, resulting from the accomplishment of several key milestones. During 2008, we focused our efforts on advancing our two lead programs: fidaxomicin, our drug candidate for the treatment of *Clostridium difficile* infection (CDI), and prulifloxacin, our drug candidate for the treatment of infectious diarrhea, including travelers' diarrhea. We completed both Phase 3 clinical trials for prulifloxacin as well as the first of two Phase 3 clinical trials for fidaxomicin. In all three trials, our drug candidates successfully met their safety and efficacy endpoints. We were also issued two patents for fidaxomicin, and we continued to develop a strong reputation among the medical community through our presence at top medical meetings. We believe these achievements have positioned the company for future growth and commercial success.

Our most significant development in 2008 was the success of the first Phase 3 trial of fidaxomicin, which achieved its endpoints of clinical cure, recurrence and global cure. This trial was the largest single comparative study ever conducted against Vancocin® for the treatment of CDI. Vancocin is the only FDA-approved antibiotic for the treatment of CDI, while fidaxomicin is the only antibiotic currently in Phase 3 clinical development worldwide for the treatment of CDI. Based on the strength of this initial data we plan to prepare a Marketing Authorization Application to the European Medicines Agency (EMEA). Once the second Phase 3 trial is complete, results from the two trials will be used to support a New Drug Application (NDA) submission to the Food and Drug Administration.

In addition, we presented sub-analysis data from our Phase 2 study of fidaxomicin, which was published in *Antimicrobial Agents and Chemotherapy*. The data showed that fidaxomicin was active against both the hyper-virulent NAP-1 strain and a non hyper-virulent strain of *C. difficile*. The data also showed that fidaxomicin was more effective against all strains tested than the currently prescribed treatments, metronidazole and vancomycin.

In 2008, we completed the Phase 3 development program for prulifloxacin, a convenient three-day, once-a-day antibiotic for the treatment of infectious diarrhea, including travelers' diarrhea. Prulifloxacin achieved its primary

endpoint of time to resolution of diarrhea in both Phase 3 clinical trials, and we are now in the process of preparing our NDA for submission to the FDA. It is a unique fluoroquinolone prodrug used to treat various infections and has also been marketed in Japan and Europe since 2002.

During 2008, we were issued key patents on the production and polymorphic composition of the fidaxomicin drug substance, potentially extending market exclusivity to 2025. There are an additional six fidaxomicin patent applications pending approval. We also received a $1 million grant from the NIH, renewable over three years, to fund additional fidaxomicin research.

We also sponsored two medical education symposia at major scientific meetings in 2008; the European Congress of Clinical Microbiology and Infectious Diseases (ECCMID) in Spain and the ICAAC/IDSA meeting in Washington, D.C. We believe our continued presence at these meetings has helped advance the discussion on current treatments and challenges associated with CDI, increase CDI awareness and strengthen and expand our relationships with thought leaders in the anti-infectives field.

With our anti-infective drug development strategies coming to fruition, the company is undergoing significant operational changes. We are beginning to shift our focus from strictly drug discovery and pre-clinical and clinical development to more advanced aspects of drug development, including submissions for regulatory approval, commercial scale manufacturing and marketing and pre-commercialization efforts. While we plan to build a sales force to market both fidaxomicin and prulifloxacin in the U.S., we have also begun discussions with potential ex-North American marketing partners for fidaxomicin as part of our global commercialization strategy.

Our most significant development in 2008 was **the success of the first Phase 3 trial of fidaxomicin,** which achieved its endpoints of clinical cure, recurrence and global cure.

With a successful 2008 behind us, our focus in 2009 is to continue creating value for our shareholders by completing the second fidaxomicin Phase 3 trial, submitting an application for European regulatory approval for fidaxomicin, and preparing an NDA submission for approval of prulifloxacin in the U.S. The Optimer team is striving to become a leader in the anti-infectives space and to establish itself at the forefront of innovative medicines to treat challenging diseases.

We are highly motivated in driving our two drug candidates to commercialization, encouraged that our efforts could bring much needed relief from infections that affect hundreds of thousands of patients around the globe.

I wish to thank our employees for their contributions to our progress and to our shareholders for their continuing support.

Michael N. Chang, Ph.D.
President and Chief Executive Officer
April 2009

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

Form 10-K

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FOR ANNUAL AND TRANSITION REPORTS PURSUANT TO SECTIONS 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2008

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number: 001-33291

Optimer Pharmaceuticals, Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**33-0830300**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)

10110 Sorrento Valley Road, Suite C, San Diego, California, 92121
(Address of principal executive offices and zip code)

Registrant's telephone number, including area code: **(858) 909-0736**

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

Title of Each Class	**Name of Each Exchange on Which Registered**
Common Stock, par value $0.001 per share	**Nasdaq Global Market**

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒.

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒.

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

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

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

Large accelerated filer ☐ Accelerated filer ☒ Non-accelerated filer ☐ Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒.

The aggregate market value of the registrant's common stock held by non-affiliates as of June 30, 2008 (without admitting that any person whose shares are not included in such calculation is an affiliate), computed by reference to the price at which the common stock was last sold as of such date on the Nasdaq Global Market, was $226,483,907.

The number of outstanding shares of the registrant's common stock, par value $0.001 per share, as of March 11, 2009 was 33,037,661.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Definitive Proxy Statement for our 2009 Annual Meeting of Stockholders are incorporated by reference in Part III of this report.

OPTIMER PHARMACEUTICALS

FORM 10-K—ANNUAL REPORT
For the Fiscal Year Ended December 31, 2008

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PART I

Cautionary Note Regarding Forward-Looking Statements

This report and other documents we file with the SEC contain forward looking statements that are based on current expectations, estimates, forecasts and projections about us, our future performance, our business or others on our behalf, our beliefs and our management's assumptions. In addition, we, or others on our behalf, may make forward looking statements in press releases or written statements, or in our communications and discussions with investors and analysts in the normal course of business through meetings, webcasts, phone calls and conference calls. Words such as "expect," "anticipate," "will," "could," "would" "project," "intend," "plan," "believe," "predict," "estimate," "should," "may," "potential," "continue," "ongoing", or variations of such words and similar expressions are intended to identify such forward looking statements. These statements are not guarantees of future performance and involve certain risks, uncertainties and assumptions that are difficult to predict. We describe our respective risks, uncertainties and assumptions that could affect the outcome or results of operations in "*Item 1A. Risk Factors*". We have based our forward looking statements on our management's beliefs and assumptions based on information available to our management at the time the statements are made. We caution you that actual outcomes and results may differ materially from what is expressed, implied or forecast by our forward looking statements. Except as required under the federal securities laws and the rules and regulations of the SEC, we do not have any intention or obligation to update publicly any forward looking statements after the distribution of this report, whether as a result of new information, future events, changes in assumptions or otherwise.

Item 1. Business

Overview

We are a biopharmaceutical company focused on discovering, developing and commercializing innovative anti-infective products. Our current development efforts are focused on products that treat gastrointestinal infections, and related diseases where current therapies have limitations, including limited efficacy, serious adverse side effects, drug-to-drug interactions, difficult patient compliance and bacterial resistance.

We currently have two late-stage anti-infective product candidates, fidaxomicin, formerly known as OPT-80, and prulifloxacin.

Fidaxomicin, our lead product candidate, is an antibiotic currently in its second Phase 3 registration trial for the treatment of *Clostridium difficile*-infections, or CDI, the most common nosocomial, or hospital acquired diarrhea. In November 2008, we reported positive data from the first fidaxomicin Phase 3 trial, the largest single comparative study ever conducted against Vancocin® (oral vancomycin) in CDI. The top-line analysis of data from this trial showed that fidaxomicin achieved the primary endpoint of clinical cure and demonstrated a significantly lower recurrence rate compared to Vancocin, the only FDA-approved antibiotic for the treatment of CDI. Fidaxomicin was also well-tolerated in the trial. The second fidaxomicin Phase 3 trial is on-going and we anticipate completing enrollment and reporting data from this trial in 2009. We currently hold worldwide rights to fidaxomicin.

Prulifloxacin is a prodrug in the fluoroquinolone class of antibiotics, a widely-used class of broad-spectrum antibiotics. We are developing prulifloxacin as a treatment for infectious diarrhea in travelers. We have announced positive results from each of our two Phase 3 trials assessing the safety and efficacy of prulifloxacin as a once-daily (600 mg), three-day oral therapy for the treatment of infectious diarrhea, including travelers' diarrhea. In July 2008, we reported positive top-line data from the first of two Phase 3 trials. The top-line analysis of data from this study showed that prulifloxacin met the primary endpoint of Time to Last Unformed Stool, or TLUS, in both the modified intent-to treat, or mITT (n=187) and microbiologically evaluable (per protocol; n=165) populations compared to placebo. Prulifloxacin was generally well tolerated and had a similar safety profile compared to placebo. In February 2009, we reported positive top-line data from the second Phase 3 trial which showed that prulifloxacin met the study objective of superiority to placebo in the resolution of diarrhea, measured by TLUS, in both the mITT (n=200) and microbiologically evaluable (per protocol; n=173) populations. The trial also confirmed the overall efficacy and safety profile observed in the first Phase 3 trial, demonstrating that prulifloxacin was generally well tolerated and had similar safety profile compared to placebo. With the results of these two Phase 3 trials we intend to file an NDA for prulifloxacin by the end of 2009. We intend to conduct a Phase 4 trial of prulifloxacin subsequent to the NDA submission to compare prulifloxacin to ciprofloxacin for the treatment of infectious diarrhea. We plan to seek a label for prulifloxacin and initially plan to focus commercialization efforts on the treatment of infectious diarrhea in travelers.

We are developing additional product candidates using our proprietary technology, including our Optimer One-Pot Synthesis, or OPopS™ drug discovery platform. OPopS is a computer-aided technology that enables the rapid and low-cost synthesis of a wide array of carbohydrate-based compounds. Two components of the OPopS technology that allow us to synthesize new compounds are GlycoOptimization and De Novo Glycosylation. These technologies are capable of rapidly generating drug candidates for broad therapeutic application. One of the more advanced OPopS product candidates is OPT-88, a disease-modifying intra-articular, or within the cavity of a joint, therapy for osteoarthritis. We plan to submit an Investigational New Drug application in 2009 and

subsequently to, either ourselves or with a partner, initiate a Phase 1 study to assess safety of repetitive intra-articular injections of OPT-88 in patients with knee osteoarthritis.

We also acquired exclusive rights from Memorial Sloan-Kettering Cancer Center, or MSKCC, to develop and commercialize OPT-822, a novel carbohydrate-based cancer immunotherapy. We plan to seek a partner and initiate Phase 2/3 clinical trials for the treatment of metastatic breast cancer in Asia in 2009.

We were incorporated in November 1998. Our principal offices are in San Diego, California. We make available, free of charge, on our website, *www.optimerpharma.com*, which includes links to reports we have filed with the Securities and Exchange Commission, or SEC. Any information that is included on or linked to our Internet site is not a part of this report or any registration statement that incorporates this report by reference. Our filings may also be read and copied at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549. Information on the operation of the Public Reference Room may be obtained by calling the SEC at 1-800-732-0330. The SEC also maintains a website that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of that site is *www.sec.gov*.

Antibiotic Market Background

Infectious diseases can be caused by bacteria present in the environment that enter the body through the skin or mucous membranes of the lungs, nasal passages and gastrointestinal tract, or GI tract. These bacteria can be pathogenic, or disease-causing, and can overwhelm the body's immune system by establishing themselves throughout the body in various tissues and organs where they proliferate. This can cause a number of serious and, in some cases, fatal infections, including those of the GI tract, urinary tract, respiratory tract, bloodstream, skin and heart.

Bacteria can be classified as either gram-positive or gram-negative. The difference in classification is largely based on a difference in bacteria cell wall structure in that gram-positive bacteria have exposed thick peptidoglycan, a polymer consisting of sugars and amino acids, cell walls, while gram-negative bacteria do not. Antibiotics that treat bacterial infections can be classified as either broad-spectrum or narrow-spectrum. Most antibiotics in use today are generally considered broad-spectrum, meaning they target a wide variety of bacteria. In contrast, narrow-spectrum antibiotics target a select group of bacteria such as gram-positive or gram-negative bacteria. Current research is increasingly focused on antibiotics that target specific bacteria, which may be beneficial for the treatment of certain infections.

Antibiotics used to treat bacterial infections work by interfering with bacterial cellular activities, such as cell wall synthesis or protein synthesis. Antibiotics may be bacteriostatic or bactericidal. Bacteriostatic antibiotics stop the growth of bacteria, which prevents the infecting bacteria from multiplying and allows the patient's own immune system to eradicate the infecting bacteria. Bactericidal antibiotics work by directly killing the bacteria, which is particularly important for patients with weakened immune systems that cannot effectively eradicate the infecting bacteria on their own.

The anti-infective market is one of the largest therapeutic categories worldwide. According to IMS Health, the combined market for prescription antibacterial drugs in 2008 exceeded $38 billion worldwide. The largest antibacterial sales per region were: North America ($11 billion), Europe ($10 billion), Asia Pacific ($10 billion), Latin America ($3 billion), and others ($4 billion). The market for anti-infective products is generally divided into two categories, nosocomial infections and community-acquired infections, which represent approximately 30% and 70% of the anti-infectives market, respectively. According to the U.S. Centers for Disease Control and Prevention, or CDC, approximately two million healthcare associated (nosocomial) infections occur annually in the United States and these infections can increase average length of hospital stays by seven to nine days. Approximately four million healthcare associated (nosocomial) infections occur annually in Europe, three million in North America, two million in South America and two million in East Asia (excluding China). Nosocomial infections are costly to address, with an estimated annual aggregate healthcare cost in the United States and the United Kingdom of approximately $4.5 billion and $1.9 billion, respectively. In addition, in the United States, nosocomial infections cause approximately 100,000 deaths annually, making them one of the five leading causes of death in the United States. We believe that bacterial infections, especially infections caused by difficult-to-treat, drug resistant bacteria, cause or contribute to a majority of these deaths.

Our Market Opportunity

Many marketed antibiotics used to treat infections have well-documented shortcomings. For example, current antibiotics often fail to reach sufficient concentrations at the site of infection to adequately eliminate harmful bacteria. Certain of these antibiotics have also been associated with serious adverse side effects, including renal toxicities, heart rhythm abnormalities, phototoxicity, rashes and central nervous effects, such as seizures. These side effects limit the use of antibiotics for certain patients. In addition, certain antibiotics have interaction issues with prescribed drugs, such as cholesterol lowering agents. Safety problems can arise when increased doses of these antibiotics are needed to treat resistant bacteria. If bacteria develop resistance to currently available antibiotics, the underlying infection can become difficult or impossible to treat, and may even lead to death. Patients also often fail to comply with treatment regimens due to many factors including the inability to tolerate an antibiotic due to its side effects,

inconvenient method of dosing and undesirable frequency and length of dosing. Because of these shortcomings associated with marketed antibiotics, we believe an opportunity exists to improve upon existing treatments.

Our Product Candidates

We believe that our product candidates may offer advantages over existing antibiotics in terms of efficacy, safety, bacterial resistance and dosing convenience. We also believe that the markets for these product candidates present us with significant commercial opportunities. Our product candidates are in various stages of clinical development and none have been approved for sale by the FDA. Our ability to obtain FDA approval of any of our product candidates requires us to successfully complete the clinical development of each such product candidate. Clinical trials involve a lengthy and expensive process with an uncertain outcome, and efficacy and safety data of earlier studies and trials may not be predictive of future trial results.

Our current product candidate portfolio consists of the following:

Product Candidate	Target Indications	Development Status	Commercial Rights
Anti-Infectives			
Fidaxomicin (1)	CDI treatment	Phase 3 — first trial completed; second trial on-going	Optimer worldwide
	CDI oral suspension	Pre-clinical	
	CDI prevention	Proof-of-Concept Trial (2)	
	Prevention of VRE in CDI	Proof-of-Concept Trial (2)	
	MRS infections (2nd generation)	Pre-clinical	
Prulifloxacin	Infectious diarrhea	NDA Preparation; Two Phase 3's completed	Optimer U.S.
CEM-101 (OP-1068)	Respiratory tract infections	Phase 1	Cempra worldwide (3)
Other Therapeutic Areas			
OPT-822/OPT-821 Combination Therapy	Breast cancer	Planning Phase 2	Optimer worldwide
OPT-88	Osteoarthritis	Pre-clinical	Optimer worldwide

(1) We filed an investigational new drug application, or IND, with the FDA for fidaxomicin in August 2003.
(2) A proof-of-concept trial is an exploratory clinical trial to provide or establish evidence that a product candidate is efficacious for a target indication.
(3) We have the right to receive royalties from Cempra Pharmaceuticals, Inc. on any sales of CEM-101 (OP-1068).

Anti-Infective Product Candidates

Fidaxomicin

Overview. We are initially developing fidaxomicin for the treatment of infections caused by *Clostridium difficile*, or *C. difficile,* bacteria. Fidaxomicin is a differentiated antibiotic for the treatment of CDI, the most common nosocomial diarrhea. Specifically, fidaxomicin has a narrow spectrum of activity against certain gram-positive bacteria. Pre-clinical data indicates that fidaxomicin is bactericidal and acts by inhibiting RNA polymerase, a bacterial enzyme. This data also shows that fidaxomicin inhibits the growth of other potentially harmful bacteria such as Staphylococci, common bacteria that reside on the skin and in the GI tract, and Enterococci, common bacteria that reside in the GI tract.

Fidaxomicin is currently in the second of two planned Phase 3 registration trials for the treatment of CDI. In November 2008, we reported positive data from the first fidaxomicin Phase 3 trial. The top-line analysis of data from this trial showed that fidaxomicin achieved the primary endpoint of clinical cure and demonstrated a significantly lower recurrence rate compared to Vancocin. Fidaxomicin was also well-tolerated in the trial. The second Phase 3 trial is on-going and we anticipate completing enrollment and reporting data from this trial in 2009. Following our repurchase of certain development and commercialization rights from Par Pharmaceutical, Inc. in February 2007, we hold worldwide rights to fidaxomicin. The FDA has granted Fast Track status for fidaxomicin in the treatment of CDI. Fast Track designation indicates that fidaxomicin has the potential to treat life-threatening diseases with unmet medical needs. The FDA also chose fidaxomicin to be the only investigational new drug in the FDA's CMA, Pilot 2 Program in the Division of Anti-Infective and Ophthalmology Products. The CMA designation offers several potential benefits, including a program of continuous FDA feedback designed to streamline the development process. Participation in these programs will not eliminate any phase of clinical development.

Currently, metronidazole and oral vancomycin are two standard antibiotic therapies used to treat CDI. Both have shortcomings including limited efficacy, high recurrence rates, adverse side effects and poor patient compliance. Of the two standard therapies, only oral vancomycin is FDA-approved to treat CDI.

Clostridium Difficile Infections. CDI is a serious illness caused by infection of the inner lining of the colon by *C. difficile*, bacteria that produce toxins resulting in inflammation, severe diarrhea and, in serious cases, death. Outbreaks and illness related to *C. difficile* generally occur during or after therapy with broad-spectrum antibiotics. Broad-spectrum antibiotics can cause CDI by disrupting normally present gastrointestinal bacteria, or gut flora, thereby allowing *C. difficile* to proliferate. Recent studies have suggested that the use of proton pump inhibitors, or PPIs, a widely used group of heartburn drugs, may also be linked to *C. difficile* infections. CDI accounts for up to 33% of antibiotic-associated diarrhea incidences as well as many cases of antibiotic-associated colitis, or inflammation of the colon. *C. difficile* can be transmitted by direct or indirect contact with infected patients via spores that can live for months on dry surfaces. According to the CDC, CDI is becoming more prevalent outside the hospital.

We estimate that CDI affects over 500,000 patients in the United States annually. In the United Kingdom, the reported number of CDI patients over 65 years of age was approximately 55,000 in 2006, and we believe that CDI incidence is growing in patients worldwide. We believe that the incidence of CDI may be higher than what is currently being reported because many hospitals are not required to and do not report incidents of CDI. For example, a survey conducted in May 2008 through August 2008 by the Association for Professionals in Infection Control and Epidemiology, or APIC, showed that 13 out of every 1,000 inpatients were either infected or colonized with *C- difficile* (94.4% infected). The rate is 6.5 to 20 times higher than previous incidence estimates. Additionally, recent reports indicate that the incidence of community-acquired CDI cases may be increasing. For example, a study conducted in one major U.S. city and cited at the 2006 Interscience Conference on antimicrobial Agents and Chemotherapy, or ICCAC, reported that the percentage of CDI cases found to be community-acquired increased from 12% in 2006 to 22% in 2004 and to 29% in 2005.

According to a study cited in the New England Journal of Medicine, the increased rates of CDI and severity of the disease may be caused by a combination of factors, including the excessive use of antibiotics and the emergence of a new hypervirulent strain of *C. difficile* known as North America Phenotype 1/027, or NAP1/027. A study published in the medical journal Lancet in September 2005 demonstrated that NAP1/027 produces 16 to 23 times more toxins *in vitro* than other strains. NAP1/027 has been reported in at least 40 states in the United States and is characterized by increased virulence, morbidity and mortality as well as potential antimicrobial resistance. According to the data presented at the 2006 ICAAC, NAP1/027 incidence in the United Kingdom increased an estimated 200% in the two years after mandatory surveillance of the disease was initiated in hospitals in 2004.

Generally, CDI results in longer hospital stays and increases average patient cost which is often not reimbursed to the hospital. In more complicated cases of CDI, hospitalization may be prolonged by up to two weeks. A recent analysis suggests that patients with CDI have their hospital stay extended by at least 3 days compared with patients without the infection, with the incremental cost of approximately $13,700 per patient. The total costs associated with hospital cases of CDI in United States are estimated at $3.2 billion. According to the data presented at the 2006 ICAAC, CDI results in an estimated increase in average patient cost of over $6,000 per patient in the United Kingdom and the total projected annual cost for treating the disease in Europe is approximately $3.8 billion.

Physicians often care for patients with CDI by discontinuing previously administered broad-spectrum antibiotics, if possible, and providing supportive care such as fluid and electrolyte replacement. If these measures fail, the standard therapy for CDI includes the administration of metronidazole and/or oral vancomycin.

Current Treatments and Limitations. Metronidazole is generally used for patients in the United States and Europe experiencing their first episode or first recurrent episode of CDI. Metronidazole is a generic drug that is used off-label to treat CDI due to its low cost and historical efficacy. The typical treatment regimen for metronidazole is 250 mg every six hours, for a minimum of ten days. Metronidazole can be associated with numerous adverse side effects such as seizures, toxic reactions to alcohol, leukopenia, or reduction of white blood cells, neuropathy, a disease affecting one or more nerves, unpleasant taste and dry mouth.

Oral vancomycin is used in the United States and also in Europe and Japan for the treatment of CDI. As a result of its broad antibacterial activity, intravenously administered vancomycin is frequently used for certain other life-threatening infections caused by multi-drug resistant bacteria. In an effort to slow the continuing emergence of vancomycin-resistant bacteria, the medical community discourages the use of the drug for the treatment of CDI except for patients who are not responding to metronidazole or for patients with severe, life-threatening colitis. Oral vancomycin's recommended treatment protocol is 125 mg or 250 mg doses every six hours, for approximately ten days.

Both metronidazole and oral vancomycin have shortcomings as treatments for CDI including:

- Limited Efficacy. A controlled study conducted in North America and reported in 2007 showed that approximately 19% of CDI patients treated with oral vancomycin and 28% of CDI patients treated with metronidazole do not respond to therapy, and these patients are at risk of developing more severe CDI.

- High Recurrence Rate. Approximately 20% of CDI patients who initially respond to oral vancomycin and 30% of CDI patients who initially respond to metronidazole experience a clinical recurrence following the cessation of antibiotic administration.

- Bacterial Resistance. Widespread use of oral vancomycin is discouraged for the treatment of CDI in some hospitals due to concerns over the development of cross-resistant bacteria, including vancomycin-resistant Enterococci, or VRE, and vancomycin-resistant Staphylococcus, which can also cause other serious nosocomial infections. Furthermore, *C. difficile* resistance to metronidazole has been reported in at least one study.

- Adverse Side Effects. Metronidazole, which is systemically absorbed and must be administered in high doses to treat CDI, may result in serious adverse side effects and complications, including seizures, toxic reactions to alcohol, leukopenia, neuropathy, unpleasant taste and dry mouth.

- Inducement of CDI. Oral vancomycin and metronidazole are both broad-spectrum antibiotics that disrupt the normal gut flora. Because normal and healthy gut flora generally suppresses the growth of *C. difficile*, administration of oral vancomycin or metronidazole may actually induce the development of CDI.

- Inconvenient Dosing and Difficult Compliance. The current treatment regimen for both oral vancomycin and metronidazole is inconvenient as both must be administered every six hours for a minimum of seven days, which may result in lower levels of patient compliance.

Potential Fidaxomicin Advantages. Fidaxomicin is a differentiated macrocycle antibiotic consisting of an 18-member ring structure. Fidaxomicin has significant differentiating features, including a narrow antimicrobial spectrum, fast-acting bactericidal activity against *C. difficile*, minimal systemic exposure and an enduring clinical effect. Based on our clinical and pre-clinical studies of fidaxomicin for the treatment of CDI, we believe fidaxomicin may offer the following advantages:

- Demonstrated activity against *C. difficile*, including hypervirulent strains such as NAP1/027, with low rates of treatment failures and recurrences. Our first Phase 3 study provided evidence of a high cure rate and substantially improved recurrence rates compared to Vancocin;

- Evidence of low *C. difficile* resistance, including hypervirulent strains such as NAP1/027;

- Minimal systemic exposure resulting in a favorable safety profile;

- Limited disruption of normal gut flora resulting in a lower likelihood of inducement of CDI and decreased severity of disease; and

- Convenient, twice daily dosing regimen.

Clinical Development

Phase 3 Pivotal Trials. In November 2008, we reported the results from a 629 patient North American Phase 2b/3 clinical trial of fidaxomicin for the treatment of CDI. This trial was a multi-center, double-blind, controlled Phase 3 trial and was the largest single comparative study conducted against Vancocin in CDI. We enrolled 629 adult subjects at more than 100 sites throughout North America. The primary endpoint of the study was clinical cure defined as patients requiring no further CDI therapy two days after completion of study medication, as determined by the treating physicians. The secondary endpoint evaluated CDI recurrence up to four weeks post therapy with recurrence defined as the return of diarrhea associated with CDI confirmed by a positive toxin test. Global cure, an exploratory endpoint, was defined as patients who were cured and did not have a recurrence. Patients were dosed with either fidaxomicin at 200 mg twice daily (400 mg/day) or Vancocin at its recommended dosing regimen of 125 mg every six hours (500 mg/day) for ten days. In the initial Phase 2b portion of the trial, we enrolled a total of 93 CDI patients at 32 sites. Following an interim blinded safety analysis by an independent data safety monitoring board, we transitioned into a Phase 3 clinical trial in March 2007.

In November 2008, we reported positive top-line data from this first Phase 3 study. In the study, 92.1% of patients treated with fidaxomicin in the per protocol population achieved clinical cure versus 89.8% for Vancocin. In addition, only 13.3% of per protocol patients treated with fidaxomicin experienced a recurrence versus 24.0% for Vancocin ($p = 0.004$). Per protocol patients treated with fidaxomicin had a global cure of 77.7% which was greater than Vancocin at 67.1% ($p = 0.006$). Fidaxomicin was well-tolerated. The top-line trial results are summarized in the table below.

Per Protocol (microbiologically evaluable)	Fidaxomicin (200 mg bid)	Vancocin ® capsules (125 mg qid)	P-Value	95% Confidence Interval
Clinical cure	92.1% (244/265 patients)	89.8% (254/283 patients)	NA	(-2.6,)*
Recurrence	13.3% (28/211)	24.0% (53/221)	0.004	(-17.9, -3.3)
Global Cure **	77.7% (206/265)	67.1% (190/283)	0.006	(3.1, 17.9)

modified Intent-to-Treat (mITT)	Fidaxomicin (200 mg bid)	Vancocin ® capsules (125 mg qid)	P-Value	95% Confidence Interval
Clinical cure	88.2% (253/287 patients)	85.8% (265/309 patients)	NA	(-3.1,)*
Recurrence	15.4% (39/253)	25.3% (67/265)	0.005	(-16.6, -2.9)
Global Cure **	74.6% (214/287)	64.1% (198/309)	0.006	(3.1, 17.7)

* one-sided 97.5% confidence intervals
** global cure rate is considered to be the most significant outcome in a CDI treatment trial by a recent Cochrane review.
NA = Not Applicable (trial met non-inferiority endpoint)

The Per Protocol (microbiologically evaluable) population is the patient group that had CDI confirmed by diarrhea with a positive toxin assay, met all inclusion/exclusion criteria, and received at least 3 days of therapy and were considered a failure or received at least 8 days of therapy and were considered a cure.

The modified Intent-to-Treat population is the patient group that had CDI confirmed by diarrhea with a positive toxin assay and received at least one dose of study medication.

We initiated a second Phase 3 pivotal trial of the same design in the second quarter of 2007. We anticipate completing enrollment and reporting data from the second trial in 2009. If the second trial is successful, we intend to submit a New Drug Application, or NDA, as soon as practical.

Phase 2a Study. In July 2005, we completed an open-label, dose-ranging, randomized safety and clinical evaluation study of fidaxomicin in patients with CDI at five sites. Fidaxomicin was administered to 48 patients. Three patients withdrew from the trial for reasons unrelated to the administration of fidaxomicin, resulting in 45 patients eligible for evaluation. Forty-one of these patients completed a ten-day therapy regimen consisting of twice daily doses of 50 mg (100 mg/day), 100 mg (200 mg/day) or 200 mg (400 mg/day). A primary endpoint of the trial was clinical cure of CDI, as determined by the treating physician for each patient on the tenth day of administration. Additional endpoints investigated were time-to-resolution of diarrhea, recurrence rate through six weeks post-treatment and total relief of CDI symptoms, defined as complete relief of diarrhea, fever and abdominal pain, and normalized white blood cell counts by the end of the ten-day therapy.

Among the 45 evaluated patients, only four patients failed to achieve clinical cure by the end of ten days of therapy, two of whom were in the 100 mg/day dose group and two of whom were in the 200 mg/day dose group. None of the patients in the 400 mg/day dose group failed to achieve clinical cure. All 41 cured subjects were subsequently monitored for six weeks following therapy for recurrence. CDI recurred in two of the 41 cured subjects, one in the 100 mg/day dose group and one in the 400 mg/day dose group. The median cure times, or time-to-resolution of diarrhea, were as follows: 5.5 days for the 100 mg/day dose group, 3.5 days for the 200 mg/day dose group and 3.0 days for the 400 mg/day dose group.

A summary of the results of the Phase 2a clinical trial for fidaxomicin is presented below:

Parameter	Dose Group		
	100 mg/day	200 mg/day	400 mg/day
Clinical Cures	86% (12/14)	87% (13/15)	100% (16/16)
Total Symptom Relief	43% (6/14)	53% (8/15)	81% (13/16)
Recurrence	8% (1/12)	0% (0/13)	6% (1/16)
Median Time to Cure of Diarrhea	5.5 Days	3.5 Days	3.0 Days

Pharmacokinetic analyses were performed on all patients. Fidaxomicin was not detectable in the blood in half of the patients and only three subjects had levels exceeding 0.02 mg/mL. Stool concentrations of fidaxomicin averaged over 1,400 mg/g of stool at the 400 mg/day dose level at day ten. As *C. difficile* is present mainly in the gut, high stool concentrations suggest that fidaxomicin is present where needed to treat CDI and low concentrations in the blood indicate fidaxomicin is minimally absorbed in the system, thus reducing the risk of side effects. There were no adverse events determined by the physicians to be related to fidaxomicin. At one site in this Phase 2a trial, we performed a microbiologic analysis of the stool of 29 patients. This analysis showed that fidaxomicin did not cause any unusual disruptions of normal gut flora for patients in any of the three dose groups.

In this study there was a 42% presence of the super toxin-producing strain of C. *difficile,* the BI/NAP1/027 strain, and there was no significant difference in the overall cure rates with fidaxomicin between subjects with the BI/NAP1/027 strain and subjects without the hypervirulent strain. The distribution of the BI/NAP1/027 strain was nearly equal in all three dosing groups.

The bacterial isolates from the study were also tested for susceptibility to fidaxomicin, vancomycin, and metronidazole. Overall antibiotic susceptibilities were consistent with the previously reported MIC_{90} values for the three antibiotics. However, fidaxomicin showed no difference in MIC values between the BI/NAP1/027 strains and the non-BI/NAP1/027 strains, whereas currently available antibiotics, metronidazole and vancomycin, showed slightly higher MIC values for the hypervirulent strains.

Phase 1 Studies. We have completed two double-blind, oral, dose-escalating, placebo-controlled Phase 1 trials, one of which was a Phase 1a single-dose trial, and one of which was a Phase 1b multiple-dose trial. The trials were designed to determine the safety, tolerability, and pharmacokinetic characteristics of fidaxomicin in healthy volunteers. Each Phase 1a patient received two single oral administrations of either a 100 mg dose followed by a 300 mg dose, or a 200 mg dose followed by a 450 mg dose of fidaxomicin. Each Phase 1b patient received daily oral administrations of 150, 300, or 450 mg doses of fidaxomicin for ten consecutive days. In both trials, there were eight subjects for each dose level, six of whom were randomly selected to receive fidaxomicin and two of whom received placebo. We collected blood, urine and stool samples for pharmacokinetic analysis. Vital signs including blood pressure, pulse, body temperature and electrocardiograms were measured following each dosing and on a regular basis throughout the study. In both studies, fidaxomicin was well tolerated by all subjects and no drug-related adverse events were observed.

Fidaxomicin also exhibited a favorable pharmacokinetic profile for CDI treatment. After oral administration at either single dose or multiple doses, all blood samples had low, usually lower than 0.02 mg/mL, or undetectable levels of fidaxomicin which indicates very low systemic absorption. In contrast, fidaxomicin was found to be present in high concentrations in the stool. For example, at day ten for the 450 mg per day multiple-dose group, the mean fidaxomicin stool concentration exceeded 10,000 times the MIC_{90}, or minimum concentration of a drug needed to inhibit growth of 90% of microorganisms, of *C. difficile.*

Oral Suspension Formulation Development. We are developing an oral suspension formulation which complements the existing tablet form of fidaxomicin. This formulation is intended for use with intensive care unit and elderly patients. We plan to submit an IND to pursue development for this potential label indication expansion.

Commercialization

We hold worldwide rights to fidaxomicin. In February 2007, we elected to exercise our right under a prospective buy-back agreement to repurchase Par Pharmaceutical, Inc.'s rights to develop and commercialize fidaxomicin in North America and Israel. We paid Par a one-time $20.0 million termination fee. We are obligated to pay Par a one-time $5.0 million milestone payment, a 5% royalty on net sales by us or our affiliates of fidaxomicin in North America and Israel, and a 1.5% royalty on net sales by us or our affiliates of fidaxomicin in the rest of the world. In addition, in the event we license our right to market fidaxomicin in the rest of the world, we will be required to pay Par a 6.25% royalty on net revenues we receive related to fidaxomicin. We are obligated to pay each of these royalties, if any, on a country-by-country basis for seven years commencing on the applicable commercial launch in each such country. We intend to seek one or more partners for the commercialization of fidaxomicin outside North America.

Fidaxomicin — Other Indications

Based on our pre-clinical and clinical studies for CDI treatment, we believe fidaxomicin may be effective against a broad range of indications with significant unmet medical needs. Our strategy is to develop fidaxomicin for its lead indication, CDI treatment, while also advancing its development for additional indications.

CDI Prevention. We believe fidaxomicin may be effective not only for treating CDI but also for preventing CDI. Patients at high risk of developing CDI, such as elderly patients in long-term care facilities or hospital patients on broad-spectrum antibiotics or PPIs, may benefit from prophylactic protection from the disease. Up to 20% of long-term care patients are colonized with *C. difficile.* There is currently no therapeutic drug approved for the prevention of CDI. Incidence of CDI outbreaks has been increasing in the hospital and community settings, and we believe fidaxomicin may provide safe, potent and narrow-spectrum bactericidal activity against *C. difficile*, thereby protecting high-risk patients while limiting disruption to normal gut flora. We continue to evaluate the design of a proof-of-concept clinical trial of fidaxomicin to prevent CDI in high-risk populations.

Prevention of VRE in CDI. Pre-clinical data indicate that fidaxomicin is active *in vitro* against antibiotic-resistant Enterococci, including VRE. Enterococci are common bacteria that reside in the GI tract and generally do not pose a serious health risk. However, if Enterococci enter the bloodstream, they can cause serious and life-threatening infections, especially in subjects with weakened immune systems. Vancomycin is considered the last line of defense against such infection. However, growing bacterial resistance to vancomycin has emerged, requiring new therapeutic options.

Biological and stool concentration data from our Phase 1 and 2a CDI treatment trials indicate fidaxomicin may be useful in the prevention of VRE bloodstream infections by minimizing the colonization of these bacteria in the GI tract before they enter the bloodstream. With the completion of our first Phase 3 CDI trial, we are currently analyzing the propensity of Vancocin and fidaxomicin to promote VRE colonization. Upon completion of this analysis, we will assess whether to conduct a VRE prevention in CDI clinical trial.

Methicillin-Resistant Staphylococci, or MRS, Infections. We believe second generation fidaxomicin compounds may be useful for the treatment of Staphylococcal infections. Methicillin is a broad-spectrum antibiotic that was previously used to treat infections caused by susceptible gram-positive bacteria, such as *Staphylococcus aureus*, or *S. aureus*, and *Staphylococcus epidermidis*, or *S. epidermidis*, that would otherwise be resistant to most penicillins.

Prulifloxacin

Overview. We are developing prulifloxacin for the treatment of infectious diarrhea, including travelers' diarrhea, a community-acquired infection which can be caused by a broad range of bacteria. We intend to initially seek approval for prulifloxacin for the treatment of infectious diarrhea in travelers. Prulifloxacin is a prodrug in the fluoroquinolone class of antibiotics, a widely-used class of broad-spectrum antibiotics. A prodrug is an inactive form of a compound that is converted in the body to an active drug either by spontaneous chemical reaction or through the enzymatic process. Following oral administration, prulifloxacin is converted to ulifloxacin, which is rapidly bactericidal by killing susceptible bacterial pathogens through inhibition of DNA replication. Ulifloxacin has demonstrated potent broad-spectrum activity against gram-positive and gram-negative bacteria. We have completed two Phase 3 clinical trials of prulifloxacin for the treatment of travelers' diarrhea and reported positive top-line data from each study. In July 2008, we reported positive top-line data from the first Phase 3 trial conducted in Mexico and Peru and in February 2009, we reported positive top-line data from the second Phase 3 trial conducted in India, Guatemala and Mexico. The top-line analysis of data from these studies showed that prulifloxacin met the primary endpoint of TLUS compared to placebo. Prulifloxacin was generally well tolerated and had a similar safety profile compared to placebo. With the results of these two Phase 3 trials we intend to file an NDA for prulifloxacin by the end of 2009.

We believe that prulifloxacin will be a differentiated therapeutic option for travelers' diarrhea due to its broad and potent activity against gastrointestinal pathogens, favorable safety profile, clinical efficacy and convenient dosing regimen.

In June 2004, we acquired from Nippon Shinyaku Co., Ltd. the exclusive rights to develop and commercialize prulifloxacin for all indications in the United States. Prulifloxacin has been marketed by other companies in Japan since 2002 to treat a wide range of bacterial infections, including infectious diarrhea, and in Italy since 2004 to treat urinary tract infections, or UTIs, and respiratory tract infections, or RTIs. Other parties have found that prulifloxacin is well-tolerated, as demonstrated by its use in the treatment of more than two million patients. A 1996 investigator-initiated clinical study of prulifloxacin in Japan by a third party for the treatment of infectious diarrhea evaluated the safety and efficacy of prulifloxacin in 122 subjects, with an endpoint of clinical cure, as evidenced by eradication of bacterial pathogens. Prulifloxacin was considered effective in approximately 98% of the 54 subjects evaluated for clinical cure. Prulifloxacin also eradicated the bacterial pathogen in approximately 95% of the 77 subjects evaluated for bacteriological effect. One hundred eight of the 109 subjects evaluated for safety had no adverse effects while one subject experienced a mild rash that was possibly related to prulifloxacin administration, but quickly recovered and continued to receive all scheduled therapy.

Infectious Diarrhea. Infectious diarrhea is associated with an infection caused by bacteria, viruses or parasites. Its symptoms include stomach cramps, vomiting, nausea, fever and headache. Infectious diarrhea is the world's second-leading cause of morbidity and mortality. It is a significant problem even in the United States where it is often found in otherwise healthy individuals.

Travelers' diarrhea is infectious diarrhea contracted by the ingestion of contaminated food or water. The CDC estimates that there are approximately 50,000 cases of travelers' diarrhea each day among the 50 million worldwide annual travelers to developing countries. We estimate that approximately 23 million patients are treated with antibiotics for infectious diarrhea annually in the United States. Bacteria cause approximately 85% of travelers' diarrhea in most localities, and the majority of these cases involve *E. coli*, Shigella or Salmonella. Severe infections can cause large fluid loss and result in dehydration and hospitalization. The CDC estimates that 30% to 50% of travelers to high-risk regions (including most of Asia, the Middle East, Africa, Central America and South America) will develop travelers' diarrhea during a one- to two-week visit. The risk of infection increases with the duration of travel, and infection is possible throughout the world. A study of Americans visiting developing countries found that 46% acquired diarrhea.

Current Treatments and Limitations. Authorities such as the Infectious Disease Society of America and the CDC recommend treatment for travelers' diarrhea with an antibiotic that has an appropriate spectrum of activity against typical pathogens related to travelers' diarrhea. These antibiotics include fluoroquinolones such as ciprofloxacin, macrolides such as azithromycin, sulfonamides such as trimethoprim-sulfamethoxazole, or TMP/SMX, tetracyclines such as doxycycline, and rifamycins such as rifaximin. Fluoroquinolones remain the first-line treatment for infectious diarrhea because of their bactericidal nature, broad spectrum of activity and generally well-tolerated profile.

Many of the treatments for travelers' diarrhea have significant limitations. Limitations of ciprofloxacin, rifaximin and TMP/SMX, three of the most commonly prescribed treatments for infectious diarrhea, include one or more of the following:

- Limited Spectrum of Activity and Antimicrobial Resistance. Rifaximin is approved only for the treatment of travelers' diarrhea caused by noninvasive strains of *E. coli*. Rifaximin is not recommended for the treatment of diarrhea caused by other pathogens commonly associated with travelers' diarrhea such as Shigella, Salmonella, Aeromonas, Campylobacter, Plesiomonas, and Yersinia. In addition, our studies with a panel of 582 infectious diarrhea-associated bacteria have shown that 25% of *E. coli* and 67% of Shigella strains associated with travelers' diarrhea are resistant to TMP/SMX.

- Possible Side Effects. Ciprofloxacin has been associated with phototoxicity and QT interval prolongation, a condition that is associated with potentially life-threatening cardiac arrhythmias. Rifaximin has been linked to allergic reactions to the drug. TMP/SMX has been associated with both frequent mild allergic reactions and rare but serious adverse effects including bone marrow suppression, severe liver damage, severe renal impairment and agranulocytosis, an acute condition related to leukopenia.

- Convenience and Compliance. Ciprofloxacin is approved as therapy for infectious diarrhea with a dosing regimen of twice daily administrations for five to seven days. Rifaximin is approved as a therapy for diarrhea caused by noninvasive *E. coli* and is typically given three times daily for three days. These treatment regimens may be inconvenient for traveling patients.

Prulifloxacin Advantages. We believe that prulifloxacin will be a differentiated and better therapeutic course for bacterial infectious diarrhea for several reasons, including:

- Efficacy. In October 2008, positive top-line data was presented at ICAAC/IDSA from the first of two Phase 3 trials. The first trial which was conducted in Mexico and Peru, and was a randomized, double-blind placebo-controlled clinical trial in which two-thirds of the patients received prulifloxacin in 600 mg doses and one-third of the patients received a placebo. Data from this study showed that prulifloxacin met the primary endpoint of Time to Last Unformed Stool, or TLUS, in both the modified intent-to treat, or mITT (n=187) and microbiologically evaluable (per protocol; n=165) populations compared to placebo. The median TLUS for patients treated with prulifloxacin was approximately 24 hours; this was significantly different from the TLUS for placebo with a p-value of <0.0001.

  In February 2009, we reported the top-line analysis of data from the second of two Phase 3 trials. The second trial was also a randomized, double-blind placebo-controlled clinical trial in which half of the patients received prulifloxacin in 600 mg doses and half of the patients received placebo. The second trial was conducted in India, Guatemala and Mexico. Data from this study showed that prulifloxacin met the objective of superiority to placebo in the resolution of diarrhea, measured by TLUS in Both the mITT (n=200) and microbiologically evaluable (per protocol; n=173 populations compared to placebo. The median TLUS for patients treated with prulifloxacin was 32.8 hours; this was significantly different from the TLUS for placebo with a p-value of <0.0001.

- Unique Pharmacokinetic Profile. Ulifloxacin, the active metabolite of prulifloxacin, quickly reached effective concentration levels following a single administration of the drug in patients with profuse diarrhea. Approximately two-thirds of the oral dose of prulifloxacin remains in the stool after being converted to ulifloxacin while approximately one-third is absorbed and accumulated in tissues and in phagocytes, the white blood cells which engulf bacterial pathogens. Ulifloxacin remains active in these tissues and available in the body to eliminate invasive and intracellular pathogens such as Shigella and Salmonella and invasive forms of *E. coli*.

- Spectrum of Activity. Ulifloxacin has more potent antibacterial activity relative to other antibacterial agents against infectious diarrhea pathogens. In a recent study published in Antimicrobial Agents and Chemotherapy, ulifloxacin was the most active of nine antibacterial agents tested against a panel of 582 international infectious diarrhea-associated bacteria. The potency of six of these agents against common bacterial pathogens that cause diarrhea is shown below, normalized to the potency of rifaximin:

Antibacterial	Comparative Potency Against Bacteria(1) E. coli (100 isolates)	Salmonella (101 isolates)	Shigella (101 isolates)
Ulifloxacin	2,000	533	2,000
Ciprofloxacin	1,000	133	1,000
Azithromycin	4	4	4
Rifaximin	1	1	1
Doxycycline	1	0.5	0.5
TMP/SMX	≤0.25	≥32	≤0.25

(1) The potency of an antibiotic normalized to rifaximin is expressed as the quotient obtained by dividing the MIC90 concentration of rifaximin by the MIC90 concentration of that antibiotic.

- Side Effects. Prulifloxacin has an established and favorable safety profile with minimal potential to produce adverse side effects associated with other treatments for travelers' diarrhea, such as QT interval prolongation, phototoxicity, or central nervous system effects. In the first phase 3 trial, prulifloxacin was generally well tolerated and had a similar safety profile compared to placebo.

- Convenience and Compliance. If approved, we expect prulifloxacin will be marketed as therapy for infectious diarrhea with a convenient dosing regimen of one tablet daily for three days.

On-Going Clinical Development and Next Steps. We conducted two Phase 3 clinical trials for the registration of prulifloxacin in the United States for the treatment of bacterial infectious diarrhea.

- *Phase 3 Trials.* In July 2008, we reported positive top-line data from the first of two Phase 3 trials. The first trial which was conducted in the United States, Mexico and Peru, was initiated in July 2006 and was a randomized, double-blind placebo-controlled clinical trial in which two-thirds of the patients received prulifloxacin in 600 mg doses and one-third of the patients received a placebo. The top-line analysis of data from this study showed that prulifloxacin met the primary endpoint of Time to Last Unformed Stool, or TLUS, in both the modified intent-to treat, or mITT (n=187) and microbiologically evaluable (per protocol; n=165) populations compared to placebo. The median TLUS for patients treated with prulifloxacin was approximately 24 hours; this was significantly different from the TLUS for placebo with a p-value of <0.0001. Prulifloxacin was generally well tolerated and had a similar safety profile compared to placebo.

  In February 2009, we reported the top-line analysis of data from the second of two Phase 3 trials. The second trial was also a randomized, double-blind placebo-controlled clinical trial in which half of the patients received prulifloxacin in 600 mg doses and half of the patients received placebo. The primary endpoint of both trials is TLUS. Secondary endpoints include microbiological eradication of the disease pathogen and relief of other disease symptoms. Data from this study showed that prulifloxacin met the objective of superiority to placebo in the resolution of diarrhea, measured by TLUS in Both the mITT (n=200) and microbiologically evaluable (per protocol; n=173 populations compared to placebo. The median TLUS for patients treated with prulifloxacin was 32.8 hours; this was significantly different from the TLUS for placebo with a p-value of <0.0001. We plan on submitting an NDA as soon as practical.

- *Proposed Phase 4 Marketing Support Trial.* We anticipate that this trial will be a randomized, double-blind clinical trial using ciprofloxacin as a comparator. We plan to initiate this trial subsequent to NDA submission of prulifloxacin.

Additional Indication for Urinary Tract Infection. After the anticipated launch of prulifloxacin for the treatment of infectious diarrhea, we may seek additional approval of prulifloxacin for the treatment of complicated UTIs, which are commonly caused by bacteria such as *E. coli*, Staphylococcus saprophyticus and Pseudomonas aeruginosa. According to the Kidney and Urology Foundation of America, an estimated ten million physician office visits in 2002 were due to UTIs, the second leading cause of infection following RTIs. UTIs account for up to 40% of nosocomial infections and, when present, can increase the average hospital patient cost by approximately $675 per patient. According to IMS Health, global sales of UTI prescription antibiotics exceeded $1.1 billion in 2003, with the United States accounting for approximately 62% of this market. We believe prulifloxacin's advantages as a therapy for infectious diarrhea can be leveraged in the approval for treatment of complicated UTIs. Prulifloxacin is currently approved as therapy for complicated and uncomplicated UTIs in Italy and Japan. Prulifloxacin was compared to ciprofloxacin as therapy for complicated lower UTIs in a 257-patient, double-blind, comparator-controlled clinical trial that was conducted in Europe by third parties. In patients that were administered prulifloxacin once daily for 10 days, clinical resolution of the infection was achieved in approximately 95% of patients and the pathogen was eradicated in approximately 90% of patients. In contrast, in patients that were administered ciprofloxacin twice daily for 10 days, clinical resolution was achieved in approximately 93% of patients and the pathogen was eradicated in approximately 78% of patients. A similar open-label study produced microbiological eradication and clinical cure in approximately 93% and approximately 96%, respectively, of 113 prulifloxacin-treated patients.

Our OPopS Drug Discovery Platform

Background. Carbohydrates are the most abundant class of biological molecules in nature and are fundamental to many physiological processes, which can be inhibited or augmented by carbohydrate-based drugs. We believe these processes represent potential drug targets for infectious diseases, cancer and immune-related disorders. Carbohydrates, however, can be difficult to synthesize because of their complex molecular structure. Historically, the synthesis of complex carbohydrate molecules took weeks to months to complete, and thus carbohydrate synthesis for use in therapeutics has often been characterized as prohibitively difficult and time-consuming. Numerous drugs currently on the market have carbohydrate components, which are often implicated in bacterial resistance, and numerous diseases involve interactions with carbohydrate molecules. Carbohydrate synthesis involves the manipulation of existing drugs to improve their spectrum of activity or significantly reduce their side effects. Such drugs include aminoglycosides, glycopeptides, macrolides and antivirals.

Our Technology. Our proprietary OPopS drug discovery platform allows us to develop potential drug candidates through carbohydrate drug synthesis. OPopS is a computer-aided technology that enables the rapid and low cost synthesis of a wide array of carbohydrate-based compounds. Specifically, the two components of our OPopS technology that allow us to synthesize new compounds are:

- *GlycoOptimization.* This process enables the modification of a carbohydrate group on an existing drug to improve its properties.
- *De Novo Glycosylation.* This process enables the addition of new carbohydrate groups on an existing drug to create new, patentable compounds.

We acquired worldwide rights to this technology from The Scripps Research Institute, or TSRI, in July 1999. We have built approximately 500 carbohydrate building blocks, and through our proprietary OptiMer software program, we are able to rapidly and reliably produce a wide variety of carbohydrate-based molecules. With OPopS, we are able to reduce the time required for the synthesis of these molecules from weeks or months to hours. We believe OPopS enables us to develop patentable drugs, optimizing drug performance, improving activity, overcoming bacterial resistance issues and/or improving side effect profiles. Several of our pre-clinical drug candidates have been developed with OPopS and we intend to use this technology to identify additional novel carbohydrate-based product candidates with significant commercial potential.

Other Pipeline Product Candidates

Using our OPopS technology, we are developing a pipeline of promising new drug candidates for the treatment of various indications including infectious disease, osteoarthritis and breast cancer. Our strategy is to license these drug candidates opportunistically to third-party partners in order to maximize the potential for their development and commercialization. The most advanced pipeline product candidates are as follows:

OPT-88: A Therapy for Osteoarthritis

Overview. We intend to develop our carbohydrate-based product candidate OPT-88, to which we obtained rights through an in-license from TSRI, as a disease-modifying intra-articular, or within the cavity of a joint, therapy for osteoarthritis. Osteoarthritis is caused by the breakdown and eventual loss of the cartilage of one or more joints in the body. Key symptoms include pain in joints such as knees, hips and fingers, inability to walk or bear weight and infection surrounding such joints. According to the National Institute of Arthritis and Musculoskeletal and Skin Diseases, osteoarthritis is one of the most common types of joint diseases and is estimated to affect 33 million people in the United States in 2006. Pre-clinical studies of OPT-88 indicate reduced erosion of knee cartilage and a reduction of pain for up to nine days after a single injection. With its disease-modifying activity and tolerability profile, OPT-88 represents a potentially new intra-articular therapy, and we believe it is a significant product opportunity for the osteoarthritis market.

Pre-Clinical Studies and Future Plans. In vitro studies of OPT-88 in human cell cultures have shown that it significantly stimulates restoration of joint cartilage. Animal studies demonstrated a reduced pathology and reduction in the erosion of knee cartilage. We held a pre-Investigational New Drug application, or pre-IND, meeting with the FDA in the first quarter of 2008 and plan to file an IND application for OPT-88 in 2009 to initiate a Phase 1 study for assessing the safety of repetitive intra-articular injections in patients with knee osteoarthritis using an escalating dose scheme. If the Phase 1 study is successful, we plan to conduct a subsequent proof-of-concept Phase 2 efficacy study.

OPT-822/OPT-821: A Cancer Immunotherapy

Overview. We are currently developing our carbohydrate-based product candidate OPT-822, a carbohydrate-based immunostimulant therapy, combined with adjuvant therapy OPT-821, for the treatment of metastatic breast cancer. According to the American Cancer Society, breast cancer was the second most common form of cancer among women in the United States, with more than 250,000 new cases and more than 40,000 deaths in 2008. The survival rate for patients with metastatic breast cancer remains limited, with a median survival of two to three years and a five-year survival rate of 21% for those patients diagnosed with late-stage cancer that has metastasized to other parts of the body. In July 2002, we acquired exclusive rights from Sloan-Kettering Institute for Cancer Research, or SKI, to develop and commercialize OPT-822 worldwide. Carbohydrate antigens are known to stimulate the immune response against cancer cells in the body. We have applied our OPopS technology to manufacture effectively complex carbohydrate cancer antigens, including Globo-H, a prominent antigen in breast cancer cells, and sialyl Lewis a, an antigen in breast and small lung cancer cells. OPT-822 is a novel cancer immunotherapy and is composed of Globo H linked to a protein carrier.

Clinical Studies and Future Plans. SKI completed Phase 1 safety studies of OPT-822 in prostate cancer patients and breast cancer patients in 1999 and 2001, respectively. In these studies, OPT-822 appeared to be well tolerated and to stimulate response to tumor antigens. Eighteen of 27 metastatic breast cancer patients treated with OPT-822 in the studies survived after five years. We currently plan to identify a strategic partner, apply for government grants for subsequent clinical trials, and then initiate a Phase 2/3 clinical trial in Asia to evaluate the clinical efficacy of OPT-822 combined with OPT-822's adjuvant therapy OPT-821.

CEM-101 (OP-1068): Macrolide and Ketolide Antibiotics

Macrolide antibiotics have been marketed for the treatment of upper and lower respiratory tract infections. Macrolides such as erythromycin and azithromycin, and ketolides, such as telithromycin, are related classes of antibiotics which have strong gram-positive activity and inhibit bacterial growth. However, an increasing number of pathogens are now resistant to currently available macrolides and ketolide. The leading product candidate developed with our discovery technology, including glycooptimization, CEM-101 (OP-1068), was effective against these resistant bacterial strains according to a pre-clinical study conducted by the Institute for Medical Microbiology. This product candidate has shown to possess potent activity against multi-drug resistant Streptococcus pneumoniae and Streptococcus pyogenes, common RTI pathogens. The pre-clinical study also showed that CEM-101 was orally active with potent efficacy in animal models after once-a-day administration. Cempra has licensed from us a library of approximately 500 macrolides related to this product candidate. Cempra has informed us that it is initially planning to develop CEM-101 for RTIs in adults and children, including community-acquired mild and moderate pneumonia.

Our Strategy

Our principal objective is to become a leading biopharmaceutical company focused on the discovery, development and commercialization of innovative anti-infective compounds, with an initial focus on gastrointestinal infections and related diseases. To achieve these objectives, our strategy includes the following key elements:

- *Build a branded anti-infective franchise through current and in-licensed product candidates.* We currently have two late-stage antibiotic product candidates, fidaxomicin for the treatment of CDI, and prulifloxacin for the treatment of infectious diarrhea in travelers. We also intend to develop these two lead products for additional indications and selectively in-license additional anti-infective compounds for development and/or commercialization. In addition, in order to maximize the value of our franchise, we intend to opportunistically seek partners to commercialize our product candidates outside of our core markets. We believe our management's industry knowledge and contacts will be a significant advantage in executing this part of our strategy.

- *Develop our lead product candidates for clinical and regulatory approval.* We are currently focusing our resources on developing fidaxomicin and prulifloxacin. Fidaxomicin potentially offers significant advantages over existing therapeutics for CDI, a serious and growing hospital-acquired illness. Prulifloxacin also potentially offers significant advantages over existing therapeutics for infectious diarrhea and has an extensive record of safety and efficacy, having been used in over two million patients in Europe and Japan. If our second trial for fidaxomicin for the treatment of CDI is successful, we plan to submit an NDA for fidaxomicin as soon as practical. We reported the positive results of our two prulifloxacin Phase 3 trials and we plan to file an NDA for prulifloxacin by the end of 2009.

- *Build marketing and sales capabilities in our core markets.* Our objective is to market innovative antibiotics in areas of unmet medical needs for the treatment and prevention of nosocomial and serious community-acquired infections. Specifically, we initially plan to commercialize and develop fidaxomicin and prulifloxacin in key defined markets. In order to achieve these goals, we intend to develop our own marketing organization and sales force, as well as evaluate partnering alternatives to commercialize our product candidates.

- *Leverage our internal discovery capabilities and expertise in carbohydrate chemistry to expand our portfolio of product candidates.* We intend to expand our product portfolio by exploiting our internal expertise to discover and develop additional product candidates. We believe our proprietary technology and our capabilities and expertise in carbohydrate chemistry will enable us to more rapidly identify and develop successful product candidates. We may opportunistically seek partners for the development and commercialization of product candidates in order to maximize value and maintain our strategic focus.

Marketing and Sales

We currently have a limited marketing organization, and do not have a sales organization for the marketing, sale and distribution of pharmaceutical products. We plan to develop a sales organization internally or through collaborations with third parties. We hold worldwide rights to fidaxomicin and rights to commercialize prulifloxacin in the United States. Assuming approval by the FDA, we plan to build our own marketing and sales force for fidaxomicin in North America and prulifloxacin in the United States. We plan to seek collaborations with one or more third parties for the commercialization of fidaxomicin outside of North America. In the United States, we plan to target our marketing and sales of fidaxomicin to hospital-based and long-term care physicians, including gastroenterologists, infectious disease specialists and internists. We plan to target our marketing and sales of prulifloxacin to high-prescribing physicians of antibiotics for travelers' diarrhea, including those at travel clinics.

We have established a medical affairs group to introduce our product candidates to key opinion leaders in CDI and healthcare professionals focusing on infectious diseases and gastroenterology. We also continue to evaluate the marketing and sales capabilities that will be necessary to launch and commercialize fidaxomicin and prulifloxacin in our target markets.

Collaborations, Commercial and License Agreements and Grants

Par Pharmaceutical, Inc. In February 2007, we exercised our right under a prospective buy-back agreement to repurchase Par's rights to develop and commercialize fidaxomicin in North America and Israel and paid Par a one-time $20.0 million termination fee. As a result, we now hold worldwide rights to fidaxomicin. We also paid Par $1.9 million for fidaxomicin clinical supply material and active pharmaceutical ingredient in 2007. We are obligated to pay Par a one-time $5.0 million milestone payment, a 5% royalty on net sales by us or our affiliates of fidaxomicin in North America and Israel, and a 1.5% royalty on net sales by us or our affiliates of fidaxomicin in the rest of the world. We are required to pay the one-time $5.0 million milestone payment after the earliest to occur of (i) the successful completion by us of our second pivotal Phase 3 trial for fidaxomicin, (ii) our grant to a third party of the rights to fidaxomicin or (iii) the submission to the FDA of an NDA for fidaxomicin. In the event we license our right to market fidaxomicin in the rest of the world, we will be required to pay Par a 6.25% royalty on net revenues we receive related to fidaxomicin. We are obligated to pay each of these royalties, if any, on a country-by-country basis for seven years commencing on the applicable commercial launch in each such country. The agreement also includes a mutual release between the parties and our indemnification of Par for actions related to fidaxomicin, the agreements assigned to us by Par and certain other matters.

Biocon. In connection with the exercise of our rights under the prospective buy-back agreement, Par assigned to us a supply agreement with Biocon Limited, or Biocon, regarding the active pharmaceutical ingredient, or API, for fidaxomicin. Under this agreement, Biocon is obligated to supply to us our requirements of the fidaxomicin API for certain markets. The supply agreement will terminate upon the tenth anniversary of the commercial launch of fidaxomicin unless earlier terminated by mutual agreement or material default of either party.

Nippon Shinyaku. In June 2004, we entered into a license agreement with Nippon Shinyaku. Under the terms of the agreement, we acquired the non-exclusive right to import and purchase prulifloxacin, and the exclusive right (with the right to sublicense) within the United States to develop, make, use, offer to sell, sell and license products suitable for consumption by humans containing prulifloxacin.

Under the terms of the agreement, we paid Nippon Shinyaku a $1.0 million upfront licensing fee and will be required to pay Nippon Shinyaku a milestone payment in the amount of $1.0 million upon the submission of a NDA for prulifloxacin in the United States. We also agreed to exclusively purchase prulifloxacin from Nippon Shinyaku and to purchase a certain amount of prulifloxacin annually that is to be mutually agreed upon by us and Nippon Shinyaku, commencing in the year of the first commercial sale of prulifloxacin in the United States. If Nippon Shinyaku is unable to supply us with the required amount of prulifloxacin, then Nippon Shinyaku is obligated to grant us a non-exclusive, worldwide license to make or have made prulifloxacin, in which event we will owe Nippon Shinyaku a royalty based on the amount of net sales of prulifloxacin generated by us and our sublicensees. Additionally, we will owe Nippon Shinyaku certain royalties based on the amount of net sales of prulifloxacin less the amount of prulifloxacin we buy from Nippon Shinyaku.

Either party may terminate the agreement 60 days after giving notice of a material breach which remains uncured 60 days after written notice. If not terminated earlier, the agreement will terminate upon the later of ten years from the date of the first commercial sale of prulifloxacin in the United States or the date on which the last valid patent claim relating to prulifloxacin expires in the United States.

Sloan-Kettering Institute for Cancer Research. In July 2002, we entered into a license agreement with Sloan-Kettering Institute for Cancer Research, or SKI, to acquire, together with certain non-exclusive licenses, exclusive, worldwide licensing and sublicensing rights to certain patented and patent-pending carbohydrate-based cancer immunotherapies, which includes OPT-822. As partial consideration for the licensing rights, we paid to SKI a one-time fee consisting of both cash and 55,383 shares of our common stock. Under the agreement, which was amended in June 2005, we owe SKI milestone payments in the following amounts for each licensed product: (i) $500,000 upon the commencement of Phase 3 clinical studies, (ii) $750,000 upon the submission of the first NDA, (iii) $1.5 million upon marketing approval in the United States and (iv) $1.0 million upon marketing approval in each and any of Japan and certain European countries, but only to the extent that we, and not a sublicensee, achieve such milestones. We also owe SKI royalties based on net sales generated from the licensed products and income we source from our sublicensing activities, which royalty payments are credited against a minimum annual royalty payment we owe to SKI during the term of the agreement.

The term of the agreement continues until the later of July 31, 2017, or the expiration of the last to expire of the patents licensed under this agreement, unless the agreement is earlier terminated. The agreement can be terminated by SKI for a variety of reasons, including (i) upon 60 days' notice in the event we fail to meet a development milestone specified in the agreement or (ii) upon 30 days' notice, in the event we fail to pay any licensing fees, royalties or patent expenses due under the agreement within 30 days of the due date and thereafter fail to pay such deficit in-full within the 30-day notice period.

Cempra Pharmaceuticals, Inc. In March 2006, we entered into a collaborative research and development and license agreement with Cempra, a biotechnology company focused on anti-infectives. We are collaborating with Cempra to discover, develop and commercialize drugs based on macrolide and ketolide compounds. We granted to Cempra an exclusive worldwide license, except in Association of Southeast Asian Nations, or ASEAN, countries as of the effective date of the agreement, with the right to sublicense, our patent and know-how related to our macrolide and ketolide antibacterial program, several other pre-clinical compounds and our related proprietary technology. Cempra is responsible for many of the costs associated with the development and commercialization of product candidates arising under the agreement, including manufacturing, marketing and sales costs. As partial consideration for granting Cempra the license, we obtained equity interest in Cempra. We will receive milestone payments as product candidates are developed and/or co-developed by Cempra. The milestone payments will be triggered upon the completion of certain clinical development milestones and in certain instances, regulatory approval of products. The aggregate amount of such milestone payments we may receive is based in part on the number of products developed under the agreement and can exceed $24.5 million. We will also receive royalty payments based on a percentage of net sales of licensed products. In consideration of the foregoing, Cempra will receive milestone payments of $1.0 million from us for each of the first two products we develop which receive regulatory approval in ASEAN countries as well as royalty payments on the net sales of such products.

The research term of this agreement was completed on March 31, 2008. Subject to certain exceptions, on a country-by-country basis, the general terms of this agreement continue until the later of: (i) the expiration of the last to expire patent rights related to a covered product in the applicable country or (ii) ten years from the first commercial sale of a covered product in the applicable country. Either party may terminate the agreement in the event of a material breach by the other party, subject to prior notice and the opportunity to cure. Either party may also terminate the agreement for any reason upon 30 days' prior written notice provided that all licenses granted by the terminating party to the non-terminating party will survive upon the express election of the non-terminating party.

The Scripps Research Institute. In July 1999, we acquired exclusive, worldwide rights to our OPopS technology from The Scripps Research Institute, or TSRI. This agreement includes the license to us of patents, patent applications and copyrights related to our OPopS technology. We also acquired, pursuant to three separate license agreements with TSRI, exclusive, worldwide rights to over 20 TSRI patents and patent applications related to other potential drug compounds and technologies, including HIV/FIV protease inhibitors, aminoglycoside antibiotics, polysialytransferase, selectin inhibitors, nucleic acid binders, carbohydrate mimetics and osteoarthritis.

Under the four agreements with TSRI, we paid TSRI license fees consisting of an aggregate of 239,996 shares of our common stock with a deemed aggregate fair market value of $46,400, as determined on the dates of each such payment. Additionally, under each agreement, we owe TSRI royalties based on net sales by us, our affiliates and sublicensees of the covered products and royalties based on revenue we generate from sublicenses granted pursuant to the agreements. For the first licensed product under each of the four agreements, we also will owe TSRI payments upon achievement of certain milestones. In three of the four TSRI agreements, the milestones are the successful completion of a Phase 2 trial or its foreign equivalent, the submission of an NDA or its foreign equivalent and government marketing and distribution approval. In the remaining TSRI agreement, the milestones are the initiation of a Phase 3 trial or its foreign equivalent, the submission of an NDA or its foreign equivalent and government marketing and distribution approval. The aggregate potential amount of milestone payments we may be required to pay TSRI under all four TSRI agreements is approximately $14.0 million.

Each TSRI agreement terminates in part as follows: (i) with respect to each product which utilizes patent rights licensed under the agreement, on a country-by-country basis concurrently with the expiration of the last to expire of the applicable patent

rights, (ii) with respect to each product which utilizes technology licensed under the agreement but which does not utilize patent rights also licensed thereunder, 15 years after the date of the first commercial sale of the product in each country and (iii) with respect to software licensed under the 1999 OPopS agreement, 75 years after the date the applicable copyright is filed in the United States.

Inc. Research, Inc. In November 2005, we entered into a master services agreement with Inc Research, Inc., formerly known as Advanced Biologics, which was subsequently amended in January 2006. Under the terms of the agreement, Inc Research will, from time to time, at our request and pursuant to separate work orders, perform research and/or administrative services in connection with certain of our clinical trials, including trial management, data collection, statistical programming or analysis, quality assurance auditing, scientific and medical communications, regulatory affairs consulting, regulatory submissions and strategic consulting. Pursuant to the master services agreement, we have issued work orders totaling $42.4 million to-date for services. Unless extended by the mutual agreement of the parties, the master services agreement will terminate on November 16, 2012. We may terminate the master services agreement at any time and for any reason, upon 30 days' prior notice to Inc Research.

NIH Small Business Innovation Research Award. In September 2007, we received an award from the National Institute of Allergy and Infectious Diseases, or NIAID, for a maximum amount of $3 million over three years. This award is renewable for $1 million each year until August 2010. The award will be used to conduct supplementary studies to the ongoing fidaxomicin trials to confirm narrow spectrum activity and potency of fidaxomicin against hypervirulent epidemic strains, to support additional toxicology and macrobiological studies to demonstrate the safety and efficacy of the fidaxomicin compound and its major metabolite in CDI patients and to support a surveillance study of *C. difficile* isolates across North America to compare activity of fidaxomicin with existing CDI treatments.

In June 2005, we received a National Institutes of Health Small Business Innovation Research Program Phase II Award in the amount of $612,000 from the National Institute of Allergy and Infectious Diseases, or NIAID. The award was used to facilitate discovery of a new macrolide class of antibiotics through glycosylation, our proprietary chemistry technology and evaluation of the lead compound in pre-clinical settings. This grant was completed in May 2008.

Manufacturing

We rely on third parties to manufacture our product candidates and currently have no plans to develop our own manufacturing facility. We require in our manufacturing and processing agreements that all third-party contract manufacturers and processors produce APIs and finished products in accordance with current Good Manufacturing Practices, or cGMP, and all other applicable laws and regulations. We maintain confidentiality agreements with potential and existing manufacturers in order to protect our proprietary rights related to our drug candidates.

Par assigned to us its contract with Biocon to manufacture clinical trial supplies of the API for fidaxomicin in February 2007 in connection with our repurchase of rights to fidaxomicin for North America and Israel. The manufacturing facilities of Biocon have been approved by the FDA for other companies' drug products, however, Biocon's facilities have not yet been approved by the FDA for the manufacture of our fidaxomicin drug supplies. We may contract with other third-party contract manufacturers for additional commercial supply of fidaxomicin.

In June 2004, as part of our license agreement for exclusive rights to develop and commercialize prulifloxacin in the United States, we entered into a supply agreement with Nippon Shinyaku for the manufacture and supply of the API for prulifloxacin. In turn, Nippon Shinyaku contracts with Juzen Chemical Co. for the manufacture of the API for prulifloxacin. The tablets used in our Phase 3 clinical trials for prulifloxacin were manufactured by Angelini ACRAF, or Angelini. We are also in discussion with Angelini and other contract manufacturers for the manufacturing, packaging and labeling of prulifloxacin for commercial sale in the United States. The manufacturing facilities of Juzen have been approved by the FDA for other companies' drug products; however, Juzen's facilities have not yet been approved for the manufacture of our prulifloxacin drug supplies. Angelini's facilities have not been approved by the FDA for the manufacture of any drug.

We have used both in-house capabilities and outside third-party cGMP manufacturers for the preparation of compounds for pre-clinical development and for the manufacture of limited quantities of finished products for clinical development. We have developed a proprietary synthetic process in our laboratories for Globo-H, the carbohydrate portion of our OPT-822 cancer immunotherapy. Third parties with cGMP facilities have manufactured OPT-822 for clinical trials. We also plan to use third-party cGMP manufacturers for the production of the adjuvant, OPT-821, as well as for the production of our carbohydrate-based product candidate OPT-88, a disease-modifying intra-articular therapy for osteroarthritis.

Intellectual Property

The proprietary nature of, and protection for, our products, product candidates, processes and know-how are important to our business. We seek patent protection in the United States and internationally for our product candidates and other technology where available and when appropriate. Our policy is to patent or in-license the technology, inventions and improvements that we consider

important to the development of our business. In addition, we use license agreements to selectively convey to others rights to our own intellectual property. We also rely on trade secrets, know-how and continuing innovation to develop and maintain our competitive position. We cannot be sure that patents will be granted with respect to any of our pending patent applications or with respect to any patent applications filed by us in the future, nor can we be sure that any of our existing patents or any patents that may be granted to us in the future will be commercially useful in protecting our technology. For this and more comprehensive risks related to our intellectual property, please see "Risk Factors — Risks Related to Our Intellectual Property."

We have established and continue to build proprietary positions for our pipeline product candidates and technology in the United States and abroad. We have built a portfolio of more than 80 patents and patent applications that we either own or have licensed around our key products and technologies. As of February 28, 2009, this portfolio included 5 issued U.S. patents and 16 pending U.S. patent applications. Foreign counterparts to these included 12 issued patents and 52 pending patent applications.

For our lead product candidate fidaxomicin, we have one issued patent, one allowed patent and six U.S. pending patent applications, and one issued patent and 34 pending foreign counterparts in Australia, Canada, China, Europe, Japan, South Korea, India, Taiwan, Mexico and Brazil. If issued, these fidaxomicin related patent applications may cover the composition of matter, the specific crystalline polymorph forms, specific methods for manufacturing, methods of using and pharmaceutical formulations containing the various components. If issued, these patent applications would expire between 2023 and 2027. For our other product candidate prulifloxacin, we have licensed one issued U.S. patent and one pending U.S. patent application from Nippon Shinyaku. The U.S. patent, covers the compound prulifloxacin, however, this patent expired in February 2009. If issued, the U.S. pending patent application for prulifloxacin would expire in 2023 and may cover processes for producing a drug-form of prulifloxacin. Absent additional patent protection we intend to rely on a five-year marketing exclusivity period for prulifloxacin that may be afforded to us under the Hatch-Waxman Act. The remainder of our patents and patent applications, and licensed patents and patent applications, relate to our other products and technology, and expire between 2015 and 2023.

Government Regulation and Product Approval

FDA Approval Process

Regulation by governmental authorities in the United States and other countries is a significant factor in the development, manufacture and marketing of pharmaceuticals and antibiotics. All of our products will require regulatory approval by governmental agencies prior to commercialization. In particular, pharmaceutical drugs are subject to rigorous pre-clinical testing and clinical trials and other premarketing approval requirements by the FDA and regulatory authorities in other countries. In the United States, various federal, and, in some cases, state statutes and regulations, also govern or impact the manufacturing, safety, labeling, storage, record-keeping and marketing of pharmaceutical products. The lengthy process of seeking required approvals and the continuing need for compliance with applicable statutes and regulations require the expenditure of substantial resources. Regulatory approval, if and when obtained for any of our product candidates, may be limited in scope, which may significantly limit the indicated uses for which our product candidates may be marketed. Furthermore, approved drugs and manufacturers are subject to ongoing review and discovery of previously unknown problems that may result in restrictions on their manufacture, sale or use or in their withdrawal from the market.

Before testing any compounds with potential therapeutic value in human subjects in the United States, we must satisfy stringent government requirements for pre-clinical studies. Pre-clinical testing includes both *in vitro* and *in vivo* laboratory evaluation and characterization of the safety and efficacy of a drug and its formulation. Pre-clinical testing results obtained from studies in several animal species, as well as data from *in vitro* studies, are submitted to the FDA as part of an IND and are reviewed by the FDA prior to the commencement of human clinical trials. These pre-clinical data must provide an adequate basis for evaluating both the safety and the scientific rationale for the initial trials in human volunteers. In order to test a new drug in humans in the United States, an IND must be submitted to the FDA. The IND will become effective automatically 30 days after receipt by the FDA, unless the FDA raises concern or questions, in which case, the IND sponsor and the FDA must resolve any outstanding concerns before a hold is lifted and clinical trials can proceed.

Clinical trials are typically conducted in three sequential phases, Phases 1, 2 and 3, with Phase 4 trials potentially conducted after initial marketing approval. These phases may be compressed, may overlap or may be omitted in some circumstances. Certain clinical trials are required to be publicly registered, as with www.clinicaltrials.com, and their results made publicly available.

- *Phase 1.* Phase 1 human clinical trials evaluate a drug's safety profile and the range of safe dosages that can be administered to healthy volunteers and/or patients, including the maximum tolerated dose that can be given to a trial subject with the target disease or condition. Phase 1 trials also determine how a drug is absorbed, distributed, metabolized and excreted by the body and the duration of its action. In some cases, we may decide to run what is referred to as a "Phase 1a" evaluation in which we administer single doses of a new drug candidate in a small group of people to evaluate its pharmacokinetic properties, safety, dose range and side effects. We may also decide to run what is referred to as a "Phase 1b" evaluation, which is a second safety-focused Phase 1 trial in which we administer a new drug candidate at its targeted dosing regimen in a small group of people to evaluate its pharmacokinetic properties, safety, dose range and side effects.

- *Phase 2.* Phase 2 clinical trials are typically designed to evaluate the potential effectiveness of the drug in patients and to further ascertain the safety of the drug at the dosage given in a larger patient population. In some cases, we may decide to run what is referred to as a "Phase 2a" evaluation, which is a trial to determine the ideal dosing regimen and length of treatment and to evaluate effectiveness and safety. We may also decide to conduct what is referred to as a "Phase 2b" evaluation, which is a second, confirmatory Phase 2 clinical trial in which we collect more efficacy and safety data prior to initiation of a Phase 3 clinical trial. If positive and accepted by the FDA, results from Phase 2b study can serve as a part of pivotal clinical trial in the approval of a drug candidate.

- *Phase 3.* In Phase 3 clinical trials, often referred to as pivotal or registrational clinical trials, the drug is usually tested in one or more controlled, randomized trials comparing the investigational new drug to an approved form of therapy or placebo in an expanded and well-defined patient population and at multiple clinical sites. The goal of these trials is to obtain definitive statistical evidence of safety and effectiveness of the investigational new drug regimen as compared to a placebo or an approved standard therapy in defined patient populations with a given disease and stage of illness.

- *Phase 4.* Phase 4 clinical trials are studies required of or agreed to by a sponsor that are conducted after the FDA has approved a product for marketing. These studies are used to gain additional experience from the treatment of patients in the intended therapeutic indication. Failure to promptly conduct any mandatory Phase 4 clinical trials that are committed to as part of an NDA's approval could result in withdrawal of approval or other legal sanction.

After completion of Phase 1, 2 and 3 clinical trials, if there is substantial evidence that the drug is safe and effective, an NDA is prepared and submitted for the FDA to review. The NDA must contain all of the essential information on the drug gathered to that date, including data from pre-clinical and clinical trials, and the content and format of an NDA must conform to all FDA regulations and guidelines. Accordingly, the preparation and submission of an NDA is a significant undertaking for a company. The FDA reviews all submitted NDAs before it accepts them for filing and may request additional information from the sponsor rather than accepting an NDA for filing. In this case, the NDA must be re-submitted with the additional information and, again, is subject to review before filing. Once the submission is accepted for filing, the FDA begins an in-depth review of the NDA. Most NDAs are reviewed by the FDA within ten months of submission. The review process is often significantly extended by the FDA through requests for additional information and clarification. The FDA may refer the application to an appropriate advisory committee, typically a panel of clinicians, for review, evaluation and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendation but typically gives it great weight. If the FDA evaluations of both the NDA and the manufacturing facilities are favorable, the FDA may issue either an approval letter or a complete response, the latter of which usually contains a number of conditions that must be satisfied in order to secure final approval.

Any products we manufacture or distribute under FDA approvals are subject to pervasive and continuing regulation by the FDA, including record-keeping requirements and reporting of adverse experiences with the products. Drug manufacturers and their subcontractors are required to register with the FDA and, where appropriate, state agencies, and are subject to periodic unannounced inspections by the FDA and state agencies for compliance with cGMP regulations which impose procedural and documentation requirements upon us and any third party manufacturers we utilize.

The FDA closely regulates the marketing and promotion of drugs. A company can make only those claims relating to safety and efficacy that are approved by the FDA. Failure to comply with these requirements can result in adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe legally available drugs for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use and healthcare payors, including the federal government, can use the False Claims Act and related statutes to pursue drug companies for off-label promotions that result in the submission of claims for payment for uses that have not been approved by the FDA as safe and effective.

The FDA's policies may change and additional government regulations may be enacted that could prevent or delay regulatory approval of our product candidates or approval of new indications after the initial approval of our existing product candidates. We

cannot predict the likelihood, nature or extent of adverse governmental regulations that might arise from future legislative or administrative action, either in the United States or abroad.

We will also be subject to a wide variety of foreign regulations governing the development, manufacture and marketing of our products. Whether or not FDA approval has been obtained, approval of a product by the comparable regulatory authorities of foreign countries must still be obtained prior to manufacturing or marketing the product in those countries. The approval process varies from country to country and the time needed to secure approval may be longer or shorter than that required for FDA approval. We cannot assure you that clinical trials conducted in one country will be accepted by other countries or that approval in one country will result in approval in any other country.

Fast Track Products Designation

The FDA has granted Fast Track status for fidaxomicin in the treatment of CDI. The FDA's Fast Track program is intended to facilitate the development and expedite the review of drugs that are intended for the treatment of a serious or life-threatening condition and demonstrate the potential to address unmet medical needs for their condition. Under Fast Track designation, the FDA may initiate review of sections of an NDA before the application is complete. This rolling review is available if the applicant provides a schedule for the submission of the remaining information and pays applicable user fees. However, the time period specified in the Prescription Drug User Fee Act, which governs the time period goals the FDA has committed to for reviewing an application, does not begin until the complete application has been submitted. The Fast Track designation may be withdrawn by the FDA if the FDA believes that the designation is no longer supported by data emerging in the clinical trial process. Participation in the Fast Track program does not eliminate any phase of clinical studies. Additionally, in some cases, a Fast Track designated product may also qualify for priority review, or review within a six-month time frame from the time an NDA is accepted for filing. A Fast Track designated product would ordinarily meet the FDA's criteria for priority review. We cannot guarantee any of our products will obtain priority review designation, or if a priority designation is received, that review or approval will be faster than conventional FDA procedures.

Competition

The pharmaceutical industry is highly competitive. We face significant competition from pharmaceutical companies and biotechnology companies that are researching and selling products designed to treat infectious disease. Many of these companies have significantly greater financial, manufacturing, marketing and product development resources than us. Additionally, many of these companies have substantially greater experience developing, manufacturing and commercializing drugs which may allow them to bring their products to market quicker than we can. Several pharmaceutical and biotechnology companies have already established themselves in the markets for the treatment of CDI and/or infectious diarrhea and many additional companies are currently developing products for the treatment of CDI and/or infectious diarrhea, which we expect will compete with fidaxomicin and prulifloxacin if approved for marketing. Potentially significant competitors to fidaxomicin and prulifloxacin, both currently marketed and in clinical development, include the following:

Product	Stage of Development	Company
Fidaxomicin Competitors		
Flagyl™/metronidazole	Marketed	Pfizer, Sanofi-Aventis and generics
Vancocin™/oral vancomycin	Marketed	Viropharma and generics
Xifaxan™/rifaximin	Phase 3	Salix and generics
ramoplanin	Phase 2 completed	Oscient
ACAM-Cdiff	Phase 2	Sanofi-Pasteur
MDX-066/ MDX-1388 (antibodies combination)	Phase 2	Medarex
Prulifloxacin Competitors		
Cipro™/ciprofloxacin	Marketed	Bayer and generics
Zithromax™/azithromycin	Marketed	Pfizer
Xifaxan™/rifaximin	Marketed	Salix and generics
Bactrim™/Septra™/TMP/SMX	Marketed	Roche and generics
Vibramycin™/doxycycline	Marketed	Pfizer and generics
Levaquin™/levofloxacin	Marketed	Johnson & Johnson
ETEC Vaccine	Phase 2 completed	Intercell

Research and Development

Our research and development efforts are primarily focused on developing fidaxomicin and prulifloxacin and our other product candidates. Our research and development expense was approximately $29.0 million, $41.6 million and $10.5 million in years 2008, 2007 and 2006, respectively. Research and development expenses in 2007 include the one-time termination payment of

$20 million related to the prospective buy-back agreement with Par, and the $1.9 million fidaxomicin clinical supply material and active pharmaceutical ingredient which we purchased from Par.

Employees

As of March 2, 2009, we employed 55 persons, 19 of whom hold Ph.D., M.D. or DVM degrees. Ten employees were engaged in discovery research, nineteen in clinical research and regulatory affairs, four in commercial and corporate development and 22 in support administration, including finance, information systems, facilities and human resources. None of our employees is subject to a collective bargaining agreement. We consider our relations with our employees to be good.

Item 1a. Risk Factors

Risks Related to Our Business

We are a company with limited sources of revenue, and we are largely dependent on the success of our lead product candidate fidaxomicin and, to a lesser degree, our other lead product candidate prulifloxacin.

We are a biopharmaceutical company with no products approved for commercial sale and, to date, we have not generated any revenues from product sales. Our ability to generate future revenues depends heavily on our success in:

- developing and securing U.S. and/or foreign regulatory approvals for fidaxomicin and prulifloxacin and, to a lesser extent, other product candidates;
- commercializing. alone or with a partner, any product candidates for which we receive approval from the FDA; and/or comparable foreign regulatory authorities; and
- generating a pipeline of innovative product candidates utilizing our drug discovery platform or through licensing strategies.

Our product candidates will generally require extensive clinical study and evaluation, regulatory approval in multiple jurisdictions, substantial investment and significant marketing efforts before we generate any revenues from product sales. We are not permitted to market or promote our product candidates before we receive regulatory approval from the FDA or comparable foreign regulatory authorities. We have not submitted an NDA, or received marketing approval for either fidaxomicin or prulifloxacin, and we cannot be certain that either of these product candidates will be successful in on-going or future clinical trials or receive regulatory approval. If we do not receive regulatory approval for and successfully commercialize fidaxomicin and prulifloxacin, we will not generate any revenues from product sales for several years, if at all, and we may not be able to continue our operations.

We believe our initial success will be more dependent on fidaxomicin than prulifloxacin, because we believe that the market for the treatment of CDI is larger than the market for the treatment of infectious diarrhea. Even if we successfully obtain regulatory approval to market fidaxomicin or prulifloxacin, our revenues for either drug candidate will be dependent upon the size of the markets in the territories for which we have commercial rights. If the markets for the treatment of CDI or infectious diarrhea are not as significant as we estimate, our business and prospects will be harmed.

We have incurred significant operating losses since inception and anticipate that we will incur continued losses for the foreseeable future.

We have experienced significant operating losses since our inception in 1998. As of December 31, 2008, we had an accumulated deficit of approximately $133.4 million. We have generated no revenues from product sales to date. We have funded our operations through December 31, 2008 from the sale of approximately $169.5 million of our securities and through research funding pursuant to collaborations with partners or government grants. We expect to continue to incur substantial additional operating losses for the next several years as we advance our clinical trials and research and development initiatives, prepare submissions for regulatory approval of our lead product candidates and build our marketing and sales capabilities. Because of the numerous risks and uncertainties associated with developing, obtaining regulatory approval for and commercializing our product candidates, we are unable to predict the extent of any future losses. We may never successfully commercialize our product candidates and thus may never have any significant future revenues or achieve and sustain profitability.

If we fail to obtain additional financing, we may be unable to commercialize fidaxomicin and prulifloxacin or develop and commercialize our other product candidates, or continue our other research and development programs.

We will require additional capital to commercialize our current lead product candidates, fidaxomicin and prulifloxacin. We cannot be certain that additional funding will be available on acceptable terms, or at all. Recently, the credit markets and the financial services industry have been experiencing a period of unprecedented turmoil and upheaval characterized by the government take-over, bankruptcy, failure, collapse or sale of various financial institutions. These events have generally made equity and debt financing more difficult to obtain, and may negatively impact our ability to complete financing transactions. To the extent that we raise additional funds by issuing equity securities, our stockholders may experience significant dilution. Any debt financing, if available, may require us to pledge our assets as collateral or involve restrictive covenants, such as limitations on our ability to incur additional indebtedness, limitations on our ability to acquire or license intellectual property rights and other operating restrictions that could negatively impact our ability to conduct our business. If we are unable to raise additional capital when required or on acceptable terms, we may have to significantly delay, scale back or discontinue the development or commercialization of one or more of our product candidates or one or more of our other research and development initiatives. We also could be required to:

- seek collaborators for one or more of our current or future product candidates at an earlier stage than otherwise would be desirable or on terms that are less favorable than might otherwise be available; or
- relinquish or license on unfavorable terms our rights to technologies or product candidates that we otherwise would seek to develop or commercialize ourselves.

Any of the above events could significantly harm our business and prospects and could cause our stock price to decline.

We do not currently have sufficient resources to commercialize fidaxomicin and prulifloxacin on our own. If we are unable to raise additional capital or are unable to effectively collaborate with one or more partners for the commercialization of fidaxomicin or prulifloxacin, we will not generate significant revenues from sales of these products and our business will be materially harmed.

We are dependent on third party collaborators and we may be unable to enter into future collaboration agreements or we may have disagreements with these collaborators.

We currently plan to build our own marketing and sales force for fidaxomicin in North America and prulifloxacin in the United States, and we intend to seek one or more partners for the commercialization of fidaxomicin outside of North America. With respect to our OPT-88 and OPT-822/OPT-821 product candidates, we currently plan to conduct a limited amount of additional research and development before seeking a partner to advance these product candidates. We cannot be certain that we would be successful in attracting any such partners. If we were not able to find appropriate partners for the continued development and commercialization of fidaxomicin, or our other product candidates, we would either have to delay further development and commercialization initiatives, which would harm our business and prospects, or raise significant additional funds to develop clinical and commercialization capabilities internally.

We are subject to a number of additional risks associated with our dependence on collaborations with third parties. Conflicts may arise between us and collaborators, such as conflicts concerning the interpretation of clinical data, the achievement of milestones, the interpretation of financial provisions or the ownership of intellectual property developed during the collaboration. If any such conflicts arise, a collaborator could act in its own self-interest, which may be adverse to our best interests. Any such disagreement between us and a collaborator could result in one or more of the following, each of which could delay or prevent the development or commercialization of fidaxomicin, and our other product candidates, and in turn prevent us from generating sufficient revenues to achieve or maintain profitability:

- reductions in the payment of royalties or other payments we believe are due pursuant to the applicable collaboration arrangement or agreement;
- uncertainties regarding ownership of intellectual property rights arising from our collaborative activities, which could prevent us from entering into additional collaborations and commercializing such rights;
- actions taken by a collaborator inside or outside our collaboration which could negatively impact our rights or benefits under our collaboration; or
- unwillingness on the part of a collaborator to keep us informed regarding the progress of its development and commercialization activities or to permit public disclosure of the results of those activities.

In addition, a collaborator may not have or devote sufficient resources to develop and commercialize our product candidates, may elect to underfund, discontinue or may not properly perform pre-clinical studies or clinical trials, or may divert resources to other programs that are potentially competitive with our product candidates.

If we are unable to obtain FDA approval of our product candidates, we will not be able to commercialize them in the United States.

We need FDA approval prior to marketing our product candidates in the United States. If we fail to obtain FDA approval to market our product candidates, we will be unable to sell our product candidates in the United States, which will significantly impair our ability to generate any revenues.

This regulatory review and approval process, which includes evaluation of pre-clinical studies and clinical trials of our product candidates as well as the evaluation of our manufacturing processes and our third-party contract manufacturers' facilities, is lengthy, expensive and uncertain. To receive approval for a product candidate, we must, among other things, demonstrate with substantial evidence from well-controlled clinical trials that the product candidate is both safe and effective for each indication for which approval is sought. Satisfaction of the approval requirements typically takes several years and the time needed to satisfy them

may vary substantially, based on the type, complexity and novelty of the pharmaceutical product. We cannot predict if or when we might receive regulatory approvals for any of our product candidates currently under development. Moreover, any approvals that we obtain may not cover all of the clinical indications for which we are seeking approval, or could contain significant limitations in the form of narrow indications, warnings, precautions or contra-indications with respect to conditions of use. In such an event, our ability to generate revenues from such products would be greatly reduced and our business would be harmed.

The FDA has substantial discretion in the approval process and may either refuse to consider our applications for substantive review or may form the opinion after review of our data that our applications are insufficient to allow approval of our product candidates. If the FDA does not consider or approve an application that we submit, it may require that we conduct additional clinical, pre-clinical or manufacturing validation studies and submit that data before it will reconsider our application. Depending on the extent of these or any other studies, approval of any applications that we submit may be delayed by several years, or may require us to expend more resources than we have available. For example, we intend to rely in part on certain legacy data from a third party to support an NDA for prulifloxacin. If we are unable to obtain this data in a timely manner or the FDA deems this data to insufficient, it may delay our filing of a NDA for prulifloxacin and could require us to complete additional studies. It is also possible that additional studies, if performed and completed, may not be successful or considered sufficient by the FDA for approval or even to make our applications approvable. If any of these outcomes occur, we may be forced to abandon one or more of our future applications for approval, which might significantly harm our business and prospects.

It is possible that none of our existing product candidates or any product candidates we may seek to develop in the future will ever obtain the appropriate regulatory approvals necessary for us or our collaborators to commence product sales. Increased scrutiny by regulatory authorities may result in significant delays in obtaining regulatory approvals, as well as more stringent product labeling and post-marketing testing requirements.

Although the FDA has granted Fast Track status to fidaxomicin and selected it for participation in a CMA Pilot 2 Program, we cannot be certain that we will receive any benefits from these designations or that the designations will expedite regulatory review or approval of fidaxomicin. Participation in these programs will not eliminate any phase of clinical development. Moreover, our participation in the CMA Pilot 2 Program will involve frequent scientific discussions and other interactions with the staff of the FDA during the investigational new drug phase of our development of fidaxomicin. These frequent discussions could subject fidaxomicin to a greater level of scrutiny than it might otherwise have received or require us to make more frequent submissions and endure other burdens that would have been avoided if we had not participated in the program. Therefore, despite any potential benefits of fidaxomicin's Fast Track and CMA Pilot 2 Program designations, significant uncertainty remains regarding the clinical development and regulatory approval process for fidaxomicin.

Clinical trials involve a lengthy and expensive process with an uncertain outcome, and results of earlier studies and trials may not be predictive of future trial results.

Clinical testing is expensive and can take many years to complete, and its outcome is uncertain. Failure can occur at any time during the clinical trial process. The results of pre-clinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials. For example, results from the first fidaxomicin Phase 3 trial, while positive, may not predict results from the second Phase 3 trial which is on-going. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy traits despite having progressed through pre-clinical studies and initial clinical testing. In addition, the type and amount of clinical data necessary to gain regulatory approval for our product candidates may change or we may inaccurately characterize such requirements. For example, we recently announced our intention to prepare a Marketing Authorization Application, or MAA, for submission to the European Medicines Agency, or EMEA, for fidaxomacin based on the results from our first Phase 3 trial. Although we currently believe that the EMEA will accept an MAA for fidaxomicin based on only one completed Phase 3 trial, we may be incorrect in this belief and may be required to resubmit our filing following the completion of our second Phase 3 trial. Such a resubmission would involve additional delay and expense related to any approval of fidaxomicin in Europe.

Even after we complete our planned clinical trials, our product candidates could fail to receive regulatory approval for many reasons, including the following:

- the results of our clinical trials may not demonstrate to the satisfaction of or meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective for any indication;
- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- the results of our clinical trials may not demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;

- the results of our clinical trials may not demonstrate that a product candidate presents an advantage over existing therapies, or over placebo in any indications for which the FDA requires a placebo-controlled trial;

- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from pre-clinical studies or clinical trials;

- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of an NDA or other submission or to obtain regulatory approval in the United States or elsewhere; and

- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

Delays in clinical trials are common and have many causes, and any such delays could result in increased costs to us and jeopardize or delay our ability to achieve regulatory approval and commence product sales as currently contemplated.

We may experience delays in clinical trials of our product candidates. We reported positive top-line data from the first of two Phase 3 trials evaluating fidaxomicin for the treatment of CDI. We anticipate completing enrollment and reporting data from the second trial in 2009. If the second trial is also successful, we intend to file an NDA as soon as practicable thereafter. In addition, we are planning to conduct a registration study for other formulations and proof-of-concept clinical trials for other indications of fidaxomicin. We reported positive top-line data from the two Phase 3 trials evaluating prulifloxacin for the treatment of infectious diarrhea in travelers. We intend to conduct a Phase 4 trial of prulifloxacin subsequent to NDA submission to compare prulifloxacin to ciprofloxacin for the treatment of infectious diarrhea. We do not know whether planned clinical trials will begin on time, will need to be redesigned or will be completed on schedule, if at all. Clinical trials can be delayed for a variety of reasons, including delays in obtaining regulatory approval to commence a trial, in reaching agreement on acceptable terms with prospective clinical research organizations, or CROs, and clinical trial sites, in obtaining institutional review board approval at each site, in recruiting suitable patients to participate in a trial, in having patients complete a trial or return for post-treatment follow-up, in adding new sites or in obtaining sufficient supplies of clinical trial materials. Many factors affect patient enrollment, including the size and nature of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the trial, the design of the clinical trial, competing clinical trials, clinicians' and patients' perceptions as to the potential advantages of the drug being studied in relation to other available therapies, including any new drugs that may be approved for the indications we are investigating and whether the clinical trial design involves comparison to placebo.

We could encounter delays if prescribing physicians encounter unresolved ethical issues associated with enrolling patients in clinical trials of our product candidates in lieu of prescribing existing antibiotics that have established safety and efficacy profiles or with administering placebo to patients in our placebo-controlled trials. Further, a clinical trial may be suspended or terminated by us, our collaborators, the FDA or other regulatory authorities due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. If we experience delays in the completion of, or termination of, any clinical trial of our product candidates, the commercial prospects of our product candidates will be harmed, and our ability to generate product revenues from any of these product candidates will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product development and approval process and jeopardize our ability to commence product sales and generate revenues. Any of these occurrences may significantly harm our business, financial condition and prospects.

We may be required to suspend or discontinue clinical trials due to adverse events, adverse side effects or other safety risks that could preclude approval of our product candidates.

Our clinical trials may be suspended at any time for a number of reasons. We may voluntarily suspend or terminate our clinical trials if at any time we believe that they present an unacceptable risk to participants. In addition, regulatory agencies may order the temporary or permanent discontinuation of our clinical trials at any time if they believe that the clinical trials are not being conducted in accordance with applicable regulatory requirements or that they present an unacceptable safety risk to participants. In the first Phase 3 clinical trial of fidaxomicin, the most common drug-related side effects reported were nausea, vomiting, constipation, anorexia, headache and dizziness. Patients treated with prulifloxacin have experienced drug-related side effects including abdominal pain, diarrhea, nausea, renal toxicities, cardiac arrhythmias, photosensitivity, rash, excessive flushing of the skin and central nervous system effects, such as seizures. The FDA recommended that we conduct a study to determine the effect, if any, of prulifloxacin on the prolongation of the QT interval, a condition that is associated with potentially life-threatening cardiac arrhythmias. In response to the FDA's recommendation, we initiated such a QT interval study, which is currently ongoing and expected to be completed in 2009. If adverse, drug-related events are encountered or suspected,, our trials would be interrupted, delayed or halted and the FDA or comparable foreign regulatory authorities could order us to cease further development of or deny approval of our product candidates

for any or all targeted indications. Even if we believe our product candidates are safe, our data is subject to review by the FDA, which may disagree with our conclusions and delay or deny approval of our product candidates which would significantly harm the commercial prospects of such product candidates. Moreover, we could be subject to significant liability if any volunteer or patient suffers, or appears to suffer, adverse side effects as a result of participating in our clinical trials. Any of these occurrences may significantly harm our business and prospects.

We rely on third parties to conduct our clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we and our collaborators may not be able to obtain regulatory approval for or commercialize our product candidates.

We have entered into agreements with third-party CROs, such as INC Research to provide monitors for and to manage data for our on-going clinical programs.

We and the CROs conducting clinical trials for our product candidates are required to comply with current good clinical practices, or GCPs, regulations and guidelines enforced by the FDA for all of our products in clinical development. The FDA enforces GCPs through periodic inspections of trial sponsors, principal investigators and trial sites. If we or the CROs conducting clinical trials of our product candidates fail to comply with applicable GCPs, the clinical data generated in the clinical trials may be deemed unreliable and the FDA may require additional clinical trials before approving any marketing applications. We cannot assure you that, upon inspection, the FDA will determine that any clinical trials of our product candidates comply with GCPs. In addition, our clinical trials must be conducted with product produced under cGMP regulations, and will require a large number of test subjects. Our failure to comply with these regulations may require us to repeat clinical trials, which would be costly and delay the regulatory approval process and commercialization of our product candidates.

Typically, the CROs conducting clinical trials of our product candidates have the right to terminate their agreements with us or our collaborators upon notice in the event of an uncured material breach. In addition, some CROs have an ability to terminate their respective agreements with us if we fail to perform our obligations, if it can be reasonably demonstrated that the safety of the subjects participating in our clinical trials warrants such termination, if we make a general assignment for the benefit of our creditors or if we are liquidated. We have relied substantially on INC Research to conduct the clinical trials for fidaxomicin and prulifloxacin. INC Research has also subcontracted with other third-party CROs for various aspects of the clinical trials. If any relationships with INC Research or these other third-party CROs terminate, we or our collaborators may not be able to enter into arrangements with alternative CROs or we may enter into arrangements with alternative CROs that do not have the expertise or relationships that INC Research has with government agencies.

In addition, these third-party CROs are not our employees, and we cannot control whether or not they devote sufficient time and resources to our on-going clinical programs. These CROs may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical studies or other drug development activities, which could harm our competitive position. If CROs do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced, or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols, regulatory requirements, or for other reasons, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain regulatory approval for or successfully commercialize our product candidates. As a result, our financial results and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenues could be delayed.

If we fail to gain and/or maintain marketing approvals from regulatory authorities in international markets for fidaxomicin and any future product candidates for which we have rights in international markets, our market opportunities will be limited.

Sales of our product candidates outside of the United States will be subject to foreign regulatory requirements governing clinical trials and marketing approval. Even if the FDA grants marketing approval for a product candidate, comparable regulatory authorities of foreign countries must also approve the marketing of the product candidate in those countries. This is important for the commercialization of fidaxomicin for which we currently have exclusive worldwide marketing rights. Obtaining foreign regulatory approvals could result in significant delays, difficulties and costs for us and require additional pre-clinical studies or clinical trials which would be costly and time consuming. Regulatory requirements can vary widely from country to country and could delay the introduction of our products in those countries. Clinical trials conducted in one country may not be accepted by regulatory authorities in other countries, and regulatory approval in one country does not guarantee regulatory approval will be obtained in any other country. In addition, our failure to obtain regulatory approval in any country may delay or have negative effects on the process for regulatory approval in others. For example, if our planned MAA for fidaxomicin is rejected or unanticipated concerns are raised by the EMEA during its review, a subsequent NDA submission for fidaxomicin could be negatively impacted. Other than prulifloxacin, which is sold by other parties in Japan, Italy and certain other European countries, none of our product candidates is approved for sale in any international market for which we have rights. If we fail to comply with regulatory requirements in our international markets or

to obtain and maintain required approvals, our target market will be reduced and our ability to generate revenues will be diminished, which would significantly harm our business, results of operations and prospects.

We currently have no sales organization and have no experience as a company in marketing drug products. If we are unable to expand our marketing capabilities and establish sales capabilities or enter into agreements with third parties to market and sell our product candidates, we may not be able to generate product revenues.

We currently have a limited marketing organization and do not have a sales organization for marketing, sales and distribution of pharmaceutical products. In order to commercialize any products, we must build our marketing, sales, distribution, managerial and other non-technical capabilities or make arrangements with third parties to perform these services. We plan to build our own marketing and sales force to commercialize fidaxomicin in North America and will seek third-party partners outside North America. We own exclusive rights to commercialize prulifloxacin in the United States, and we contemplate establishing our own sales force or seeking third-party partners to sell prulifloxacin in the United States. The establishment and development of our own sales force to market any products we may develop will be expensive and time consuming and could delay any product launch, and we cannot be certain that we will be able to successfully develop this capability. We do not currently have sufficient funds to develop a sales force and other resources that we believe would be necessary to adequately market fidaxomicin and prulifloxacin in the United States. We will also have to compete with other pharmaceutical and biotechnology companies to recruit, hire, train and retain marketing and sales personnel. To the extent we rely on third parties to commercialize our products, if any, we may receive less revenues than if we commercialized these products ourselves. In addition, we may have little or no control over the sales efforts of any third parties involved in commercializing our products. In the event we are unable to develop our own marketing and sales force or collaborate with a third-party marketing and sales organization, we would not be able to commercialize our product candidates which would negatively impact our ability to generate product revenues.

We may not be able to enter into acceptable agreements to market and commercialize fidaxomicin outside of North America or if, needed, adequately build our own marketing and sales capabilities.

If appropriate regulatory approvals are obtained, we intend to commercialize fidaxomicin outside of North America through collaboration arrangements with third parties. We may be unable to enter into collaboration arrangements in international markets. In addition, there can be no guarantee that if we enter into these collaboration arrangements with other parties that they will be successful or result in more revenues than we could obtain by marketing fidaxomicin on our own. If we are unable to enter into collaboration arrangements for our products or develop an effective international sales force, our ability to generate product revenues would be limited, which would adversely affect our business, financial condition, results of operations and prospects. If we are unable to enter into such collaboration arrangements, we may need to develop our own marketing and sales force to market fidaxomicin in a number of countries in Europe and Latin America to hospital-based and long-term care physicians. These efforts may not be successful as we have no relationships among such hospital-based and long-term care physicians and do not currently have sufficient funds to develop an adequate sales force in these regions. There is no guarantee that we will be able to develop an effective international sales force to successfully commercialize our products in these international markets. If we cannot commercialize fidaxomicin, we will have to rely solely on prulifloxacin and earlier stage product candidates for any future revenues, and our ability to achieve and sustain profitability will be materially and adversely harmed.

If our product candidates are unable to compete effectively with branded and generic antibiotics, our commercial opportunity would be reduced or eliminated.

If approved, our lead product candidates will compete against both branded antibiotic therapies, such as Vancocin Pulvules with respect to fidaxomicin and Xifaxan®/rifazamin with respect to prulifloxacin, and generic antibiotics such as metronidazole and oral vancomycin with respect to fidaxomicin and ciprofloxacin with respect to prulifloxacin. In addition, we anticipate that fidaxomicin will compete with other antibiotic and anti-infective product candidates currently in development for the treatment of CDI, such as Xifaxan®/rifaxamin and Alinia™/nitazoxanide. Many of these products have been or will be developed and marketed by major pharmaceutical companies, who have significantly greater financial resources and expertise in research and development, pre-clinical testing, conducting clinical trials, obtaining regulatory approvals, manufacturing and marketing approved products than we do. As a result, these companies may obtain regulatory approval more rapidly than we are able to and may be more effective in selling and marketing their products as well. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large, established companies.

We anticipate that, if approved, fidaxomicin and prulifloxacin will face increasing competition in the form of generic versions of branded products of competitors that will lose their patent exclusivity. For example, fidaxomicin, if approved, will immediately face steep competition from an inexpensive generic form of metronidazole. Fidaxomicin would currently face generic oral vancomycin competition in Europe and in the future may face competition from generic oral vancomycin in the United States as well. Generic antibiotic therapies typically are sold at lower prices than branded antibiotics and are generally preferred by managed

care providers of health services. For example, because metronidazole is sold at such a low price, we believe it will be difficult to sell fidaxomicin as a first-line therapy for the treatment of CDI. If we are unable to demonstrate to physicians and patients that, based on experience, clinical data, side-effect profiles and other factors, our products are preferable to these generic antibiotic therapies, we may never generate meaningful product revenues. In addition, many antibiotics experience bacterial resistance over time because of their continued use. There can be no guarantee that bacteria would not develop resistance to fidaxomicin, prulifloxacin or any of our other product candidates. Our commercial opportunity would also be reduced or eliminated if our competitors develop and commercialize generic or branded antibiotics that are safer, more effective, have fewer side effects or are less expensive than our product candidates.

We currently depend, and will in the future continue to depend, on third parties to manufacture our product candidates, including fidaxomicin and prulifloxacin. If these manufacturers fail to provide us and our collaborators with adequate supplies of clinical trial materials and commercial product or fail to comply with the requirements of regulatory authorities, we may be unable to develop or commercialize our products.

We outsource all manufacturing of clinical trial supplies of our product candidates to third parties. We seek to establish long-term supply arrangements with third-party contract manufacturers. We intend to continue outsourcing the manufacture of our product candidates to third parties for any future clinical trials and large-scale commercialization of any product candidates that receive regulatory approval and become commercial drugs.

Our ability to develop and commercialize fidaxomicin and prulifloxacin and any other product candidates depends in part on our ability to arrange for collaborators or other third parties to manufacture our products at a competitive cost, in accordance with strictly enforced regulatory requirements and in sufficient quantities for clinical testing and eventual commercialization. We have not yet manufactured commercial batches of fidaxomicin, prulifloxacin or any of our other product candidates. Collaborators or third-party manufacturers that we select to manufacture our product candidates for clinical testing or on a commercial scale may encounter difficulties with the small- and large-scale formulation and manufacturing processes required for such manufacture. Such difficulties could result in delays in clinical trials, regulatory submissions and approvals, or commercialization of our product candidates. The inability of us or our collaborators to enter into and maintain agreements with third-party manufacturers on acceptable terms would cause shortages of clinical trial supplies of our product candidates, thereby delaying or preventing regulatory approval and/or commercialization of the affected product candidate, and adversely affecting our ability to generate revenues. Further, development of large-scale manufacturing processes will require additional validation studies, which the FDA must review and approve, and the time it will take us or a third party manufacturer to develop such large-scale processes and capabilities may delay any product launch following regulatory approval. Even if we are able to establish additional or replacement manufacturers, identifying these sources and entering into definitive supply agreements and obtaining regulatory approvals may involve a substantial amount of time and cost and such supply arrangements may not be available on acceptable economic terms.

In addition, we, our collaborators and other third-party manufacturers of our products must comply with strictly enforced cGMP requirements enforced by the FDA through its facilities inspection program. These requirements include quality control, quality assurance and the maintenance of records and documentation. We currently rely on Biocon to manufacture fidaxomicin active pharmaceutical ingredient and rely on Patheon, Inc. to manufacture the drug product supplies. As such, Biocon and Patheon will be subject to ongoing periodic unannounced inspections by the FDA and other agencies for compliance with current cGMP, and similar foreign standards. We also rely on Nippon Shinyaku, which contracts with Juzen, Angelini and Patheon to manufacture prulifloxacin drug supplies. The manufacturing facilities of Biocon, Juzen and Patheon have been inspected and approved by the FDA for other companies' drug products; however, none of Biocon's, Juzen's nor Patheon's facilities have yet been inspected by the FDA for the manufacture of our drug supplies. Angelini's facilities have not been inspected or approved by the FDA. We or other third-party manufacturers of our products may be unable to comply with cGMP requirements and with other FDA, state, local and foreign regulatory requirements. We and our collaborators have little control over third-party manufacturers' compliance with these regulations and standards. A failure to comply with these requirements by our third-party manufacturers, including Biocon, Juzen, Angelini, and Patheon could result in the issuance of untitled letters and/or warning letters from authorities, as well as sanctions being imposed on us, including fines and civil penalties, suspension of production, suspension or delay in product approval, product seizure or recall or withdrawal of product approval. In addition, we have no control over these manufacturers' ability to maintain adequate quality control, quality assurance and qualified personnel. If the safety of any quantities supplied by third parties is compromised due to their failure to adhere to applicable laws or for other reasons, we may not be able to obtain or maintain regulatory approval for or successfully commercialize one or more of our product candidates, which would significantly harm our business and prospects.

The commercial success of our product candidates will depend upon attaining significant market acceptance of these product candidates among physicians, patients, healthcare payors and the medical community.

Even if our product candidates are approved by the appropriate regulatory authorities for marketing and sale, physicians may not prescribe our product candidates, which would prevent us from generating revenues or becoming profitable. Market acceptance of

fidaxomicin, prulifloxacin and any of our future product candidates by physicians, patients and healthcare payors will depend on a number of factors, many of which are beyond our control, including:

- the clinical indications for which the product candidate is approved;
- acceptance by physicians and patients of each product candidate as a safe and effective treatment;
- perceived advantages over alternative treatments;
- the cost of treatment in relation to alternative treatments, including numerous generic antibiotics;
- the extent to which the product candidate is approved for inclusion on formularies of hospitals and managed care organizations;
- the extent to which bacteria develops resistance to the product candidate, thereby limiting its efficacy in treating or managing infections;
- whether the product candidate is designated under physician treatment guidelines as a first-line therapy or as a second- or third-line therapy for particular infections;
- the availability of adequate reimbursement by third parties, such as insurance companies and other healthcare payors;
- limitations or warnings contained in a product's FDA-approved labeling;
- relative convenience and ease of administration; and
- prevalence and severity of adverse side effects.

Because fidaxomicin is a differentiated antibiotic for the treatment of CDI, it may encounter additional hurdles to market acceptance by physicians, who may be skeptical about its clinical benefits or healthcare payors who may resist reimbursing a premium-priced therapeutic particularly in light of the availability of generic alternatives.

We plan to target our marketing of prulifloxacin primarily to high-prescribing physicians of antibiotics for travelers' diarrhea, including those at travel clinics. Because of the number of these physicians in the United States, we will be required to expend significant time and resources to obtain broad market acceptance of prulifloxacin among these physicians. We do not have experience in marketing to this population of physicians and do not currently have the resources to be able to conduct such marketing efforts on our own. As such, we may not be successful in any of these marketing efforts which would limit the commercial success of prulifloxacin.

In addition, in July 2008 the FDA notified makers of fluoroquinolone antimicrobial drugs for systemic use that a boxed warning is necessary for those products due to the risk of tendonitis and tendon rapture. As prulifloxacin is a fluoroquinolone antibiotic it may be required to carry a black box warning. Although these risks have been described for years on the product label of many fluoroquinolones the increased awareness of this risk may impact the market potential for the fluoroquinolone class of antibiotics, including prulifloxacin. Furthermore, because prulifloxacin has already been marketed by other companies outside the United States to treat a wide range of bacterial infections, including infectious diarrhea, UTIs and RTIs, patients may be able to obtain prulifloxacin from these other companies, and not from us, if prulifloxacin is approved in the market where the patient is located. We have rights to prulifloxacin only in the United States. These patients may obtain prulifloxacin in these other markets from other companies even if these patients are from the United States.

If we fail to develop and commercialize other products or product candidates, we may be unable to grow our business.

A key element of our strategy is to commercialize a portfolio of new anti-infective products in addition to fidaxomicin and prulifloxacin. As a significant part of our growth strategy, we intend to develop and commercialize additional products and product candidates through our discovery research program using our proprietary technology, including OPopS. The success of this strategy depends upon our ability to identify, select and acquire pharmaceutical product candidates and products that fit into our development plans on terms that are acceptable to us. To supplement this strategy, we may also obtain rights to additional product candidates from third parties through acquisition or in-licensing transactions.

Any product candidate we identify or to which we acquire rights will likely require additional development efforts prior to commercial sale, including pre-clinical studies, extensive clinical testing and approval by the FDA and applicable foreign regulatory authorities. All product candidates are prone to the risks of failure that are inherent in pharmaceutical product development, including the possibility that the product candidate will not be shown to be sufficiently safe and/or effective for approval by regulatory authorities. In addition, we cannot assure you that any such products that are approved will be manufactured or produced economically, successfully commercialized or widely accepted in the marketplace or be more effective than other commercially available alternatives.

A significant portion of the research that we are conducting involves new and unproven technologies. Research programs to identify new disease targets and product candidates require substantial technical, financial and human resources whether or not we ultimately identify any candidates. Our research programs may initially show promise in identifying potential product candidates, yet fail to yield product candidates for clinical development.

If we are unable to develop suitable potential product candidates through internal research programs or by obtaining rights to novel therapeutics from third parties, our business and prospects will suffer.

Our focus on drug discovery and development using our technology platform, including our patented proprietary OPopS drug discovery platform, is novel and unique. As a result, we cannot be certain that our product candidates will produce commercially viable drugs that safely and effectively treat infectious diseases or other diseases. To date, our technology platform has yielded only a small number of anti-infective product candidates. In addition, we do not have significant clinical data with respect to any of these potential product candidates. Even if we are successful in completing clinical development and receiving regulatory approval for one commercially viable drug for the treatment of one disease using our technology platform and carbohydrate chemistry focus, we cannot be certain that we will also be able to develop and receive regulatory approval for other drug candidates for the treatment of other forms of that disease or other diseases. If we fail to develop and commercialize viable drugs using our platform and specialized focus, we will not be successful in developing a pipeline of potential product candidates to follow fidaxomicin and prulifloxacin, and our business prospects would significantly be harmed.

Our future growth depends on our ability to identify and acquire or in-license products. If we do not successfully identify and acquire or in-license related product candidates or integrate them into our operations, we may have limited growth opportunities.

We in-licensed the U.S. rights to prulifloxacin from Nippon Shinyaku who, along with Meiji-Seika Kaisha Ltd., conducted the initial development of this product candidate. An important part of our business strategy is to continue to develop a pipeline of product candidates by acquiring or in-licensing products, businesses or technologies that we believe are a strategic fit for our business. Future in-licenses or acquisitions, however, may entail numerous operational and financial risks, including:

- exposure to unknown liabilities;
- disruption of our business and diversion of our management's time and attention to develop acquired products or technologies;
- incurrence of substantial debt or dilutive issuances of securities to pay for acquisitions;
- higher than expected acquisition and integration costs;
- increased amortization expenses;
- difficulty and cost in combining the operations and personnel of any acquired businesses with our operations and personnel;
- impairment of relationships with key suppliers or customers of any acquired businesses due to changes in management and ownership; and
- inability to retain key employees of any acquired businesses.

We have limited resources to identify and execute the acquisition or in-licensing of third-party products, businesses and technologies and integrate them into our current infrastructure. In particular, we may compete with larger pharmaceutical companies and other competitors in our efforts to establish new collaborations and in-licensing opportunities. These competitors likely will have

access to greater financial resources than us and may have greater expertise in identifying and evaluating new opportunities. Moreover, we may devote resources to potential acquisitions or in-licensing opportunities that are never completed, or we may fail to realize the anticipated benefits of such efforts.

Our ability to pursue the development and commercialization of prulifloxacin, our other product candidates and our future product candidates depends upon the continuation of our licenses from third parties.

Our license agreement with Nippon Shinyaku provides us with an exclusive license to develop and commercialize prulifloxacin for any indication in the United States, with a right to sublicense to third parties. In the event Nippon Shinyaku is not able to supply us with prulifloxacin, the license agreement provides us with a non-exclusive, worldwide right and license to manufacture or have prulifloxacin manufactured for us. Either we or Nippon Shinyaku may terminate the license agreement immediately upon the bankruptcy or dissolution of the other party or upon a breach of any material provision of the agreement if the breach is not cured within 60 days following written notice. In addition, we are entitled to terminate the agreement in the event that the FDA compels us to cease sales of prulifloxacin in the United States. If our license agreement with Nippon Shinyaku terminates, we will lose our rights to develop, manufacture and commercialize prulifloxacin and our potential revenues would be limited. Similarly, if our agreement with the Scripps Research Institute, or TSRI, for the license of our OPopS technology is terminated, we will not be able to further develop future product candidates using our OPopS technology.

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of our product candidates.

We face an inherent risk of product liability lawsuits related to the testing of our product candidates, and will face an even greater risk if product candidates are introduced commercially. An individual may bring a liability claim against us if one of our product candidates causes, or merely appears to have caused, an injury. If we cannot successfully defend ourselves against the product liability claim, we may incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for our product candidates;
- injury to our reputation;
- termination of clinical trial sites or entire clinical trial programs;
- withdrawal of clinical trial participants;
- significant litigation costs;
- substantial monetary awards to or costly settlement with patients;
- product recalls;
- loss of revenues; and
- the inability to commercialize our product candidates.

We may become dependent upon consumer perceptions of us and the safety and quality of our product candidates. We could be adversely affected if we or our product candidates are subject to negative publicity. We could also be adversely affected if any of our potential products or any similar products distributed by other companies prove to be, or are asserted to be, harmful to consumers. Also, because of our dependence upon consumer perceptions, any adverse publicity associated with illness or other adverse effects resulting from consumers' use or misuse of our potential products or any similar products distributed by other companies could have a material adverse impact on our results of operations.

We have global clinical trial liability insurance that covers our clinical trials up to a $10.0 million annual aggregate limit. Our current or future insurance coverage may prove insufficient to cover any liability claims brought against us. We intend to expand our insurance coverage to include the sale of commercial products if marketing approval is obtained for our product candidates, which would increase our insurance premiums. Because of the increasing costs of insurance coverage, we may not be able to maintain insurance coverage at a reasonable cost or obtain insurance coverage that will be adequate to satisfy any liability that may arise.

Even if we receive regulatory approval for our product candidates, we will be subject to ongoing significant regulatory obligations and oversight.

Even if we receive regulatory approval to sell our product candidates, the FDA and foreign regulatory authorities will likely impose significant restrictions on the indicated uses or marketing of such products, or impose ongoing requirements for potentially costly post-approval studies. In addition, following any regulatory approval of our product candidates, we and our collaborators will be subject to continuing regulatory obligations, such as requirements for storage, recordkeeping and safety reporting, and additional post-marketing obligations, including regulatory oversight of the labeling, packaging, promotion and marketing of our products. If we or our collaborators become aware of previously unknown problems with any of our product candidates in the United States or overseas or at our third-party manufacturers' facilities, a regulatory agency may impose restrictions on our products, our third-party manufacturers or on us, including requiring us to reformulate our products, conduct additional clinical trials, make changes in the labeling of our products, implement changes to, or obtain re-approvals of, our third-party manufacturers' facilities, or withdraw the product from the market. In addition, we or our collaborators may experience a significant drop in the sales of the affected products and our product revenues will be reduced, our reputation in the marketplace may suffer and we may become the target of lawsuits, including class action suits. Moreover, if we or our collaborators or third-party manufacturers fail to comply with applicable regulatory requirements, we may be subject to civil or criminal fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions, costly new manufacturing requirements and criminal prosecution. Any of these events could harm or prevent sales of the affected products and reduce our related revenues or could substantially increase the costs and expenses of commercializing and marketing these products, which would significantly harm our business, financial condition and prospects.

If we fail to attract and retain senior management and key scientific personnel, we may be unable to successfully develop our product candidates, conduct our clinical trials and commercialize our product candidates.

Our success depends in part on our continued ability to attract, retain and motivate highly qualified management, clinical and scientific personnel and on our ability to develop and maintain important relationships with leading academic institutions, clinicians and scientists. We are highly dependent upon our senior management and scientific staff, particularly Michael N. Chang, Ph.D., our President and Chief Executive Officer, Tessie M. Che, Ph.D., our Senior Vice President and Chief Operating Officer, Francois-Xavier Frapaise, M.D., our Senior Vice President and Chief Scientific Officer, Youe-Kong Shue, Ph.D., our Vice President, Clinical Development, Sherwood L. Gorbach, M.D., our Vice President of Medical Affairs and Chief Medical Officer, and Kevin P. Poulos, our Chief Commercial Officer. The loss of services of any of Drs. Chang, Che, Frapaise, Shue, Gorbach or Shue or Mr. Poulos or one or more of our other members of senior management could delay or prevent the successful completion of our planned clinical trials or the commercialization of our product candidates. Replacing key employees may be difficult and costly and may take an extended period of time because of the limited number of individuals in our industry with the breadth of skills and experience required to develop and commercialize products successfully. We do not maintain "key person" insurance policies on the lives of these individuals or the lives of any of our other employees. We employ these individuals on an at-will basis and their employment can be terminated by us or them at any time, for any reason and with or without notice.

We will need to hire additional personnel as we expand our clinical development and commercial activities. We may not be able to attract or retain qualified management and scientific personnel on acceptable terms in the future due to the intense competition for qualified personnel among biotechnology, pharmaceutical and other businesses, particularly in the San Diego, California area. If we are not able to attract and retain the necessary personnel to accomplish our business objectives, we may experience constraints that will impede significantly the achievement of our research and development objectives, our ability to raise additional capital and our ability to implement our business strategy. In particular, if we lose any members of our senior management team, we may not be able to find suitable replacements, and our business and prospects may be harmed as a result.

We will need to increase the size of our organization, and we may experience difficulties in managing growth.

We are a small company with 55 employees as of March 2, 2009. To continue our clinical trials and commercialize our product candidates, we will need to expand our employee base for managerial, operational, marketing, sales, financial and other resources. Future growth will impose significant added responsibilities on members of management, including the need to identify, recruit, maintain and integrate additional employees and may take time away from running other aspects of our business, including development and commercialization of our product candidates. Our future financial performance and our ability to commercialize our product candidates and to compete effectively will depend, in part, on our ability to manage any future growth effectively. To that end, we must be able to:

- manage our development efforts effectively;
- manage our current clinical trials effectively;

- integrate additional management, administrative and manufacturing personnel;
- build a marketing and sales organization; and
- maintain sufficient administrative, accounting and management information systems and controls.

We may not be able to accomplish these tasks, and accordingly, may not achieve our research, development and commercialization goals. Our failure to accomplish any of these goals could harm our financial results and prospects.

Third-party payor coverage and reimbursement may be insufficient or unavailable altogether for our product candidates, which could diminish our sales or affect our ability to sell our products profitably.

Market acceptance and sales of our product candidates will depend on reimbursement policies and may be affected by future healthcare reform measures. Government third-party payors, such as the Medicare and Medicaid programs, and private payors, including health maintenance organizations, decide which drugs they will pay for and establish reimbursement levels for these drugs. Because third-party payors increasingly are challenging prices charged and the cost-effectiveness of medical products, significant uncertainty exists as to the ability of our product candidates to receive adequate coverage and reimbursement. We cannot be sure that third-party payors will place our product candidates on approved formularies or that reimbursement will be available in whole or in part for any of our product candidates. Also, we cannot be sure that insufficient reimbursement amounts will not reduce the demand for, or the price of, our products, if approved.

Many healthcare providers, such as hospitals, receive a fixed reimbursement amount per procedure or other treatment therapy, and these amounts are not necessarily based on the actual costs incurred. As a result, these healthcare providers may choose only the least expensive therapies regardless of efficacy. We cannot guarantee that our product candidates will be the least expensive alternative and thus providers may decide not to use them or buy them for treatment.

We have not commenced efforts to have our product candidates reimbursed by government or third-party payors. If reimbursement is not available or is available only to limited levels, we may not be able to commercialize our products successfully or at all, which would harm our business and prospects.

Recent proposed legislation may permit re-importation of drugs from foreign countries into the United States, including foreign countries where the drugs are sold at lower prices than in the United States, which could materially adversely affect our operating results and our overall financial condition.

We may face competition for our products from lower priced products from foreign countries that have placed price controls on pharmaceutical products. Imports from Canada and elsewhere may continue to increase due to market and political forces, and the limited enforcement resources of the FDA, the U.S. Customs Service, and other government agencies. For example, U.S. Customs Service generally does not prevent individuals from importing from Canada less than a 90-day supply of a prescription drug for personal use, when the drug otherwise complies with the Federal Food, Drug and Cosmetic Act. Further, several states and local governments have implemented importation schemes for their citizens, and, in the absence of federal action to curtail such activities, we expect other states and local governments to launch importation efforts. The importation of foreign products that compete with our own product candidates could negatively impact our business and prospects.

Current healthcare laws and regulations and future legislative or regulatory reforms to the healthcare system may affect our ability to sell our product candidates profitably.

In both the United States and certain foreign jurisdictions, there have been, and we anticipate there will continue to be, a number of legislative and regulatory changes to the healthcare system that could impact our ability to sell our products profitably. We cannot be certain that fidaxomicin and prulifloxacin or other current or future drug candidates will successfully be placed on the list of drugs covered by particular health plan formularies, nor can we predict the negotiated price for our drug candidates, which will be determined by market factors. Many states have also created preferred drug lists and include drugs on those lists only when the manufacturers agree to pay a supplemental rebate. If fidaxomicin and prulifloxacin or other current or future drug candidates are not included on these preferred drug lists, physicians may not be inclined to prescribe them to their Medicaid patients, thereby diminishing the potential market for our products.

As a result of legislative proposals and the trend towards cost-effectiveness criteria and managed healthcare in the United States, third-party payors are increasingly attempting to contain healthcare costs by limiting both coverage and the level of reimbursement of new drugs. They may also refuse to provide any coverage of uses of approved products for medical indications

other than those for which the FDA has granted market approvals. As a result, significant uncertainty exists as to whether and how much third-party payors will reimburse for newly-approved drugs, which in turn will put pressure on the pricing of drugs. Further, we do not have experience in ensuring approval by applicable third-party payors outside of the United States for reimbursement of our products. The availability of numerous generic antibiotics at lower prices than branded antibiotics can also be expected to substantially reduce the likelihood of reimbursement for fidaxomicin and prulifloxacin. We also anticipate pricing pressures in connection with the sale of our products due to the trend toward managed healthcare, the increasing influence of health maintenance organizations and additional legislative proposals.

We must comply with federal and state "fraud and abuse" laws, and, if we are unable to fully comply with such laws, we could face substantial penalties, which may adversely affect our business, financial condition and results of operations.

We are subject to various federal and state laws pertaining to healthcare fraud and abuse, including anti-kickback laws, the False Claims Act, the Foreign Corrupt Practices Act and state laws requiring reporting and certification under comprehensive compliance programs governing our financial relationships with healthcare providers. Violations of these laws are punishable by criminal and civil sanctions, including, in some instances, exclusion from participation in federal and state healthcare programs, including Medicare and Medicaid, and the curtailment or restructuring of operations. We believe that our operations are in material compliance with such laws and we are aware of the need to increase our compliance resources if we begin marketing products. However, because of the far-reaching nature of these laws, there can be no assurance that we would not be required to alter one or more of our practices to be in compliance with these laws. In addition, there can be no assurance that the occurrence of one or more violations of these laws or regulations would not result in a material adverse effect on our financial condition and results of operations.

Our business involves the use of hazardous materials and we and our third-party manufacturers must comply with environmental laws and regulations, which can be expensive and restrict how we do business.

Our third-party manufacturers' activities and, to a lesser extent, our own activities involve the controlled storage, use and disposal of hazardous materials, including the components of our product candidates and other hazardous compounds. We and our manufacturers are subject to federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of these hazardous materials. Although we believe that the safety procedures for handling and disposing of these materials comply with the standards prescribed by these laws and regulations, we cannot eliminate the risk of accidental contamination or injury from these materials. We currently have insurance coverage in the amount of approximately $250,000 for damage claims arising from contamination on our property. These amounts may not be sufficient to adequately protect us from liability for damage claims relating to contamination. If we are subject to liability exceeding our insurance coverage amounts, our business and prospects would be harmed. In the event of an accident, state or federal authorities may also curtail our use of these materials and interrupt our business operations.

Our business and operations would suffer in the event of computer, telecommunications or other system failure.

Despite the implementation of security measures, our internal computer systems are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. Any system failure, accident or security breach that causes interruptions in our operations could result in a material disruption of our drug development programs. For example, the loss of clinical trial information from completed or ongoing clinical trials for fidaxomicin or prulifloxacin, which is maintained by our third-party CRO, could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach results in a loss or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we may incur liability and the further development of our product candidates may be delayed.

Risks Related to Our Intellectual Property

It is difficult and costly to protect our intellectual property and our proprietary technologies, and we may not be able to ensure their protection.

Our commercial success will depend in part on obtaining and maintaining patent protection and trade secret protection of the use, formulation and structure of our product candidates, and the methods used to manufacture them, as well as successfully defending these patents against third-party challenges, including those from generic drug manufacturers. Our ability to protect our product candidates from unauthorized making, using, selling, offering to sell or importing by third parties is dependent upon the extent to which we have rights under valid and enforceable patents or trade secrets that cover these activities.

The patent positions of pharmaceutical and biotechnology companies can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. No consistent policy regarding the breadth of claims allowed in biotechnology patents has emerged to date in the United States. The biotechnology patent situation outside the United

States is even more uncertain. Changes in either the patent laws or in interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our licensed patents, our patents or in third-party patents.

The degree of future protection for our proprietary rights is uncertain, because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. For example:

- others may be able to make compounds that are similar to our product candidates but that are not covered by the claims of our pending patent applications or licensed patents, or for which we are not licensed under our license agreements;
- others may be able to make competing pharmaceutical formulations containing our product candidates or components of our product formulations that are either not covered by the claims of our licensed patents, not licensed to us under our license agreements or are subject to patents that expire;
- we or our licensors might not have been the first to make the inventions covered by our pending patent applications or the pending patent applications and issued patents of our licensors;
- we or our licensors might not have been the first to file patent applications for these inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies;
- it is possible that our pending patent applications or our licensed patent applications will not result in issued patents;
- our pending patent applications or the pending patent applications and issued patents of our licensors may not provide us with any competitive advantages, may be designed around by our competitors, including generic drug companies, or may be held invalid or unenforceable as a result of legal challenges by third parties;
- we may not develop additional proprietary technologies that are patentable; or
- the patents of others may have an adverse effect on our business.

In addition, to the extent we are unable to obtain and maintain patent protection for one of our lead product candidates or in the event such patent protection expires, it may no longer be cost effective to extend our portfolio by pursuing additional development of a product candidate for follow-on indications.

We have filed 8 patent applications related to fidaxomicin, six of which are pending, one of which has resulted in the issuance of a polymorph patent and one of which has resulted in the allowance of a manufacturing patent from the United States Patent and Trademark Office or U. S. PTO.

These patent applications related to fidaxomicin encompass various topics relating to:

- composition of matter for fidaxomicin (allowed in Taiwan);
- composition of matter for fidaxomicin related substances and use for CDI;
- polymorphic forms (issued in U.S.);
- composition comprising a polymorphic form;
- manufacturing processes (allowed in U.S.; issued in Australia);
- treatment of diseases;
- formulation; and
- fidaxomicin related compounds, including metabolites, e.g. OP-1118.

If we are unable to obtain a composition of matter patent, our competitors, including generic drug companies, may be able to design other similar formulations of the active ingredient of fidaxomicin. Furthermore, even when the process patent is issued and if the formulation patent applications become issued patents, our competitors, including generic drug companies, may be able to design around our manufacturing processes or formulation for fidaxomicin. As a result, our competitors may be able to develop competing products.

In addition, we currently plan to submit an NDA for prulifloxacin for the treatment of infectious diarrhea in travelers in 2009. The composition of matter patent covering prulifloxacin is expired in February 2009. Although in some cases the U.S. PTO will grant an extension of a patent term where the related product is subject to FDA approval, this extension was unavailable to us with respect to the prulifloxacin composition of matter patent because we did not submit an NDA for prulifloxacin prior to the expiration of this patent. There are currently no other active issued patents which would prevent third parties from potentially marketing prulifloxacin in the United States. Therefore, we will likely rely on one or more regulatory marketing exclusivities for prulifloxacin in the United States. Specifically, if our NDA for prulifloxacin is approved, we expect to receive a five-year period of marketing exclusivity under the Hatch-Waxman Act. This exclusivity period is available to the first applicant to gain approval of an NDA for a new chemical entity, or NCE, that has not previously been approved as an active ingredient under Section 505(b) of the Food Drug and Cosmetic Act, or FDCA. While we expect that the NCE exclusivity period will be available for prulifloxacin, if we or Nippon Shinyaku are unsuccessful in obtaining additional patents related to prulifloxacin, we may face generic competition in the United States five years after our NDA for prulifloxacin is approved by the FDA. If we are unable to obtain marketing exclusivity beyond five years from the approval of our NDA, our potential revenues from prulifloxacin sales in the U.S. will be limited.

We depend, in part, on our licensors and collaborators to protect a portion of our proprietary rights. In such cases, our licensors and collaborators may be primarily or wholly responsible for the maintenance of patents and prosecution of patent applications relating to important areas of our business. For example, Nippon Shinyaku, SKI, TSRI and Cempra are responsible for the maintenance of patents and prosecution of patent applications relating to prulifloxacin, OPT-822/OPT-821 combination therapy, our OPopS technology, and OP-1068 also known as CEM-101, respectively. We may also be dependent on Par to provide technical support for patent applications relating to fidaxomicin. If any of these parties fail to adequately protect these product candidates with issued patents, our business and prospects would be significantly harmed.

Under our agreement with Nippon Shinyaku, in the event Nippon Shinyaku fails to take all steps necessary to seek extension of the patents licensed to us in the United States 180 days after we request such action be taken, then we have the right to take all necessary actions to extend the licensed patents. Our agreements with SKI, TSRI, Cempra and Par do not have explicit provisions regarding our rights to take necessary action with respect to maintenance of patents and prosecution of patent applications nor do such agreements provide us with any legal recourse in the event such parties do not so maintain and/or prosecute. If any of these parties fails to adequately maintain patents and prosecute patent applications relating to technology licensed to or from us, we may be required to take further action on our own to protect this technology. However, we may not be successful in maintaining such patents or prosecuting such patent applications and if so, our business and prospects would be significantly harmed.

We also rely on trade secrets to protect our technology, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect. Although we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors, outside scientific collaborators and other advisors may unintentionally or willfully disclose our information to competitors. Enforcing a claim that a third-party entity illegally obtained and is using any of our trade secrets is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States are sometimes less willing to protect trade secrets. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how.

If we or our licensors fail to obtain or maintain patent protection or trade secret protection for our product candidates or our technologies, third parties could use our proprietary information, which could impair our ability to compete in the market and adversely affect our ability to generate revenues and attain profitability.

We may incur substantial costs as a result of litigation or other proceedings relating to our patent, trademark and other intellectual property rights, and we may be unable to protect our rights to, or use, our technology.

If we choose to go to court to stop someone else from using our inventions, that individual or company has the right to ask the court to rule that the underlying patents are invalid and/or should not be enforced against that third party. These lawsuits are expensive and would consume time and other resources even if we were successful in stopping the infringement of these patents. There is also the risk that, even if the validity of these patents is upheld, the court will refuse to stop the other party on the ground that such other party's activities do not infringe our rights to these patents.

Furthermore, a third party may claim that we or our manufacturing or commercialization partners are using inventions covered by the third party's patent rights and may go to court to stop us from engaging in our normal operations and activities, including making, using or selling our product candidates. These lawsuits are costly and could affect our results of operations and divert the attention of managerial and technical personnel. There is a risk that a court would decide that we or our commercialization partners are infringing the third party's patents and would order us or our partners to stop the activities covered by the patents. In addition, there is a risk that a court will order us or our partners to pay the other party damages for having violated the other party's patents. We have indemnified our commercial partners against patent infringement claims and thus would be responsible for any of their costs associated with such claims and actions. The biotechnology industry has produced a proliferation of patents, and it is not always clear to industry participants, including us, which patents cover various types of products or methods of use. The coverage of patents is subject to interpretation by the courts and the interpretation is not always uniform. If we are sued for patent infringement, we would need to demonstrate that our products or methods of use either do not infringe the patent claims of the relevant patent and/or that the patent claims are invalid, and we may not be able to do this. Proving invalidity, in particular, is difficult since it requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents.

Although we have conducted searches of third-party patents with respect to fidaxomicin and prulifloxacin, these searches may not have identified all third-party patents relevant to those products and we have not conducted an extensive search of patents issued to third parties with respect to our other product candidates. Consequently, no assurance can be given that third-party patents containing claims covering our products, technology or methods do not exist, have not been filed, or could not be filed or issued. Because of the number of patents issued and patent applications filed in our technical areas or fields, we believe there is a risk that third parties may allege they have patent rights encompassing our products, technology or methods. In addition, we have not conducted an extensive search of third-party trademarks, so no assurance can be given that such third-party trademarks do not exist, have not been filed, could not be filed or issued, or could not exist under common trademark law. While we have filed a trademark application for the names "Optimer" and "Optimer Pharmaceuticals," we are aware that the name "Optimer" has been registered as a trademark with the U.S. PTO by more than one third party, including one in the biotechnology space. As such, we believe there is a significant risk that third parties may allege they have trademark rights encompassing the names for which we have applied for protection.

Because some patent applications in the United States may be maintained in secrecy until the patents are issued, because patent applications in the United States and many foreign jurisdictions are typically not published until eighteen months after filing, and because publications in the scientific literature often lag behind actual discoveries, we cannot be certain that others have not filed patent applications for technology covered by our licensors' issued patents or our pending applications or our licensors' pending applications, or that we or our licensors were the first to invent the technology. Our competitors may have filed, and may in the future file, patent applications covering technology similar to ours. Any such patent application may have priority over our or our licensors' patent applications and could further require us to obtain rights to issued patents covering such technologies. If another party has filed a U.S. patent application on inventions similar to ours, we may have to participate in an interference proceeding declared by the U.S. PTO, to determine priority of invention in the United States. The costs of these proceedings could be substantial, and it is possible that such efforts would be unsuccessful, resulting in a loss of our U.S. patent position with respect to such inventions.

Some of our competitors may be able to sustain the costs of complex patent litigation more effectively than we can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on our ability to raise the funds necessary to continue our operations.

Risks Related to the Securities Market and Ownership of Our Common Stock

The market price of our common stock may be highly volatile.

Before our initial public offering in February 2007, there was no public market for our common stock. We cannot assure you that an active trading market will exist for our common stock. You may not be able to sell your shares quickly or at the market price if trading in our common stock is not active.

The trading price of our common stock is likely to be highly volatile and could be subject to wide fluctuations in price in response to various factors, many of which are beyond our control, including:

- general economic and market conditions and other factors that may be unrelated to our operating performance or the operating performance of our competitors, including the current turmoil in the credit market and financial services industry;

- announcement of FDA or comparable foreign regulatory agency approval or non-approval of our product candidates, or specific label indications for their use, or delays in the FDA or comparable foreign regulatory agency review process;

- actions taken by the FDA or other regulatory agencies with respect to our product candidates, clinical trials, manufacturing process or marketing and sales activities;
- changes in laws or regulations applicable to our products, including but not limited to clinical trial requirements for approvals;
- the success of our development efforts and clinical trials, particularly with respect to fidaxomicin and prulifloxacin;
- announcements by our collaborators with respect to clinical trial results and communications from the FDA or comparable foreign regulatory agencies;
- the success of our efforts to acquire or in-license additional products or product candidates;
- developments concerning our collaborations and partnerships, including but not limited to those with our sources of manufacturing supply and our commercialization partners;
- actual or anticipated variations in our quarterly operating results;
- announcements of technological innovations by us, our collaborators or our competitors;
- new products or services introduced or announced by us or our commercialization partners, or our competitors and the timing of these introductions or announcements;
- third-party coverage or reimbursement policies;
- actual or anticipated changes in earnings estimates or recommendations by securities analysts;
- conditions or trends in the biotechnology and biopharmaceutical industries;
- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- general economic and market conditions and other factors that may be unrelated to our operating performance or the operating performance of our competitors, including the turmoil on the credit markets and financial services industry;
- changes in the market valuations of similar companies;
- sales of common stock or other securities by us or our stockholders in the future;
- additions or departures of key scientific or management personnel;
- disputes or other developments relating to intellectual property, proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies; and
- trading volume of our common stock.

In addition, the stock market in general and the market for biotechnology and biopharmaceutical companies in particular have experienced extreme price and volume fluctuations that have often been unrelated and/or disproportionate to the operating performance of those companies. These broad market and industry factors may significantly harm the market price of our common stock, regardless of our operating performance. In the past, following periods of volatility in the market, securities class-action litigation has often been instituted against companies. Such litigation, if instituted against us, could result in substantial costs and diversion of management's attention and resources, which could significantly harm our business, financial condition and prospects.

Future sales of our common stock in the public market could cause our stock price to decline.

Persons who were our stockholders prior to our initial public offering continue to hold a substantial number of shares of our common stock. Many of these stockholders are able to sell their shares in the public market. Significant portions of these shares are

held by a small number of stockholders. Sales by such stockholders of a substantial number of shares, or the expectation that such sales may occur, could significantly reduce the market price of our common stock. Moreover, the holders of a substantial number of shares of our common stock have rights, subject to certain conditions, to require us to file registration statements to permit the resale of their shares in the public market or to include their shares in registration statements that we may file for ourselves or other stockholders.

We have also registered all common stock that we have issued under our employee benefits plans. As a result, these shares can be freely sold in the public market upon issuance, subject to any applicable restrictions under the securities laws. In addition, our directors and executive officers may in the future establish programmed selling plans under Rule 10b5-1 of the Securities Exchange Act for the purpose of effecting sales of our common stock. If any of these events cause a large number of our shares to be sold in the public market, the sales could reduce the trading price of our common stock and impede our ability to raise future capital.

Negative conditions in the global credit markets may impair the liquidity of a portion of our investment portfolio.

Our investment securities consist of high-grade auction rate securities, money market funds, corporate debt securities and government agency securities. As of December 31, 2008, we held two auction rate preferred securities valued at $1.0 million with perpetual maturity dates that reset every 28 days. The negative conditions in the global credit markets have prevented some investors from liquidating their holdings, including their holdings of auction rate securities. There was insufficient demand at auction for these two auction rate preferred securities. As a result, these affected securities are currently not liquid, and we could be required to hold them until they are redeemed by the issuer or to maturity. In the event we need to access the funds that are in an illiquid state, we will not be able to do so without a loss of principal, until a future auction on these investments is successful, the securities are redeemed by the issuer or they mature. As of December 31, 2008, the carrying value of all auction rate securities had been reduced by $118,000, from $1,150,000 to $1,032,000, reflecting an estimated change in fair market value due primarily to a lack of liquidity. Although the auction rate securities continue to pay interest according to their stated terms, based on valuation models, we have recorded an unrealized loss for an other-than-temporary change in valuation of $118,000. If the credit ratings of the security issuers deteriorate or if uncertainties in these markets continue and any decline in market value is determined to be other-than-temporary, we would be required to adjust the carrying value of the investment through an impairment charge, which could negatively affect our financial condition, cash flow and reported earnings.

We will continue to incur significant costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives.

As a public company, we will continue to incur significant legal, accounting and other expenses. In addition, the Sarbanes-Oxley Act, as well as rules subsequently implemented by the Securities and Exchange Commission, or SEC, and the Nasdaq Global Market, or Nasdaq, impose various requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. Our management and other personnel need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. For example, these rules and regulations to make it more difficult and more expensive for us to maintain director and officer liability insurance, and we may be required to incur substantial costs in the future to maintain the same or similar coverage.

The Sarbanes-Oxley Act of 2002 requires, among other things, that we maintain effective internal controls for financial reporting and disclosure controls and procedures. As a result, as of December 31, 2008, we were required to perform an evaluation of our internal controls over financial reporting to allow management to report on the effectiveness of those controls, as required by Section 404 of the Sarbanes-Oxley Act. Additionally, our independent auditors were required to perform a similar evaluation and report on the effectiveness of our internal controls over financial reporting. At December 31, 2008, management and our independent auditors did not identify any material weaknesses in our internal controls over financial reporting. Our efforts to comply with Section 404 and related regulations has required, and continues to require, the commitment of significant financial and managerial resources. While we anticipate maintaining the integrity of our internal controls over financial reporting and all other aspects of Section 404, we cannot be certain that a material weakness will not be identified when we test the effectiveness of our control systems in the future. If a material weakness is identified, we could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities, which would require additional financial and management resources, costly litigation or a loss of public confidence in our internal controls, which could have an adverse effect on the market price of our stock.

Some provisions of our charter documents and Delaware law may have anti-takeover effects that could discourage an acquisition of us by others, even if an acquisition would be beneficial to our stockholders and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our amended and restated certificate of incorporation and bylaws, as well as provisions of Delaware law, could make it more difficult for a third party to acquire us, even if doing so would benefit our stockholders, or remove our current management. These provisions include:

- a board of directors divided into three classes serving staggered three-year terms, such that not all members of the board will be elected at one time;
- authorizing the issuance of "blank check" preferred stock, the terms of which may be established and shares of which may be issued without stockholder approval;
- limiting the removal of directors by the stockholders;
- prohibiting stockholder action by written consent, thereby requiring all stockholder actions to be taken at a meeting of our stockholders;
- a requirement of approval of not less than 66 2/3% of all outstanding shares of our capital stock entitled to vote to amend any bylaws by stockholder action, or to amend specific provisions of our certificate of incorporation;
- eliminating the ability of stockholders to call a special meeting of stockholders; and
- establishing advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted upon at stockholder meetings.

These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, which is responsible for appointing the members of our management. In addition, we are subject to Section 203 of the Delaware General Corporation Law, which generally prohibits a Delaware corporation from engaging in any of a broad range of business combinations with a stockholder owning 15% or more of our outstanding voting stock for a period of three years following the date on which the stockholder became an interested stockholder, unless such transactions are approved by our board of directors. This provision could have the effect of delaying or preventing a change of control, whether or not it is desired by or beneficial to our stockholders. Such a delay or prevention of a change of control transaction could cause the market price of our stock to decline.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our facilities currently consist of approximately 26,000 square feet of laboratory and office space in two facilities in San Diego, California. We believe these facilities are adequate to meet our current needs and that additional space will be available on commercially reasonable terms as needed.

Item 3. Legal Proceedings

We are not currently a party to any legal proceeding.

Item 4. Submission of Matters to a Vote of Security Holders

No matters were submitted to a vote of security holders during the fourth quarter of fiscal year ended December 31, 2008.

PART II

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

Our common stock has been traded on the Nasdaq Global Market under the symbol "OPTR" since February 9, 2007. Prior to that time, there was no public market for our common stock. The following table sets forth the range of high and low sale prices for our common stock for each completed fiscal quarter since February 9, 2007.

2008	High	Low
First Quarter	$ 7.30	$ 5.90
Second Quarter	$ 9.00	$ 5.85
Third Quarter	$ 9.70	$ 7.24
Fourth Quarter	$ 12.14	$ 3.30

2007	High	Low
First Quarter (from February 9, 2007)	$ 10.74	$ 7.24
Second Quarter	$ 10.40	$ 8.50
Third Quarter	$ 10.42	$ 7.75
Fourth Quarter	$ 8.86	$ 6.50

As of March 11, 2009, there were approximately 71 holders of record of our common stock.

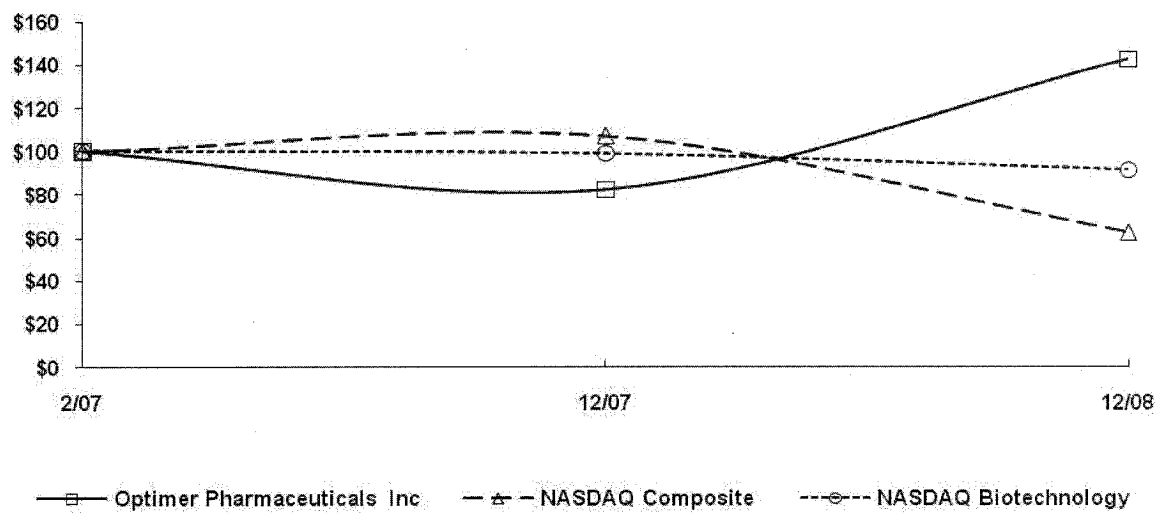
Dividends

We have never paid or declared cash dividends on our capital stock. We currently intend to retain future earnings, if any, for use in the expansion and operation of our business and do not anticipate paying any cash dividends in the foreseeable future.

Performance Measurement Comparison (1)

The following stock performance graph illustrates a comparison of the total stockholder return on our common stock since February 9, 2007, which is the date our common stock first began trading on the Nasdaq Global Market, to two indices: the Nasdaq Composite Index and the Nasdaq Biotechnology Index. The graph assumes an initial investment of $100 on February 9, 2007, and that all dividends were reinvested.

COMPARISON OF CUMULATIVE TOTAL RETURN*
Among Optimer Pharmaceuticals Inc, The NASDAQ Composite Index
And The NASDAQ Biotechnology Index



*$100 invested on 2/9/07 in stock & 1/31/07 in index-including reinvestment of dividends. Fiscal year ending December 31.

(1) This section is not "soliciting material", is not deemed "filed" with the SEC, is not subject to the liabilities of Section 18 of the Exchange Act, and is not to be incorporated by reference in any of our filings under the Exchange Act whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

Item 6. Selected Consolidated Financial Data

You should read the following selected consolidated financial and operating information together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and notes thereto included elsewhere in this report. Historical results for any prior period are not necessarily indicative of the results to be expected for any future period.

	Years Ended December 31,				
	2008	2007	2006	2005	2004
	(in thousands, except per share amounts)				
Statement of Operations Data:					
Collaboration and grant revenues	$ 1,023	$ 767	$ 933	$ 2,147	$ 1,111
Operating expenses:					
Research and development	29,036	41,569	10,481	7,047	8,571
Marketing	2,451	2,048	—	—	—
General and administrative	6,683	5,351	3,523	2,782	2,697
Total operating expenses	38,170	48,968	14,004	9,829	11,268
Loss from operations	(37,147)	(48,201)	(13,071)	(7,682)	(10,157)
Interest income and other, net	1,562	2,062	1,169	237	247
Net loss	(35,585)	(46,139)	(11,902)	(7,445)	(9,910)
Accretion to redemption amount of redeemable convertible preferred stock	—	—	(329)	(223)	(12)
Net loss attributable to common stockholders	$ (35,585)	$ (46,139)	$ (12,231)	$ (7,668)	$ (9,922)
Basic and diluted net loss per share attributable to common stockholders	$ (1.24)	$ (2.12)	$ (4.81)	$ (3.22)	$ (4.76)
Weighted average shares outstanding	28,683	21,715	2,543	2,383	2,084

	As of December 31,				
	2008	2007	2006	2005	2004
			(in thousands)		
Balance Sheet Data:					
Cash, cash equivalents and short-term investments	$ 39,326	$ 58,806	$ 21,341	$ 29,880	$ 1,953
Working capital	32,258	52,173	17,990	28,490	1,231
Total assets	42,295	60,786	24,114	32,335	4,903
Redeemable convertible preferred stock	—	—	65,460	65,078	32,175
Accumulated deficit	(133,382)	(97,698)	(51,558)	(39,656)	(32,212)
Total stockholders' equity (deficit)	34,231	52,903	(46,702)	(35,143)	(28,463)

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

The following discussion and analysis should be read in conjunction with our "Selected Consolidated Financial Data" and consolidated financial statements and accompanying notes appearing elsewhere in this report. This discussion and other parts of this report may contain forward-looking statements based upon current expectations that involve risks and uncertainties. Our actual results and the timing of selected events could differ materially from those anticipated in these forward-looking statements as a result of several factors, including those set forth under "Risk Factors" and elsewhere in this report.

Overview

We are a biopharmaceutical company focused on discovering, developing and commercializing innovative anti-infective products. Our current development efforts are focused on products that treat gastrointestinal infections, and related diseases where current therapies have limitations, including limited efficacy, serious adverse side effects, drug-to-drug interactions, difficult patient compliance and bacterial resistance.

We currently have two late-stage anti-infective product candidates, fidaxomicin, formerly known as OPT-80, and prulifloxacin.

Fidaxomicin, our lead product candidate, is an antibiotic currently in its second Phase 3 registration trial for the treatment of CDI, the most common nosocomial, or hospital acquired, diarrhea. In November 2008, we reported positive data from the first fidaxomicin Phase 3 trial, the largest single comparative study ever conducted against Vancocin. The top-line analysis of data from this trial showed that fidaxomicin achieved the primary endpoint of clinical cure and demonstrated a significantly lower recurrence rate compared to Vancocin, the only FDA-approved antibiotic for the treatment of CDI. Fidaxomicin was also well-tolerated in the trial. The second fidaxomicin Phase 3 trial is on-going and we anticipate completing enrollment and reporting data from this trial in 2009. We currently hold worldwide rights to fidaxomicin.

Prulifloxacin is a prodrug in the fluoroquinolone class of antibiotics, a widely-used class of broad-spectrum antibiotics. We are developing prulifloxacin as a treatment for infectious diarrhea in travelers. In July 2008, we reported positive top-line data from the first Phase 3 trial conducted in Mexico and Peru and in February 2009, we reported positive top-line data from the second Phase 3 trial conducted in India, Guatemala and Mexico. The top-line analysis of data from these studies showed that prulifloxacin met the primary endpoint of TLUS compared to placebo. We intend to conduct a Phase 4 trial of prulifloxacin subsequent to the NDA submission to compare prulifloxacin to ciprofloxacin for the treatment of infectious diarrhea. We plan to initially seek approval for prulifloxacin for the treatment of infectious diarrhea in travelers.

We are developing additional product candidates using our proprietary technology, including our Optimer One-Pot Synthesis, or OPopS™ drug discovery platform. OPopS is a computer-aided technology that enables the rapid and low-cost synthesis of a wide array of carbohydrate-based compounds. Two components of the OPopS technology that allow us to synthesize new compounds are GlycoOptimization and De Novo Glycosylation. These technologies are capable of rapidly generating drug candidates for broad therapeutic application. One of the more advanced OPopS product candidates is OPT-88, a disease-modifying intra-articular, or within the cavity of a joint, therapy for osteoarthritis. We plan to submit an Investigational New Drug application in 2009 and subsequently to, either ourselves or with a partner, initiate a Phase 1 study to assess safety of repetitive intra-articular injections of OPT-88 in patients with knee osteoarthritis.

We also acquired exclusive rights from Memorial Sloan-Kettering Cancer Center to develop and commercialize OPT-822, a novel carbohydrate-based cancer immunotherapy. We plan to seek a partner and initiate Phase 2/3 clinical trials for the treatment of metastatic breast cancer in Asia in 2009.

We were incorporated in November 1998. Since inception, we have focused on developing our product candidates, including fidaxomicin and prulifloxacin. We have never been profitable and have incurred significant net losses since our inception. As of December 31, 2008, we had an accumulated deficit of $133.4 million. These losses have resulted principally from costs incurred in connection with research and development activities, including the costs of clinical trial activities associated with our current lead product candidates, license fees and general and administrative expenses. We expect to continue to incur operating losses for the next several years as we pursue the clinical development and commercialization of our product candidates, as well as acquire or in-license additional products or product candidates, technologies or businesses that are complementary to our own.

Financial Operations Overview

Collaboration and Grant Revenues

We have not generated any revenues from sales of commercial products. Since inception, we have generated revenues primarily as a result of various collaborations with pharmaceutical and biotechnology companies and grants from government agencies. We may also periodically recognize as revenues non-refundable payments for achieving certain milestones during the term of our collaboration agreements.

Research and Development Expense

Research and development expense consists of expenses incurred in connection with identifying and developing our drug candidates and developing and advancing our drug discovery technology. Our research and development expenses consist primarily of salaries and related employee benefits, costs associated with clinical trials managed by our CROs and costs associated with non-clinical research activities and regulatory approvals. Our most significant costs are for clinical trials, including payments to vendors such as CROs, investigators, manufacturers of clinical supplies and related consultants. Our historical research and development expenses have resulted predominantly from our clinical trials of fidaxomicin and prulifloxacin, the development of our carbohydrate technology platforms, including OPopS, in-licensing fees and general research activities. We charge all research and development expenses to operations as they are incurred because the underlying technology associated with these expenditures relates to our research and development efforts and has no alternative future uses. From inception through December 31, 2008, we incurred total research and development expenses of approximately $113.4 million.

We use our internal research and development resources across several projects, and much of this use is not allocable to a specific project. Accordingly, we do not account for all of our internal research and development costs on a project basis. In addition to our internal resources, we use external service providers and vendors to conduct our clinical trials, to manufacture our product candidates to be used in clinical trials and to provide various other research and development related products and services. These external costs are allocable to specific projects.

External costs are expensed as incurred. We incurred $18.6 million, $34.4 million and $64.7 million of research and development expenses directly related to the development of fidaxomicin for the years ended December 31, 2008 and 2007, and cumulatively through December 31, 2008, respectively. The decrease in these research and development expenses, from 2007 to 2008, resulted primarily from expense recorded in 2007 related to a $20 million payment to Par Pharmaceutical to regain the rights to fidaxomicin in North America. We incurred $7.5 million, $4.0 million, and $16.2 million of research and development expenses directly related to the development of prulifloxacin for the years ended December 31, 2008 and 2007, and cumulatively through December 31, 2008, respectively. All other research and development expenses were for other clinical programs.

We expect our research and development expenses to increase as we complete our clinical trial activities with respect to fidaxomicin, prepare regulatory filings for marketing approval of fidaxomicin and prulifloxacin, incur expenses related to large-scale manufacturing of fidaxomicin and prulifloxacin, advance our other product candidates through the development process and invest in additional product opportunities and research programs. Although we expect our costs associated with clinical trials to decrease as we complete the second of two Phase 3 clinical trials for fidaxomicin, we expect to incur substantial costs in the preparation of applications for regulatory approval and manufacturing and scale-up for fidaxomicin and prulifloxacin. The process of conducting pre-clinical and clinical trials and obtaining regulatory approval for our product candidates is time-consuming, expensive and subject to many uncertainties. For example, the cost of clinical trials may vary significantly over the life of a project as a result of a variety of factors, including the number of patients enrolled, the rate of enrollment and the duration of patient treatment and follow-up. In addition, it is not uncommon for the FDA to request additional data following its review of an NDA, which can significantly lengthen the regulatory approval process and increase expenses.

As a result of the uncertainties discussed above, we are unable to determine with any significant degree of certainty the duration and completion costs of our research and development projects or when and to what extent we will generate revenues from the commercialization and sale of any of our product candidates. However, while we do not have specific estimates for the costs of all of our projects, we currently estimate that we will incur external costs of approximately $8.3 million to complete the Phase 3 clinical trials for fidaxomicin to treat CDI and approximately $1.3 million to complete the Phase 3 clinical trials for Prulifloxacin to treat infectious diarrhea in travelers.

General and Administrative Expense

General and administrative expense consists primarily of compensation, including stock-based compensation, and other expenses related to an allocated portion of facility cost, legal fees and other professional services expenses, our corporate

administrative employees and insurance costs. We anticipate that we will maintain our existing level of general and administrative expenditures. However, we will make determinations as to the necessary levels of general and administrative expenditures on an on-going basis in response to our research and development activities and regulatory obligations.

Interest Income (Expense) and Other, Net

Interest income (expense) and other, net consists of interest earned on our cash, cash equivalents and short-term investments and other-than-temporary declines in the market value of available-for-sale securities and cash and non-cash interest charges related to bridge financings.

Net Operating Losses and Tax Credit Carryforwards

As of December 31, 2008 we had federal, state and foreign net operating loss carryforwards of approximately $120.5 million, $123.9 million and $2.6 million, respectively. If not utilized, the net operating loss carryforwards will begin expiring in 2020 for federal purposes and 2012 for state purposes. The foreign losses originate from our subsidiary in Taiwan. The losses from our subsidiary in Taiwan expire five years after origination. As of December 31, 2008, we had both federal and state research and development tax credit carryforwards of approximately $2.2 million and $1.5 million, respectively. The federal tax credits will begin expiring in 2020 unless previously utilized and the state tax credits carryforward indefinitely. As of December 31, 2008, we had a state manufacturer's investment tax credit carryforward of approximately $103,000 which will begin to expire in 2011, unless previously utilized. Under Section 382 of the Internal Revenue Code of 1986, as amended, substantial changes in our ownership may limit the amount of net operating loss and tax credit carryforwards that could be utilized annually in the future to offset taxable income. Any such annual limitation may significantly reduce the utilization of the net operating losses and tax credits before they expire.

As of December 31, 2008, we have completed a Section 382/383 analysis regarding the limitation of the net operating losses and credit carryovers and had determined that the maximum amount of U.S. federal and state NOL and credit carryovers are available for utilization, subject to the annual limitation. Based on the analysis, the related deferred tax assets were reinstated in 2008 and the corresponding valuation allowance was increased. Any carryforwards that will expire prior to utilization as a result of future limitations will be removed from deferred tax assets with a corresponding reduction of the valuation allowance. Due to the existence of the valuation allowance, future changes in the unrecognized tax benefits will not impact the effective tax rate.

Critical Accounting Policies and Estimates

Our Management's Discussion and Analysis of our Financial Condition and Results of Operations is based on our consolidated financial statements, which have been prepared in conformity with generally accepted accounting principles in the United States. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, expenses and related disclosures. Actual results could differ from those estimates. While our significant accounting policies are described in more detail in Note 1 of the Notes to Consolidated Financial Statements appearing elsewhere in this report, we believe the following accounting policies to be critical to the judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition

Our collaboration agreements contain multiple elements, including non-refundable upfront fees, payments for reimbursement of third-party research costs, payments for ongoing research, payments associated with achieving specific development milestones and royalties based on specified percentages of net product sales, if any. We apply the revenue recognition criteria outlined in Staff Accounting Bulletin, or SAB No. 104, *Revenue Recognition* and Emerging Issues Task Force, or EITF, Issue 00-21, *Revenue Arrangements with Multiple Deliverables*, or EITF 00-21. In applying these revenue recognition criteria, we consider a variety of factors in determining the appropriate method of revenue recognition under these arrangements, such as whether the elements are separable, whether there are determinable fair values and whether there is a unique earnings process associated with each element of a contract.

Cash received in advance of services being performed is recorded as deferred revenue and recognized as revenue as services are performed over the applicable term of the agreement.

When a payment is specifically tied to a separate earnings process, revenues are recognized when the specific performance obligation associated with the payment is completed. Performance obligations typically consist of significant and substantive milestones. Revenues from milestone payments may be considered separable from funding for research services because of the uncertainty surrounding the achievement of milestones for products in early stages of development. Accordingly, these milestone payments are allowed to be recognized as revenue if and when the performance milestone is achieved if they represent a substantive earnings process as described in EITF 00-21.

In connection with certain research collaboration agreements, revenues are recognized from non-refundable upfront fees, which we do not believe are specifically tied to a separate earnings process, ratably over the term of the agreement or the period over which we have significant involvement or perform services. Research fees are recognized as revenue as the related research activities are performed.

Revenues derived from reimbursement of direct out-of-pocket expenses for research costs associated with grants are recorded in compliance with EITF Issue 99-19, *Reporting Revenue Gross as a Principal Versus Net as an Agent*, and EITF Issue 01-14, *Income Statement Characterization of Reimbursements Received for "Out-of-Pocket" Expenses Incurred.* According to the criteria established by these EITF Issues, in transactions where we act as a principal, with discretion to choose suppliers, bear credit risk and perform part of the services required in the transaction, we record revenue for the gross amount of the reimbursement. The costs associated with these reimbursements are reflected as a component of research and development expense in the consolidated statements of operations.

None of the payments that we have received from collaborators to date, whether recognized as revenue or deferred, are refundable even if the related program is not successful.

Research and Development

Research and development costs are expensed as incurred and consist primarily of costs associated with clinical trials, compensation, including stock-based compensation, and other expenses related to research and development, including personnel costs, facilities costs and depreciation.

When nonrefundable payments for goods or services to be received in the future for use in research and development activities are made, we apply the criteria outlined in EITF Issue 07-3, or EITF 07-3, *Accounting for Non-Refundable Advance Payments for Goods or Services to be Used in Future Research and Development Activities.* In accordance with EITF 07-3, these types of payments are deferred and capitalized. The capitalized amounts are expensed when the related goods are delivered or the services are performed.

Accrued Clinical Trial Costs

A substantial portion of our on-going research and development activities are performed under agreements we enter into with external service providers, including CROs, who conduct many of our research and development activities. We accrue the costs incurred under these contracts based on factors such as estimates of work performed, milestones achieved, patient enrollment and costs historically incurred for similar contracts. As actual costs become known, we adjust our accruals. Historically, our accruals have been within management's estimates, and no material adjustments to research and development expenses have been recognized. Subsequent changes in estimates may result in a material change in our accruals, which could also materially affect our results of operations.

Stock-Based Compensation

Effective January 1, 2006, we adopted Statement of Financial Accounting Standards, or SFAS, No. 123(R), *Share-Based Payment*, which revises SFAS No. 123, *Accounting for Stock-Based Compensation* and supersedes Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees*. SFAS No. 123(R) requires that share-based payment transactions with employees be recognized in the financial statements based on their fair value and recognized as compensation expense over the vesting period. We used the modified prospective method when we adopted SFAS No. 123(R) and accordingly we did not restate the results of operations for the prior periods. Compensation expense of $1.8 million, $1.2 million and $0.7 million was recognized in the years ended December 31, 2008, 2007 and 2006, respectively.

Stock-based compensation expense is estimated as of the grant date based on the fair value of the award and is recognized as expense over the requisite service period, which generally represents the vesting period. We estimate the fair value of our stock options using the Black-Scholes option-pricing model and the fair value of our stock awards based on the quoted market price of our common stock.

Estimating the fair value for stock options requires judgment, including estimating stock-price volatility, expected term, expected dividends and risk-free interest rates. The expected volatility rates are based on the historical fluctuation in the stock price since inception. The average expected term is calculated using SAB No. 107, "*Simplified Method for Estimating the Expected Term.*" Expected dividends are estimated based on our dividend history as well as our current projections. The risk-free interest rate for periods approximating the expected terms of the options is based on the U.S. Treasury yield curve in effect at the time of grant. These assumptions are updated on an annual basis or sooner if there is a significant change in circumstances that could affect these assumptions.

Equity instruments issued to non-employees are recorded at their fair value as determined in accordance with SFAS No.123(R) and EITF Issue 96-18, *Accounting for Equity Instruments That are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling Goods and Services*, and are periodically revalued as the equity instruments vest and are recognized as expense over the related service period.

Results of Operations

Comparison of Years Ended December 31, 2008 and 2007

Collaboration and Grant Revenues. Collaboration and grant revenues for the years ended December 31, 2008 and 2007 were $1,023,000 and $767,000, respectively. The increase of $256,000, or 33%, was primarily due to an increase in revenue from a NIH research grant, which was partially offset by a decrease in revenue from a collaboration with a natural healthcare company which was completed in 2007.

Research and Development Expense. Research and development for the years ended December 31, 2008 and 2007 was $29,036,000 and $41,569,000, respectively. The decrease of $12,533,000, or 30%, was due primarily to a $20.0 million payment in 2007 to Par to regain the rights to fidaxomicin in North America, and the purchase of $1.9 million of clinical supply material and active pharmaceutical ingredient. This decrease was partially offset by an increase in expenses of $7.0 million related to our fidaxomicin and prulifloxacin Phase 3 clinical trials in 2008.

Marketing Expense. Marketing expense for the years ended December 31, 2008 and 2007 was $2,451,000 and $2,048,000, respectively. The increase of $403,000, or 20%, was primarily due to an increase in medical education and pre-launch marketing efforts related to fidaxomicin.

General and Administrative Expense. General and administrative expense for the years ended December 31, 2008 and 2007 was $6,683,000 and $5,351,000, respectively. The increase of $1,332,000 or 25% was due to higher legal, accounting, investor relations, and compensation expenses, including an increase of $247,000 in stock compensation expense over the same period in the prior year.

Interest Income and Other, net. Net interest income and other for the years ended December 31, 2008 and 2007 were $1,562,000 and $2,061,000, respectively. The decrease of $500,000, or 24%, was primarily due to lower cash and short-term investments and lower overall interest rates. In addition, we recorded an impairment on our long-term investments of $118,000 in 2008.

Comparison of Years Ended December 31, 2007 and 2006

Collaboration and Grant Revenues. Collaboration and grant revenues for the years ended December 31, 2007 and 2006 were $767,000 and $933,000, respectively. The decrease of $166,000, or 18%, was primarily due to a decrease in revenue from a NIH grant and the conclusion of a development and license agreement, partially offset by an increase of $370,000 related to a collaboration with a natural healthcare company.

Research and Development Expense. Research and development for the years ended December 31, 2007 and 2006 was $41,569,000 and $10,481,000, respectively. The increase of $31,088,000, or 297% was due primarily to the $20.0 million payment to Par to reacquire the rights to fidaxomicin in North America and Israel, the advancement of our fidaxomicin and prulifloxacin clinical trials, including the initiation of the second pivotal Phase 3 trial for fidaxomicin, and the purchase of $1.9 million of fidaxomicin clinical supply material and active pharmaceutical ingredient for the fidaxomicin clinical study.

Marketing. We incurred $2,048,000 of marketing expense in the year ended December 31, 2007 and no such expense in the year ended December 31, 2006. The expenses in the year ended December 31, 2007 were related to salaries and pre-launch activities which include medical education, scientific conferences, and public relations services.

General and Administrative Expense. General and administrative expense for the year ended December 31, 2007 and 2006 was $5,351,000 and $3,523,000, respectively. The increase of $1,828,000, or 52%, was due to increased expenses to support a public company infrastructure which included higher legal expenses, insurance and compensation expenses, including a $679,000 of stock compensation expense, an increase of $265,000 over the prior year.

Interest Income and Other, net. Net interest income and other for the year ended December 31, 2007 and 2006 were $2,062,000 and $1,169,000, respectively. The increase was primarily due to higher cash and short-term investment balances as a result of our initial public offering completed in February 2007 and our private placement offering which closed in October 2007.

Liquidity and Capital Resources

Sources of Liquidity

Since inception, our operations have been financed primarily through the sale of equity securities. Through March 9, 2009, we received gross proceeds of approximately $202.4 million from the sale of shares of our preferred and common stock as follows:

- in May 2000, we sold a total of 1.6 million shares of Series A preferred stock for proceeds of $3.4 million;
- from March 2001 to December 2001, we sold a total of 4.1 million shares of Series B preferred stock for proceeds of $32.2 million;
- in April 2005, we sold a total of 1.5 million shares of Series C preferred stock for proceeds of $12.0 million;
- from April 2005 to November 2005, we sold a total of 2.9 million shares of Series D preferred stock for proceeds of $22.3 million;
- in February 2007, we sold a total of 7.0 million shares of our common stock in connection with our initial public offering for proceeds of $49.0 million;
- in October 2007, we sold a total of 4.6 million shares of our common stock in connection with a private placement offering for proceeds $35.9 million;
- in July 2008, we sold a total of 1.7 million shares of our common stock in a registered direct offering for proceeds of $14.7 million; and
- in March 2009, we sold a total of 3.3 million shares of our common stock and warrants to purchase up to an aggregate of 91,533 shares of our common stock in a registered direct offering for proceeds of $32.9 million.

Until required for operations, we invest a substantial portion of our available funds in money market funds, corporate debt securities, United States government instruments and other readily marketable debt instruments, all of which are investment-grade quality. We have established guidelines relating to diversification and maturities of our investments to preserve principal and maintain liquidity.

Cash Flows

As of December 31, 2008, our cash, cash equivalents and short-term investments totaled approximately $39.3 million as compared to $58.8 million as of December 31, 2007. The decrease of approximately $19.5 million was primarily due to cash used in operations and was partially offset by $14.7 million raised in a registered direct offering in July 2008. In addition, as noted above, in March 2009, we raised $32.9 million in a registered direct offering.

We cannot be certain if, when or to what extent we will receive cash inflows from the commercialization of our product candidates. We expect our development expenses to be substantial and to increase over the next few years as we advance the development of our product candidates and prepare for regulatory submissions and commercialization.

In February 2007, we regained worldwide rights to fidaxomicin from Par under a prospective buy-back agreement. We paid Par a one-time $20.0 million termination fee and purchased $1.9 million of fidaxomicin clinical supply material and active pharmaceutical ingredient. We are obligated to pay Par a one-time $5.0 million milestone payment, a 5% royalty on net sales by us or our affiliates of fidaxomicin in North America and Israel, and a 1.5% royalty on net sales by us or our affiliates of fidaxomicin in the rest of the world. In addition, in the event we license our right to market fidaxomicin in the rest of the world, we will be required to pay Par a 6.25% royalty on net revenues we receive related to fidaxomicin. We are obligated to pay each of these royalties, if any, on a country-by-country basis for seven years commencing on the applicable commercial launch in each such country. In connection with the exercise of our rights under the prospective buy-back agreement, Par assigned to us a supply agreement with Biocon. Under this agreement, Biocon is obligated to supply to us our requirements of the fidaxomicin API for certain markets. We may be obligated to pay a $3.0 million prepayment to Biocon, subject to future set-offs.

In June 2004, we entered into a license agreement with Nippon Shinyaku pursuant to which we acquired the non-exclusive right to import and purchase prulifloxacin, and the exclusive right (with the right to sublicense), within the United States, to develop, make, use, offer to sell, sell and license products suitable for consumption by humans containing prulifloxacin. Additionally, we acquired rights within the United States to a key patent which covers the compound and the treatment of bacterial infections in

humans and animals. Under the terms of the agreement, we will be required to pay Nippon Shinyaku a milestone payment in the amount of $1.0 million upon the filing, if any, of an NDA for prulifloxacin in the United States.

In October 2008, our Compensation Committee adopted a Severance Benefit Plan covering certain eligible employees of the Company, including executive officers. Pursuant to the plan, upon an involuntary termination other than for cause an eligible employee may be entitled to receive specified severance benefits. The benefits may include cash severance payments and acceleration of stock award vesting. The level of benefits provided under the plan depends upon an eligible employee's position and years of service, and whether the termination is related to a change in control.

Funding Requirements

Our future capital uses and requirements depend on numerous factors including, but not limited to, the following:

- the progress of our clinical trials, including expenses to support the trials and the milestone payments that may become payable to Par and Nippon Shinyaku;
- our ability to establish and maintain strategic collaborations, including partnerships and other arrangements;
- the costs involved in prosecuting, enforcing or defending patent claims or other intellectual property rights;
- the costs and timing of regulatory approvals;
- the costs of establishing sales or distribution capabilities;
- the commercial success of our products; and
- the extent to which we in-license, acquire or invest in other indications, products, technologies and businesses.

We believe that our existing cash and cash equivalents will be sufficient to meet our capital requirements for at least the next 15 months.

Until we can generate significant cash from our operations, we expect to continue to fund our operations with existing cash resources that were primarily generated from offerings of our equity securities and collaborations and government grants. In addition, we may finance future cash needs through the sale of additional equity securities, strategic collaboration agreements and debt financing. However, we may not be successful in entering into additional collaboration agreements, in receiving milestone or royalty payments under new or existing collaboration agreements, in obtaining new government grants or in obtaining equity or debt financing. In addition, we cannot be sure that our existing cash and investment resources will be adequate, that financing will be available when needed or that, if available, financing will be obtained on terms favorable to us or our stockholders. Having insufficient funds may require us to delay, scale-back or eliminate some or all of our development programs, relinquish some or even all of our rights to product candidates at an earlier stage of development or renegotiate less favorable terms than we would otherwise choose. Failure to obtain adequate financing also may adversely affect our ability to operate as a going concern. If we raise funds by issuing equity securities, substantial dilution to existing stockholders would likely result. If we raise funds by incurring additional debt financing, the terms of the debt may involve significant cash payment obligations as well as covenants and specific financial ratios that may restrict our ability to operate our business.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements.

Contractual Obligations

The following table describes our long-term contractual obligations and commitments as of December 31, 2008:

	Payments Due by Period				
	Total	Less than 1 year	1-2 years	3-5 years	After 5 years
			(in thousands)		
Operating lease obligations	$ 2,099	$ 856	$ 1,243	$ —	$ —

We contracted with a CRO for clinical research services for the fidaxomicin Phase 3 clinical trials and prulifloxacin Phase 3 clinical trials. We have issued purchase orders totaling $42.4 million as of December 31, 2008 for these services, $8.4 million, $9.8 million and $20.4 million were issued in 2008, 2007, and 2006, respectively. As of December 31, 2008, we have paid $28.6 million related to these purchase orders. We can terminate the service agreement at any time upon 60 days' written notice to the CRO. We have not included any amounts related to the CRO contract in the table above.

The contractual obligations table does not include (a) a potential future milestone payment in the amount of $1.0 million to Nippon Shinyaku due upon filing our first NDA in the United States for prulifloxacin, (b) potential future milestone payments to Cempra in the amount of $1.0 million due upon the regulatory approval of each of the first two products we develop under our licensing agreement with Cempra in any country which is a member of the Association of Southeast Asian Nations, or ASEAN, (c) potential future milestone payments to SKI for each product licensed under the SKI agreement as follows: (i) $500,000 upon the commencement of Phase 3 clinical studies, (ii) $750,000 upon the filing of the first NDA, (iii) $1.5 million upon marketing approval in the United States and (iv) $1.0 million upon marketing approval in each and any of Japan and certain European countries, (d) potential future milestone payments of up to $14.0 million to TSRI due upon achievement of certain clinical milestones, the filing of NDAs or their foreign equivalents and government marketing and distribution approval, or (e) a future $5.0 million milestone payment to Par upon the earliest occurrence of (i) the successful completion by us of our pivotal Phase 3 trial for fidaxomicin, (ii) our grant to a third party of the rights to fidaxomicin or (iii) the submission to the FDA of an NDA for fidaxomicin. We may also be required to pay royalties on any net sales of prulifloxacin, fidaxomicin and other licensed product candidates. The milestone and royalty payments under our license agreements are not included in the table above because we cannot, at this time, determine when or if the related milestones will be achieved or the events triggering the commencement of payment obligations will occur.

Recently Issued Accounting Pronouncements

In December 2007, the Financial Accounting Standards Board, or FASB issued Statement of Financial Accounting Standards, or SFAS No. 160, *"Noncontrolling Interests in Consolidated Financial Statements — An Amendment of ARB No. 51"*, or SFAS 160. SFAS 160 requires the recognition of a noncontrolling interest, sometimes called minority interest, as equity in the consolidated financial statements and separate from the parent's equity. The amount of net income attributable to the noncontrolling interest will be included in consolidated net income on the face of the income statement. SFAS 160 clarifies that changes in a parent's ownership interest in a subsidiary that do not result in deconsolidation are equity transactions if the parent retains its controlling financial interest. In addition, this statement requires that a parent recognize a gain or loss in net income when a subsidiary is deconsolidated. Such gain or loss will be measured using the fair value of the noncontrolling equity investment on the deconsolidation date. SFAS 160 also includes expanded disclosure requirements regarding the interests of the parent and its noncontrolling interest. SFAS 160 is effective for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008. Earlier adoption is prohibited. We do not expect the adoption of this standard to have a material impact on our financial position, cash flows, or results of operations.

In December 2007, the FASB issued SFAS 141 (revised 2007), "Business Combinations", or SFAS 141(R). SFAS 141(R) establishes principles and requirements for how an acquirer recognizes and measures in its financial statements the identifiable assets acquired, the liabilities assumed, any noncontrolling interest in the acquiree and the goodwill acquired in connection with business combinations. SFAS 141(R) also establishes disclosure requirements to enable the evaluation of the nature and financial effects of the business combination. SFAS 141(R) is effective for fiscal years beginning on or after December 15, 2008. We do not expect the adoption of this standard to have a material impact on our financial position, cash flows, or results of operations.

In March 2008, the FASB issued SFAS No. 161, *Disclosures about Derivative Instruments and Hedging Activities, an amendment of FASB Statement No. 133.* This new standard requires enhanced disclosures for derivative instruments, including those used in hedging activities. It is effective for fiscal years and interim periods beginning after November 15, 2008. We do not expect the adoption of this standard to have a material impact on our financial position, cash flows, or results of operations.

In April 2008, the FASB issued FASB Staff Position, or FSP, FAS 142-3, *Determination of the Useful Life of Intangible Assets.* FSP FAS 142-3 amends the factors that should be considered in developing renewal or extension assumptions used to determine the useful life of a recognized intangible asset under FASB Statement No. 142, *Goodwill and Other Intangible Assets.* FSP FAS 142-3 is effective for fiscal years beginning after December 15, 2008 and early adoption is prohibited. We do not expect the adoption of this standard to have a material impact on our financial position, cash flows, or results of operations.

In January 2009, the FASB FSP issued FSP EITF 99-20-1, *Amendments to the Impairment Guidance of EITF 99-20.* This new standard amends the impairment guidance in EITF Issue No. 99-20, *Recognition of Interest Income and Impairment on Purchased Beneficial Interests and Beneficial Interests That Continue to Be Held by a Transferor in Securitized Financial Assets,* to achieve more consistent determination, of whether an other-than-temporary impairment has occurred. FSP EITF 99-20-1 also retains and emphasizes the objective of an other than-temporary impairment assessment and the related disclosure requirements in FASB

Statement No. 115, *Accounting for Certain Investments in Debt and Equity Securities,* and other related guidance. FSP EITF 99-20-1 is effective for interim and annual reporting periods ending after December 15, 2008, and shall be applied prospectively. Retrospective application to a prior interim or annual reporting period is prohibited. We adopted this standard in our fiscal year ended December 31, 2008. The adoption did not have a material impact on our financial position, cash flows, or results of operations.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Our cash and cash equivalents and short-term investments as of December 31, 2008 consisted primarily of money market funds, corporate debt securities, United States government instruments and other readily marketable debt instruments. Our primary exposure to market risk is interest income sensitivity, which is affected by changes in the general level of U.S. interest rates. The primary objective of our investment activities is to preserve principal while at the same time maximizing the income we receive from our investments without significantly increasing risk. A hypothetical ten percent change in interest rates during the year ended December 31, 2008 would have resulted in approximately a $177,000 change in net loss. Accordingly, we do not expect that our operating results or cash flows would be affected to any significant degree a sudden change in market interest rates on our securities portfolio. In general, money market funds are not subject to market risk because the interest paid on such funds fluctuates with the prevailing interest rate.

Item 8. Financial Statements and Supplementary Data

Our financial statements required by this item are attached to this Report beginning on page 61.

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

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this report, an evaluation was performed under the supervision and with the participation of our management, including our chief executive officer and chief financial officer (collectively, our "certifying officers"), of the effectiveness of the design and operation of our disclosure controls and procedures. Based on their evaluation, our certifying officers concluded that these disclosure controls and procedures are effective in providing reasonable assurance that the information required to be disclosed by us in our periodic reports filed with the SEC is recorded, processed, summarized and reported within the time periods specified by the SEC's rules and SEC reports.

We believe that a controls system, no matter how well designed and operated, is based in part upon certain assumptions about the likelihood of future events, and therefore can only provide reasonable, not absolute, assurance that the objectives of the controls system are met, and no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within a company have been detected.

In addition, we have reviewed our internal controls over financial reporting and have made no changes during the quarter ended December 31, 2008, that our certifying officers concluded materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Internal Control Over Financial Reporting

(a) Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

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

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

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2008. We based this assessment on criteria for effective internal control over financial reporting described in "Internal Control-Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Our assessment included an evaluation of the design of our internal control over financial reporting and testing of the operational effectiveness of its internal control over financial reporting. We reviewed the results of our assessment with the Audit Committee.

Based on this assessment, management determined that, as of December 31, 2008, our internal control over financial reporting was effective to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America.

Ernst & Young LLP, the Independent registered public accounting firm that audited the Company's consolidated financial statements included in this annual report, has issued its report on the effectiveness of the Company's internal control over financial reporting as of December 31, 2008.

(b) *Report of Independent Registered Public Accounting Firm*

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The Board of Directors and
Stockholders of Optimer Pharmaceuticals, Inc.

We have audited Optimer Pharmaceuticals, Inc.'s internal control over financial reporting as of December 31, 2008, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission ("the COSO criteria"). Optimer Pharmaceuticals, Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Optimer Pharmaceuticals, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2008, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Optimer Pharmaceuticals, Inc. as of December 31, 2008 and 2007, and the related consolidated statements of operations, redeemable convertible preferred stock and stockholders' equity (deficit), and cash flows for each of the three years in the period ended December 31, 2008 of Optimer Pharmaceuticals, Inc. and our report dated March 11, 2009 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Diego, California
March 11, 2009

Item 9B. Other Information.

None.

PART III

Certain information required by Part III is omitted from this report because we will file a definitive proxy statement within 120 days after the end of our fiscal year ended December 31, 2008 pursuant to Regulation 14A (the "Proxy Statement") for our annual meeting of stockholders to be held on May 6, 2009, and certain information included in the Proxy Statement is incorporated herein by reference.

Item 10. Directors, Executive Officers and Corporate Governance

We have adopted a Code of Business Conduct and Ethics that applies to all officers, directors and employees. The Code of Business Conduct and Ethics is available on our website at www.optimerpharma.com. If we make any substantive amendments to the Code of Business Conduct and Ethics or grant any waiver from a provision of the Code to any executive officer or director, we will promptly disclose the nature of the amendment or waiver on our website. We will promptly disclose on our website (i) the nature of any amendment to the policy that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions and (ii) the nature of any waiver, including an implicit waiver, from a provision of the policy that is granted to one of these specified individuals, the name of such person who is granted the waiver and the date of the waiver.

The other information required by this item will be set forth in the Proxy Statement and is incorporated in this report by reference.

Item 11. Executive Compensation

The information required by this item will be set forth in the Proxy Statement and is incorporated in this report by reference.

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

The information required by this item will be set forth in the Proxy Statement and is incorporated in this report by reference.

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

The information required by this item will be set forth in the Proxy Statement and is incorporated in this report by reference.

Item 14. Principal Accountant Fees and Services

The information required by this item will be set forth in the Proxy Statement and is incorporated in this report by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

1. *Financial Statements*

See Index to Consolidated Financial Statements in Item 8 of this report.

2. *Financial Statement Schedules*

None

3. *Exhibits*

Exhibit No.		Description of Document
3.1	(3)	Certificate of Incorporation of Optimer Pharmaceuticals, Inc., as amended and restated.
3.2	(7)	Bylaws of Optimer Pharmaceuticals, Inc., as amended.
4.1	(4)	Common Stock Certificate of Optimer Pharmaceuticals, Inc.
4.2	(1)	Investors' Rights Agreement by and among Optimer Pharmaceuticals, Inc. and certain stockholders of the registrant dated November 30, 2005, as amended and restated.
4.3	(6)	Registration Rights Agreement, dated October 23, 2007, by and between Optimer Pharmaceuticals, Inc. and the purchasers listed on the signature pages thereto.
4.4	(11)	Form of Warrant.
10.1	(1)*	Master Service Agreement between Optimer Pharmaceuticals, Inc. and Advanced Biologics, LLC (subsequently INC Research, Inc.), dated November 16, 2005, as amended.
10.2	*	Collaboration Research and Development and License Agreement between Optimer Pharmaceuticals, Inc. and Cempra Pharmaceuticals, Inc., dated March 31, 2006, as amended.
10.3	(4)*	Agreement between Optimer Pharmaceuticals, Inc. and Sloan-Kettering Institute for Cancer Research dated July 31, 2002, as amended.
10.4	(3)*	License Agreement between Optimer Pharmaceuticals, Inc. and Nippon Shinyaku Co., Ltd., dated June 10, 2004.
10.5	(1)*	License Agreement between Optimer Pharmaceuticals, Inc. and The Scripps Research Institute dated July 23, 1999.
10.6	(1)*	License Agreement between Optimer Pharmaceuticals, Inc. and The Scripps Research Institute dated May 30, 2001.
10.7	(1)*	License Agreement between Optimer Pharmaceuticals, Inc. and The Scripps Research Institute dated May 30, 2001.
10.8	(1)*	License Agreement between Optimer Pharmaceuticals, Inc. and The Scripps Research Institute dated June 1, 2004.
10.9	(3)	Building Lease between Optimer Pharmaceuticals, Inc. and Pacific Sorrento Technology Park dated May 1, 2001, as amended by the First Amendment to Building Lease between Optimer Pharmaceuticals, Inc. and Pacific Sorrento Technology Park dated July 12, 2001.
10.10	(1)+	Form of Employee Proprietary Information Agreement of Optimer Pharmaceuticals, Inc.
10.11	+	Employment Agreement between Optimer Pharmaceuticals, Inc. and Michael N. Chang dated June 17, 2005, as amended on October 2, 2008.
10.12	(1)+	Offer letter between Optimer Pharmaceuticals, Inc. and Sherwood L. Gorbach dated October 6, 2005.
10.13	+	Offer letter between Optimer Pharmaceuticals, Inc. and Kevin P. Poulos dated June 15, 2006, as amended on October 2, 2008.
10.14	+	Offer letter between Optimer Pharmaceuticals, Inc. and John D. Prunty dated May 10, 2006, as amended on October 2, 2008.
10.15	(1)+	Offer letter between Optimer Pharmaceuticals, Inc. and Tessie M. Che dated August 30, 2001.
10.16	(1)+	Offer letter between Optimer Pharmaceuticals, Inc. and Youe-Kong Shue dated February 18, 2000.
10.17	(1)+	Form of Indemnification Agreement between Optimer Pharmaceuticals, Inc. and its directors and officers.
10.18	(1)+	1998 Stock Plan of Optimer Pharmaceuticals, Inc.
10.19	(1)+	Stock Plan Stock Option Agreement of Optimer Pharmaceuticals, Inc.
10.20	(3)+	2006 Equity Incentive Plan of Optimer Pharmaceuticals, Inc.
10.21	(7)+	Employee Stock Purchase Plan of Optimer Pharmaceuticals, Inc., as amended.
10.22	(3)	Prospective Buy-Back Agreement between Optimer Pharmaceuticals, Inc. and Par Pharmaceutical, Inc. dated January 19, 2007.
10.23	(5)*	Supply Agreement with Biocon Limited dated August 29, 2005, as amended.

10.24	(5)*	Assignment letter between Par Pharmaceutical, Inc. and Biocon Limited dated January 16, 2007.
10.25	(8)+	Summary of Optimer Pharmaceuticals, Inc. 2009 Incentive Compensation Plan.
10.26	(9)	Office Lease, dated August 18, 2008, by and between Optimer Pharmaceuticals, Inc. and Trizec Sorrento Towers, LLC.
10.27	(10)+	Optimer Pharmaceuticals, Inc. Severance Benefit Plan
23.1		Consent of Independent Registered Public Accounting Firm.
31.1		Certification of principal executive officer required by Rule 13a-14(a) or Rule 15d-14(a).
31.2		Certification of principal financial officer required by Rule 13a-14(a) or Rule 15d-14(a).
32		Certification by the Chief Executive Officer and the Chief Financial Officer of Optimer Pharmaceuticals, Inc., as required by Rule 13a-14(b) or 15d-14(b) and Section 1350 of Chapter 63 of Title 18 of the United States Code (18 U.S.C. 1350).

+ Indicates management contract or compensatory plan.

* Confidential treatment has been granted with respect to certain portions of this exhibit. Omitted portions have been filed separately with the Securities and Exchange Commission.

(1) Filed with Registrant's Registration Statement on Form S-1 on November 9, 2006.

(2) Filed with Registrant's Amendment No. 2 to Registration Statement on Form S-1 on January 5, 2007.

(3) Filed with Registrant's Amendment No. 3 to Registration Statement on Form S-1 on January 22, 2007.

(4) Filed with Registrant's Amendment No. 4 to Registration Statement on Form S-1 on February 5, 2007.

(5) Filed with the Registrant's Current Report on Form 8-K on February 26, 2007.

(6) Filed with the Registrant's Current Report on Form 8-K on October 29, 2007.

(7) Filed with the Registrant's Current Report on Form 8-K on September 18, 2007.

(8) Filed with the Registrant's Current Report on Form 8-K on January 13, 2009.

(9) Filed with the Registrant's Current Report on Form 8-K on August 21, 2008.

(10) Filed with the Registrant's Current Report on Form 8-K on October 8, 2008.

(11) Filed with the Registrant's Current Report on Form 8-K on March 5, 2009.

SIGNATURES

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

OPTIMER PHARMACEUTICALS

Dated: March 12, 2009

By: /s/ Michael N. Chang
Name: **Michael N. Chang**
Title: ***President and Chief Executive Officer***

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

Signature	Title	Date
/s/ MICHAEL N. CHANG Michael N. Chang	President, Chief Executive Officer and Director (Principal Executive Officer)	March 12, 2009
/s/ JOHN D. PRUNTY John D. Prunty	Chief Financial Officer (Principal Accounting and Financial Officer)	March 12, 2009
/s/ ANTHONY E. ALTIG Anthony E. Altig	Director	March 12, 2009
/s/ MARK AUERBACH Mark Auerbach	Director	March 12, 2009
/s/ JOSEPH Y. CHANG Joseph Y. Chang	Director	March 12, 2009
/s/ PETER E. GREBOW PETER E. GREBOW	Director	March 12, 2009
/s/ ALAIN B. SCHREIBER Alain B. Schreiber	Director	March 12, 2009

Item 8. Financial Statements and Supplementary Data

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and
Stockholders of Optimer Pharmaceuticals Inc.

We have audited the accompanying consolidated balance sheets of Optimer Pharmaceuticals, Inc. as of December 31, 2008 and 2007, and the related consolidated statements of operations, redeemable convertible preferred stock and stockholders' equity (deficit), and cash flows for each of the three years in the period ended December 31, 2008. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the 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 financial statements referred to above present fairly, in all material respects, the consolidated financial position of Optimer Pharmaceuticals, Inc. at December 31, 2008 and 2007, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2008, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Optimer Pharmaceuticals, Inc.'s internal control over financial reporting as of December 31, 2008, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 11, 2009 expressed an unqualified opinion thereon.

/s/ ERNST & YOUNG LLP

San Diego, California
March 11, 2009

Optimer Pharmaceuticals, Inc.
Consolidated Balance Sheets

	December 31, 2008	December 31, 2007
ASSETS		
Current assets:		
Cash and cash equivalents	$ 16,778,880	$ 3,191,814
Short-term investments	22,547,515	55,613,785
Research grant, contract and other receivables	211,299	95,184
Prepaid expenses and other current assets	533,371	872,810
Total current assets	40,071,065	59,773,593
Restricted cash	170,000	—
Property and equipment, net	694,183	705,374
Long-term investments	1,032,000	—
Other assets	328,250	306,573
Total assets	$ 42,295,498	$ 60,785,540
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 3,767,831	$ 2,602,152
Accrued expenses	4,045,660	4,998,025
Total current liabilities	7,813,491	7,600,177
Deferred rent	251,504	281,894
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, par value $0.001, 10,000,000 shares and no shares authorized at December 31, 2008 and 2007, respectively	—	—
Common stock, $0.001 par value, 75,000,000 shares authorized, 29,716,751 shares and 27,903,705 shares issued and outstanding at December 31, 2008 and 2007, respectively	29,717	27,904
Treasury stock, at cost; no shares and 46,153 shares held December 31, 2008 and 2007, respectively	—	(100,000)
Additional paid-in capital	167,544,806	150,681,519
Accumulated other comprehensive gain (loss)	38,088	(8,396)
Accumulated deficit	(133,382,108)	(97,697,558)
Total stockholders' equity	34,230,503	52,903,469
Total liabilities and stockholders' equity	$ 42,295,498	$ 60,785,540

See accompanying notes.

Optimer Pharmaceuticals, Inc.
Consolidated Statements of Operations

	Years Ended December 31,		
	2008	2007	2006
Revenues:			
Research grants	$ 973,370	$ 333,610	$ 676,764
Collaborative research agreements	50,000	433,555	256,326
Total revenues	1,023,370	767,165	933,090
Operating expenses:			
Research and development	29,035,828	41,569,067	10,480,924
Marketing	2,451,191	2,048,002	—
General and administrative	6,682,881	5,350,800	3,523,221
Total operating expenses	38,169,900	48,967,869	14,004,145
Loss from operations	(37,146,530)	(48,200,704)	(13,071,055)
Interest income and other, net	1,561,934	2,061,527	1,169,160
Net loss	(35,584,596)	(46,139,177)	(11,901,895)
Accretion to redemption amount of redeemable convertible preferred stock	—	—	(329,207)
Net loss allocable to common stockholders	$ (35,584,596)	$ (46,139,177)	$ (12,231,102)
Basic and diluted net loss per share attributable to common stockholders	$ (1.24)	$ (2.12)	$ (4.81)
Shares used to compute basic and diluted net loss per share attributable to common stockholders	28,682,542	21,715,332	2,542,893

See accompanying notes.

Optimer Pharmaceuticals, Inc.
Consolidated Statements of Stockholders' Equity (Deficit)

	Redeemable Convertible		Stockholders' Equity (Deficit)									
	Redeemable Convertible Series B, C and D Preferred Stock		Series A Convertible Preferred Stock		Common Stock		Treasury Stock		Additional paid-in capital	Accumulated other comprehensive income (loss)	Accumulated deficit	Total
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount				
Balance at December 31, 2005	8,525,784	$ 65,078,437	1,569,204	$ 1,569	2,414,236	$ 2,414	—	$ —	$ 4,558,456	$ (49,224)	$ (39,656,486)	$ (35,143,271.00)
Issuance of common stock upon exercise of options	—	—	—	—	290,240	290	—	—	156,096	—	—	156,386
Accretion of redemption amount for Series B, C and D convertible preferred stock	—	329,208	—	—	—	—	—	—	(329,208)	—	—	(329,208)
Exercise of Series D warrants	6,666	51,998	—	—	—	—	—	—	—	—	—	—
Compensation expense related to grants of consultant stock options	—	—	—	—	—	—	—	—	158,850	—	—	158,850
Employee stock based compensation under FAS123(R)	—	—	—	—	—	—	—	—	553,181	—	—	553,181
Repurchase of common stock	—	—	—	—	—	—	(46,153)	(100,000)	—	—	—	(100,000)
Retirement of Series A convertible preferred stock	—	—	(46,153)	(46)	—	—	—	—	(99,954)	—	—	(100,000)
Comprehensive loss:												
Unrealized loss on short-term investment	—	—	—	—	—	—	—	—	—	(5,872)	—	(5,872)
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	10,125	—	10,125
Net loss	—	—	—	—	—	—	—	—	—	—	(11,901,895)	(11,901,895)
Comprehensive loss	—	—	—	—	—	—	—	—	—	—	—	(11,897,642)
Balance at December 31, 2006	8,532,450	65,459,643	1,523,051	1,523	2,704,476	2,704	(46,153)	(100,000)	4,997,421	(44,971)	(51,558,381)	(46,701,704)
Issuance of common stock upon exercise of options	—	—	—	—	182,382	182	—	—	176,365	—	—	176,547
Issuance of common stock during the initial public offerings, net	—	—	—	—	7,000,000	7,000	—	—	43,612,117	—	—	43,619,117
Issuance of common stock through stock awards	—	—	—	—	17,500	18	—	—	148,208	—	—	148,226
Issuance of common stock pursuant to employee stock purchase plan			—	—	22,682	23	—	—	134,942	—	—	134,965
Issuance of common stock during private placement, net			—	—	4,600,000	4,600	—	—	33,550,388	—	—	33,554,988
Conversion of preferred stock to common stock	(8,532,450)	(65,459,643)	(1,523,051)	(1,523)	12,246,229	12,247	—	—	65,448,919	—	—	65,459,643
Issuance of common stock upon exercise of warrants			—	—	1,130,436	1,130	—	—	1,369,137	—	—	1,370,267
Compensation expense related to grants of consultant stock options	—	—	—	—	—	—	—	—	34,720	—	—	34,720
Employee stock based compensation under FAS123(R)	—	—	—	—	—	—	—	—	1,209,302	—	—	1,209,302
Comprehensive loss:												
Unrealized loss on short-term investment	—	—	—	—	—	—	—	—	—	(31,923)	—	(31,923)
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	68,498	—	68,498
Net loss	—	—	—	—	—	—	—	—	—	—	(46,139,177)	(46,139,177)
Comprehensive loss	—	—	—	—	—	—	—	—	—	—	—	(46,102,602)
Balance at December 31, 2007	—	—	—	—	27,903,705	27,904	(46,153)	(100,000)	150,681,519	(8,396)	(97,697,558)	$ 52,903,469

Optimer Pharmaceuticals, Inc.
Consolidated Statements of Stockholders' Equity (Deficit)

	Redeemable Convertible Redeemable Convertible Series B, C and D Preferred Stock		Stockholders' Equity (Deficit)									
			Series A Convertible Preferred Stock		Common Stock		Treasury Stock		Additional paid-in capital	Accumulated other comprehensive income (loss)	Accumulated deficit	Total
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount				
Issuance of common stock upon exercise of options	—	—	—	—	68,077	68	—	—	69,694	—	—	69,762
Issuance of common stock, net	—	—	—	—	1,743,396	1,743	—	—	14,738,332	—	—	14,740,075
Issuance of common stock pursuant to employee stock purchase plan		—	—	—	47,726	48	—	—	291,185	—	—	291,233
Compensation expense related to grants of consultant stock options	—	—	—	—	—	—	—	—	25,637	—	—	25,637
Employee stock based compensation under FAS123(R)	—	—	—	—	—	—	—	—	1,738,439	—	—	1,738,439
Retirement of treasury stock	—	—	—	—		(46)	46,153	100,000	—	—	(99,954)	—
Comprehensive loss:												
Unrealized loss on short-term investment	—	—	—	—	—	—	—	—	—	(5,374)	—	(5,374)
Foreign currency translation adjustment	—	—	—	—	—	—	—	—	—	51,858	—	51,858
Net loss	—	—	—	—	—	—	—	—	—	—	(35,584,596)	(35,584,596)
Comprehensive loss	—	—	—	—	—	—	—	—	—	—	—	(35,538,112)
Balance at December 31, 2008	—	$ —	—	$ —	29,762,904	$ 29,717	—	$ —	$ 167,544,806	$ 38,088	$ (133,382,108)	$ 34,230,503

Optimer Pharmaceuticals, Inc.
Consolidated Statements of Cash Flows

	Years Ended December 31,		
	2008	2007	2006
Operating activities			
Net loss	$ (35,584,596)	$ (46,139,177)	$ (11,901,895)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	219,878	285,515	496,211
Stock based compensation	1,764,076	1,244,022	712,031
Stock awards	—	148,226	—
Non-cash compensation related to forgiveness of note receivable from officer	—	—	262,500
Loss on disposal of assets	—	—	(45,339)
Impairment of long-term securities	118,000	—	—
Deferred rent	(30,390)	(10,490)	12,970
Changes in operating assets and liabilities:			
Prepaid expenses and other current assets	339,439	676,252	(1,449,189)
Research grant, contract and other receivables	(116,115)	68,318	466,626
Restricted cash	(170,000)	—	—
Other assets	(21,677)	8,917	(2,894)
Accounts payable and accrued expenses	213,314	2,536,584	2,943,357
Net cash used in operating activities	(33,268,071)	(41,181,833)	(8,505,622)
Investing activities			
Purchases of short-term investments	(31,306,561)	(86,993,067)	(10,478,237)
Sales or maturity of short-term investments	63,250,000	46,610,000	5,190,000
Purchase of property and equipment	(208,686)	(246,326)	(46,173)
Net cash provided by (used) in investing activities	31,734,753	(40,629,393)	(5,334,410)
Financing activities			
Proceeds from sale of common stock	15,101,070	77,485,617	156,386
Proceeds from exercise of Series D warrants	—	1,370,267	51,998
Repurchase of common stock	—	—	(100,000)
Repurchase of Series A preferred stock	—	—	(100,000)
Net cash provided by financing activities	15,101,070	78,855,884	8,384
Effect of exchange rate changes on cash and cash equivalents	19,314	24,718	10,127
Net increase (decrease) in cash and cash equivalents	13,587,066	(2,930,624)	(13,821,521)
Cash and cash equivalents at beginning of year	3,191,814	6,122,438	19,943,959
Cash and cash equivalents at end of year	$ 16,778,880	$ 3,191,814	$ 6,122,438
Supplemental disclosure of cash flow information:			
Conversion of redeemable convertible preferred stock to common stock	$ —	$ 65,461,166	$ —
Retirement of treasury stock	100,000	—	—

See accompanying notes.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Organization and Summary of Significant Accounting Policies

Optimer Pharmaceuticals, Inc. ("Optimer" or the "Company") was incorporated in Delaware on November 18, 1998. The Company has a wholly owned subsidiary, Optimer Biotechnology, Inc., which is incorporated and located in Taiwan.

Optimer is a biopharmaceutical company focused on discovering, developing and commercializing anti-infective products. The Company currently has two anti-infective product candidates, fidaxomicin for the treatment of *Clostridium difficile*-infections, and prulifloxacin, for the treatment of infectious diarrhea. The Company is developing additional product candidates using its proprietary technology, including its OPoPS™ drug discovery platform.

Stock Split

In January 2007, the Company's board of directors and stockholders authorized a 1-for-2.1667 reverse stock split for all outstanding preferred and common shares. All share information has been retroactively restated to reflect the reverse stock split.

Principles of Consolidation

The consolidated financial statements include all the accounts of the Company and its wholly owned subsidiary. All intercompany balances and transactions have been eliminated in consolidation.

Use of Estimates

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 amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Cash, Cash Equivalents and Short-Term Investments

Investments with original maturities of less than 90 days at the date of purchase are considered to be cash equivalents. All other investments are classified as short-term investments which are deemed by management to be available-for-sale and are reported at fair value with net unrealized gains or losses reported within other comprehensive loss in the consolidated statement of redeemable convertible preferred stock and stockholders' equity. Realized gains and losses, and declines in value judged to be other than temporary, are included in investment income or interest expense. The cost of securities sold is computed using the specific identification method.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to a significant concentration of credit risk consist primarily of cash and cash equivalents and short-term investments. The Company maintains deposits in federally insured financial institutions in excess of federally insured limits. However, management believes the Company is not exposed to significant credit risk due to the financial position of the depository institutions in which those deposits are held. Additionally, the Company has established guidelines regarding diversification of its investments and their maturities, which are designed to maintain safety and liquidity.

Property and Equipment

Property and equipment, including leasehold improvements, are stated at cost. Depreciation is calculated using the straight-line method over the estimated useful lives of the assets, generally five years. Leasehold improvements are amortized over the shorter of their useful lives or the terms of the related leases.

Deferred Rent

Rent expense is recorded on a straight-line basis over the term of the lease. The difference between rent expense accrued and amounts paid under the lease agreement is recorded as deferred rent in the accompanying consolidated balance sheets.

Foreign Currency Translation

The financial statements of foreign subsidiaries having the U.S. dollar as the functional currency, with certain transactions denominated in a local currency, are remeasured into U.S. dollars at their historical rates. The remeasurement of local currency amounts into U.S. dollars creates translation adjustments that are included in net loss. Transaction and translation gains or losses were not material to the Company's financial statements for any periods presented.

Fair Value of Financial Instruments

The carrying amount of cash and cash equivalents, short-term investments and accounts payable and accrued liabilities are considered to be representative of their respective fair values because of the short-term nature of those instruments. The fair value of available-for-sale securities is based upon market prices quoted on the last day of the fiscal period.

Impairment of Long-Lived Assets

In accordance with Statement of Financial Accounting Standards ("SFAS") No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, long-lived assets, such as property and equipment, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, an impairment charge is recognized by the amount by which the carrying amount of the asset exceeds the fair value of the asset. Assets to be disposed of would be separately presented in the balance sheet and reported at the lower of the carrying amount or the fair value less costs to sell, and are no longer depreciated. Assets and liabilities that are part of a disposed group and classified as held for sale would be presented separately in the appropriate asset and liability sections of the balance sheet. Although the Company has accumulated losses since inception, the Company believes the future cash flows to be received from its long-lived assets will exceed the assets' carrying value and, accordingly, the Company has not recognized any impairment losses through December 31, 2008.

Income Taxes

Income taxes are accounted for under the asset and liability 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 and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. The Company provides a valuation allowance against net deferred tax assets unless, based upon the available evidence, it is more likely than not that the deferred tax assets will be realized.

Revenue Recognition

The Company's license and collaboration agreements contain multiple elements, including non-refundable upfront fees, payments for reimbursement of third-party research costs, payments for ongoing research, payments associated with achieving specific development milestones and royalties based on specified percentages of net product sales, if any. The Company applies the revenue recognition criteria outlined in Staff Accounting Bulletin ("SAB") No. 104, *Revenue Recognition* and Emerging Issues Task Force ("EITF") Issue 00-21, *Revenue Arrangements with Multiple Deliverables* ("EITF 00-21"). In applying these revenue recognition criteria, the Company considers a variety of factors in determining the appropriate method of revenue recognition under these arrangements, such as whether the elements are separable, whether there are determinable fair values and whether there is a unique earnings process associated with each element of a contract.

Cash received in advance of services being performed is recorded as deferred revenue and recognized as revenue as services are performed over the applicable term of the agreement.

When a payment is specifically tied to a separate earnings process, revenues are recognized when the specific performance obligation associated with the payment is completed. Performance obligations typically consist of significant and substantive milestones pursuant to the related agreement. Revenues from milestone payments may be considered separable from funding for research services because of the uncertainty surrounding the achievement of milestones for products in early stages of development. Accordingly, these payments are allowed to be recognized as revenue if and when the performance milestone is achieved if they represent a separate earnings process as described in EITF 00-21.

In connection with certain research collaboration agreements, revenues are recognized from non-refundable upfront fees, which the Company does not believe are specifically tied to a separate earnings process, ratably over the term of the agreement. Research fees are recognized as revenue as the related research activities are performed.

Revenues derived from reimbursement of direct out-of-pocket expenses for research costs associated with grants are recorded in compliance with EITF Issue 99-19, *Reporting Revenue Gross as a Principal Versus Net as an Agent*, and EITF Issue 01-14, *Income Statement Characterization of Reimbursements Received for "Out-of-Pocket" Expenses Incurred.* According to the criteria established by these EITF Issues, in transactions where the Company acts as a principal, with discretion to choose suppliers, bear credit risk and perform part of the services required in the transaction, the Company records revenue for the gross amount of the reimbursement. The costs associated with these reimbursements are reflected as a component of research and development expense in the consolidated statements of operations.

None of the payments that the Company has received from collaborators to date, whether recognized as revenue or deferred, are refundable even if the related program is not successful.

Research and Development Expenses

The Company accounts for research and development costs in accordance with SFAS No. 2, *Accounting for Research and Development Costs* ("SFAS No. 2"). SFAS No. 2 specifies that research and development costs should be charged to expense until technological feasibility has been established for the product. Once technological feasibility is established, all product costs should be capitalized until the product is available for general release to customers. The Company has determined that technological feasibility for its product candidates will be reached when the requisite regulatory approvals are obtained to make the product available for sale, or approval of the new drug application ("NDA") for such product. The Company's research and development expenses consist primarily of license fees, salaries and related employee benefits, costs associated with clinical trials managed by the Company's contract research organizations, or CROs, and costs associated with non-clinical activities and regulatory approvals. The Company uses external service providers and vendors to conduct clinical trials, to manufacture supplies of product candidates to be used in clinical trials and to provide various other research and development-related products and services.

When nonrefundable payments for goods or services to be received in the future for use in research and development activities are made, the Company applies the criteria outlined in EITF issue No. 07-3 (" EITF 07-3"), *Accounting for Non-Refundable Advance Payments for Goods or Services to be Used in Future Research and Development Activities* . In accordance with EITF 07-3, these types of payments are deferred and capitalized. The capitalized amounts are expensed when the related goods are delivered or the services are performed.

Stock-Based Compensation

Effective January 1, 2006, the Company adopted SFAS No. 123(R), *Share-Based Payment*, which revises SFAS No. 123, *Accounting for Stock-Based Compensation* and supersedes Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees*. SFAS No. 123(R) requires that share-based payment transactions with employees be recognized in the financial statements based on their fair value and recognized as compensation expense over the vesting period. The Company used the modified prospective-transition-method when it adopted SFAS 123(R), and accordingly, the Company did not restate its results of operations for the prior periods. Compensation expense of $1.8 million, $1.2 million and $0.7 million was recognized in the years ended December 31, 2008, 2007 and 2006, respectively.

Stock-based compensation expense is estimated as of the grant date based on the fair value of the award and is recognized as expense over the requisite service period, which generally represents the vesting period. The Company estimates the fair value of its stock options using the Black-Scholes option-pricing model and the fair value of its stock awards based on the quoted market price of its common stock.

Estimating the fair value for stock options requires judgment, including estimating stock-price volatility, expected term, expected dividends and risk-free interest rates. The expected volatility rates are based on the historical fluctuation in the stock price since inception. The average expected term is calculated using SAB No. 107, "*Simplified Method for Estimating the Expected Term*". Expected dividends are estimated based on the Company's dividend history as well as the Company's current projections. The risk-free interest rate for periods approximating the expected terms of the options is based on the U.S. Treasury yield curve in effect at the time of grant. These assumptions are updated on an annual basis or sooner if there is a significant change in circumstances that could affect these assumptions.

Equity instruments issued to non-employees are recorded at their fair value as determined in accordance with SFAS No. 123(R) and EITF 96-18, *Accounting for Equity Instruments That are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling Goods and Services*, and are periodically revalued as the equity instruments vest and are recognized as expense over the related service period.

Comprehensive Income (Loss)

The Company has applied SFAS No. 130, *Reporting Comprehensive Income*, which requires that all components of comprehensive income (loss), including net income (loss), be reported in the financial statements in the period in which they are recognized. Comprehensive income (loss) is defined as the change in equity during a period from transactions and other events and circumstances from non-owner sources. Net income (loss) and other comprehensive income (loss), including foreign currency translation adjustments and unrealized gains and losses on investments, is required to be reported, net of their related tax effect, to arrive at comprehensive income (loss).

Net Loss Per Share Attributable to Common Stockholders

Basic net loss per share attributable to common stockholders is calculated by dividing the net loss attributable to common stockholders by the weighted average number of shares of common stock outstanding for the period, without consideration for common stock equivalents. Diluted net loss per share attributable to common stockholders is computed by dividing the net loss attributable to common stockholders by the weighted average number of common stock equivalents outstanding for the period determined using the treasury-stock method. For purposes of this calculation, convertible preferred stock, stock options and warrants are considered to be common stock equivalents and are only included in the calculation of diluted net loss per share attributable to common stockholders when their effect is dilutive.

	Years Ended December 31,		
	2008	2007	2006
Historical			
Numerator:			
Net loss attributable to common stockholders	$ (35,584,596)	$ (46,139,177)	$ (12,231,102)
Denominator:			
Weighted average common shares outstanding	28,682,542	21,715,332	2,542,893
Net loss attributable to common stockholders per share — basic and diluted	$ (1.24)	$ (2.12)	$ (4.81)
Historical outstanding anti-dilutive securities not included in diluted net loss per share calculation			
Preferred stock (as converted)	—	—	12,223,548
Preferred stock warrants (as converted)	—	—	22,705
Common stock options	1,979,660	1,615,317	1,496,945
Common stock warrants	—	13,845	1,144,604
Total	1,979,660	1,629,162	14,887,802

Recent Accounting Pronouncements

In December 2007, the FASB issued Statement of Financial Accounting Standards, or SFAS No. 160, *"Noncontrolling Interests in Consolidated Financial Statements — An Amendment of ARB No. 51"* ("SFAS No. 160"). SFAS No. 160 requires the recognition of a noncontrolling interest, sometimes called minority interest, as equity in the consolidated financial statements and separate from the parent's equity. The amount of net income attributable to the noncontrolling interest will be included in consolidated net income on the face of the income statement. SFAS No. 160 clarifies that changes in a parent's ownership interest in a subsidiary that do not result in deconsolidation are equity transactions if the parent retains its controlling financial interest. In addition, this statement requires that a parent recognize a gain or loss in net income when a subsidiary is deconsolidated. Such gain or loss will be measured using the fair value of the noncontrolling equity investment on the deconsolidation date. SFAS No. 160 also includes expanded disclosure requirements regarding the interests of the parent and its noncontrolling interest. SFAS No. 160 is effective for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008. Earlier adoption is prohibited. The Company does not expect the adoption of this standard to have a material impact on its financial position, cash flows, or results of operations.

In December 2007, the FASB issued SFAS 141 (revised 2007), "Business Combinations" ("SFAS 141(R)"). SFAS 141(R) establishes principles and requirements for how an acquirer recognizes and measures in its financial statements the identifiable assets acquired, the liabilities assumed, any noncontrolling interest in the acquiree and the goodwill acquired in connection with business combinations. SFAS 141(R) also establishes disclosure requirements to enable the evaluation of the nature and financial effects of the business combination. SFAS 141(R) is effective for fiscal years beginning on or after December 15, 2008. The Company does not expect the adoption of this standard to have a material impact on its financial position, cash flows, or results of operations.

In March 2008, the FASB issued SFAS No. 161, *Disclosures about Derivative Instruments and Hedging Activities, an amendment of FASB Statement No. 133.* This new standard requires enhanced disclosures for derivative instruments, including those used in hedging activities. It is effective for fiscal years and interim periods beginning after November 15, 2008. The Company does not expect the adoption of this standard to have a material impact on its financial position, cash flows, or results of operations.

In April 2008, the FASB issued FASB Staff Position, ('FSP") FAS 142-3, *Determination of the Useful Life of Intangible Assets.* FSP FAS 142-3 amends the factors that should be considered in developing renewal or extension assumptions used to determine the useful life of a recognized intangible asset under FASB Statement No. 142, *Goodwill and Other Intangible Assets.* FSP FAS 142-3 is effective for fiscal years beginning after December 15, 2008 and early adoption is prohibited. The Company does not expect the adoption of this standard to have a material impact on its financial position, cash flows, or results of operations.

In January 2009, the FASB issued FSP EITF 99-20-1, *Amendments to the Impairment Guidance of EITF 99-20.* This new standard amends the impairment guidance in EITF Issue No. 99-20, *Recognition of Interest Income and Impairment on Purchased Beneficial Interests and Beneficial Interests That Continue to Be Held by a Transferor in Securitized Financial Assets,* to achieve more consistent determination of whether an other-than-temporary impairment has occurred. FSP EITF 99-20-1 also retains and emphasizes the objective of an other than-temporary impairment assessment and the related disclosure requirements in FASB Statement No. 115, *Accounting for Certain Investments in Debt and Equity Securities,* and other related guidance. FSP EITF 99-20-1 is effective for interim and annual reporting periods ending after December 15, 2008, and shall be applied prospectively. Retrospective application to a prior interim or annual reporting period is prohibited. The Company adopted this standard in its fiscal year ended December 31, 2008. The adoption did not have a material impact on the Company's financial position, cash flows, or results of operations.

2. Restricted Cash

In September 2008, the Company established a letter of credit as required under its lease related to a new office facility. The letter of credit terminates 60 days after the lease expires (currently scheduled to occur on November 30, 2011) and is secured by a $170,000 certificate of deposit.

3. Fair Value of Financial Instruments

The Company adopted SFAS 157 effective January 1, 2008 for financial assets and liabilities measured on a recurring basis. SFAS 157 applies to all financial assets and financial liabilities that are being measured and reported on a fair value basis. As defined in SFAS 157, fair value is based on the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. SFAS 157 requires disclosure that establishes a framework for measuring fair value and expands disclosure about fair value measurements. The statement requires fair value measurement be classified and disclosed in one of the following three categories:

Level 1: Quoted prices in active markets for identical assets and liabilities; or
Level 2: Quoted prices for identical or similar assets and liabilities in markets that are not active, or observable inputs other than quoted prices in active markets for identical assets and liabilities; or
Level 3: Unobservable inputs.

The following table summarizes the Company's assets measured at fair value on a recurring basis subject to the disclosure requirements of SFAS 157 as of December 31, 2008:

	Quoted Prices in Active Markets (Level 1)	Other Observable Inputs (Level 2)	Unobservable Inputs (Level 3)	Total
Cash and cash equivalents	$ 16,778,880	$ —	$ —	$ 16,778,880
Marketable securities	22,547,515	—	—	22,547,515
Auction rate securities	—	—	1,032,000	1,032,000

A reconciliation of the beginning and ending balances of assets measured at fair value on a recurring basis using Level 3 inputs is as follows:

	Auction Rate Preferred Securities
Beginning balance at January 1, 2008	$ —
Total gains and losses	
Realized net income	—
Unrealized gains/losses included in accumulated other comprehensive income	—
Unrealized gains/losses included in interest income and other, net	(118,000)
Purchases, sales, issuances and settlements	—
Transfers in (out) of Level 3	1,150,000
Ending balance at December 31, 2008	$ 1,032,000
Change in unrealized gains (losses) included in net loss related to assets still held	$ (118,000)

All of the Company's investments in available-for-sale securities are recorded at fair value based on quoted market prices. At December 31, 2008, the Company held two auction rate preferred securities valued at $1.0 million with perpetual maturity dates that reset every 28 days. Since February 2008, the auctions for these securities have failed. Although these auction rate preferred securities continue to pay interest according to their stated terms, the market to sell such securities continues to be illiquid and the decline in value was judged to be other than temporary. Based on valuation models on the individual securities, the Company has recognized in the consolidated statement of operations an unrealized loss of approximately $118,000 in investment income. These securities have been classified as long-term investments on the consolidated balance sheets as the Company does not believe it could liquidate the securities in the near term.

4. Short-Term Investments

The following is a summary of the Company's investment securities, all of which are classified as available-for-sale. Determination of estimated fair value is based upon quoted market prices.

	December 31, 2008			
	Gross Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Market Value
Corporate debt securities	$ 13,464,268	$ 3,089	$ (49,257)	$ 13,418,100
Foreign debt securities	1,503,901	5,824	—	1,509,725
Government debt securities	7,584,720	37,106	(2,136)	7,619,690
Total investment securities	$ 22,552,889	$ 46,019	$ (51,393)	$ 22,547,515

	December 31, 2007			
	Gross Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Market Value
Certificates of deposits	$ 4,802,335	$ 1,515	$ (2,234)	$ 4,801,616
Commercial paper	7,464,847	259	(650)	7,464,456
Corporate debt securities	20,856,371	9,378	(43,527)	20,822,222
Foreign debt securities	3,323,878	6,947	(3,479)	3,327,346
U.S. securities and other government obligations	3,500,647	5,118	—	3,505,765
Taxable auction securities	14,200,000	—	—	14,200,000
Other securities	1,498,251	—	(5,871)	1,492,380
Total investment securities	$ 55,646,329	$ 23,217	$ (55,761)	$ 55,613,785

Investments in net unrealized loss positions as of December 31, 2008 are as follows:

		Less Than 12 Months of Temporary Impairment		Greater Than 12 Months of Temporary Impairment		Total Temporary Impairment	
	Number of Investments	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Corporate debt securities	16	$ 11,156,015	$ (49,257)	$ —	$ —	$ 11,156,015	$ (49,257)
Government debt securities	3	493,627	(2,136)	—	—	493,627	(2,136)
Total	19	$ 11,649,642	$ (51,393)	$ —	$ —	$ 11,649,642	$ (51,393)

The amortized cost and estimated fair value of securities available-for-sale at December 31, 2008, by contractual maturity, are as follows:

	Amortized Cost	Estimated Fair Value
Due in one year or less	$ 22,552,889	$ 22,547,515
Due after one year through two years	—	—
Total	$ 22,552,889	$ 22,547,515

The Company considered a number of factors to determine whether the decline in value in its investments is other than temporary, including the length of time and the extent of which the market value has been less than cost, the financial condition of the issuer and the Company's intent to hold and ability to retain these short-term investments. Based on these factors, the Company believes that the decline in value is temporary and primarily related to the change in market interest rates since purchase. The Company anticipates full recovery of amortized cost with respect to these securities at maturity or sooner in the event of a change in the market interest rate environment.

5. Property and Equipment

Property and equipment is stated at cost and consists of the following:

	December 31,	
	2008	2007
Equipment	$ 3,089,953	$ 3,016,275
Furniture and fixtures	291,665	279,923
Leasehold improvements	1,399,163	1,368,179
Computer equipment and software	308,144	224,802
	5,088,925	4,889,179
Less accumulated depreciation and amortization	(4,394,742)	(4,183,805)
Total property and equipment, net	$ 694,183	$ 705,374

Depreciation of property and equipment is computed using the straight-line method over the estimated useful lives of the assets, which typically is five years. Leasehold improvements and assets acquired under capital leases are amortized over their estimated useful life or the related lease term, whichever is shorter. The depreciation of equipment under capital leases is included in depreciation expense. As of December 31, 2008 and 2007, the Company did not have any capital leases.

6. Accrued Expenses

Accrued expenses consisted of the following:

	December 31,	
	2008	2007
Accrued preclinical and clinical expenses	$ 2,541,437	$ 3,726,891
Accrued research services	215,490	172,754
Accrued legal fees	51,132	64,007
Accrued salaries, wages and benefits	1,199,338	980,448
Other accrued liabilities	38,263	53,925
Total accrued expenses	$ 4,045,660	$ 4,998,025

7. Revenue and Other Collaborative Agreements

Revenues from Research Grants

The Company has received several research grants from U.S. government agencies since 2003, all of which except for one were completed on or prior to December 31, 2008. The active grant was awarded from National Institute of Allergy and Infectious Diseases ("NIAID") in September 2007. This grant is renewable for $1 million each year until August 2010 to a maximum of $3 million. The award will be used to conduct supplementary studies to the ongoing fidaxomicin trials to confirm narrow spectrum activity and potency of fidaxomicin against hypervirulent epidemic strains, to support additional toxicology and microbiological studies to demonstrate the safety and efficacy of the fidaxomicin compound and its major metabolite in CDI patients and to support a surveillance study of *C. difficile* isolates across North America to compare activity of fidaxomicin with existing CDI treatments. For the years ended December 31, 2008, 2007 and 2006, the Company recognized revenues related to research grants of $973,370, $338,735 and $493,960, respectively.

Other Collaborative Agreements

The Company holds worldwide rights to fidaxomicin. In February 2007, the Company repurchased the rights to develop and commercialize fidaxomicin in North America and Israel from Par under a prospective buy-back agreement. Under the prospective buy-back agreement, the Company paid Par a one-time $20.0 million termination fee and $1.9 million for fidaxomicin clinical supply material and active pharmaceutical ingredient in 2007. The Company is also obligated to pay Par a one-time $5.0 million milestone payment, a potential $3.0 million prepayment to Biocon, subject to future set-offs following the assignment, if any, by Par to the Company of its supply agreement with Biocon, a 5% royalty on net sales by the Company, its affiliates or its licensees of fidaxomicin in North America and Israel, and a 1.5% royalty on net sales by the Company or its affiliates of fidaxomicin in the rest of the world. The one-time $5.0 million milestone payment is required to be paid after the earliest to occur of (i) the successful completion by the Company of its second pivotal Phase 3 trial for fidaxomicin, (ii) the Company's grant to a third party of the rights to fidaxomicin or (iii) the submission to the FDA of an NDA for fidaxomicin. In addition, in the event the Company licenses its right to market fidaxomicin in the rest of the world, the Company will be required to pay Par a 6.25% royalty on net revenues received by it related to fidaxomicin. The Company is obligated to pay each of these royalties, if any, on a country-by-country basis for seven years commencing on the applicable commercial launch in each such country.

In March 2006, the Company entered into a collaborative research and development and license agreement with Cempra Pharmaceuticals, Inc. ("Cempra"). The Company granted to Cempra an exclusive worldwide license, except in Association of Southeast Asian Nations, or ASEAN countries, with the right to sublicense, the Company's patent and know-how related to the Company's macrolide and ketolide antibacterial program. As partial consideration for granting Cempra the licenses, the Company obtained equity of Cempra and the Company assigned no value to such equity. The Company may receive milestone payments as product candidates are developed and/or co-developed by Cempra, in addition to milestone payments based on certain sublicense revenue. The aggregate potential amount of such milestone payments is not capped and, based in part on the number of products developed under the agreement, may exceed $24.5 million. The Company will also receive royalty payments based on a percentage of net sales of licensed products. The milestone payments will be triggered upon the completion of certain clinical development milestones and in certain instances, regulatory approval of products. In consideration of the foregoing, Cempra may receive milestone payments from the Company in the amount of $1.0 million for each of the first two products the Company develops which receive regulatory approval in ASEAN countries, as well as royalty payments on the net sales of such products. The research term of the agreement was completed on March 2008. Subject to certain exceptions, on a country-by-country basis, the general terms of this agreement continue until the later of: (i) the expiration of the last to expire patent rights of a covered product in the applicable country or (ii) ten years from the first commercial sale of a covered product in the applicable country. Either party may terminate the agreement in the event of a material breach by the other party, subject to prior notice and the opportunity to cure. Either party may also terminate the agreement for any reason upon 30 days' prior written notice provided that all licenses granted by the terminating party to the non-terminating party will survive upon the express election of the non-terminating party.

In June 2004, the Company entered into a license agreement with Nippon Shinyaku, Co., Ltd. ("Nippon Shinyaku"). Under the terms of the agreement, the Company acquired the non-exclusive right to import and purchase prulifloxacin, and the exclusive right (with the right to sublicense), within the United States, to develop, make, use, offer to sell, sell and license products suitable for consumption by humans containing prulifloxacin. Under this agreement, the Company paid Nippon Shinyaku an up-front fee in the amount of $1.0 million and will be required to make one future milestone payment in the amount of $1.0 million upon filing, if any, its first NDA for prulifloxacin in the United States. Under the agreement, the Company pays Nippon Shinyaku for certain materials. If Nippon Shinyaku is unable to supply the Company with the contracted amount of prulifloxacin, then Nippon Shinyaku will grant to the Company a non-exclusive, worldwide license to make or have made prulifloxacin, in which event the Company will owe Nippon Shinyaku a royalty based on the amount of net sales of prulifloxacin generated by the Company and the Company's subsidiary. Additionally, the Company will owe Nippon Shinyaku certain royalties based on the amount of net sales of prulifloxacin less the amount of prulifloxacin the Company buys from Nippon Shinyaku. Either party may terminate the agreement 60 days after giving notice of a material breach which remains uncured 60 days after written notice. If not terminated earlier, the agreement will terminate upon the later of ten years from the date of the first commercial sale of prulifloxacin in the United States or the date on which the last valid patent claim relating to prulifloxacin expires in the United States.

In July 2002, the Company entered into a license agreement with Sloan-Kettering Institute to acquire, together with certain nonexclusive licenses, exclusive, worldwide licensing and sublicensing rights to certain patented and patent-pending carbohydrate-based cancer immunotherapies. As partial consideration for the licensing rights, the Company paid to SKI a one-time fee consisting of both cash and 55,383 shares of its common stock. Under the agreement, which was amended in June 2005, the Company owes SKI milestone payments in the following amounts for each licensed product: (i) $500,000 upon the commencement of Phase 3 clinical studies, (ii) $750,000 upon the filing of the first NDA, (iii) $1.5 million upon obtaining marketing approval in the United States and (iv) $1.0 million upon obtaining marketing approval in each and any of Japan and certain European countries, but only to the extent that the Company, and not a sublicensee, achieves such milestones. The Company may also owes SKI royalties based on net sales

generated from the licensed products and income the Company receives from its sublicensing activities, which royalty payments are credited against a minimum annual royalty payment the Company may owes to SKI during the term of the agreement. The term of the agreement continues until the later of July 31, 2017, or the expiration of the last to expire of the patents licensed under this agreement, unless the agreement is earlier terminated. The agreement can be terminated by SKI for a variety of reasons, including (i) upon 60 days' notice in the event the Company fails to meet a development milestone specified in the agreement or (ii) upon 30 days' notice, in the event the Company fails to pay any licensing fees, royalties or patent expenses due under the agreement within 30 days of the due date and thereafter fails to pay such deficit in-full within the 30-day notice period.

In July 1999, the Company acquired exclusive, worldwide rights to its OPopS technology from the Scripps Research Institute ("TSRI"). This agreement includes the license to the Company of patents, patent applications and copyrights related to OPopS technology. The Company also acquired, pursuant to three separate license agreements with TSRI, exclusive, worldwide rights to over 20 TSRI patents and patent applications related to other potential drug compounds and technologies, including HIV/FIV protease inhibitors, aminoglycoside antibiotics, polysialytransferase, selectin inhibitors, nucleic acid binders, carbohydrate mimetics and osteoarthritis. Under the four agreements, the Company paid TSRI license fees consisting of an aggregate of 239,996 shares of its common stock with a deemed aggregate fair market value of $46,400, as determined on the dates of each such payment. Additionally, under each agreement, the Company may owe TSRI royalties based on net sales by the Company, its affiliates and sublicensees of the covered products and royalties based on revenue the Company generates from sublicenses granted pursuant to the agreements. For the first licensed product under each of the four agreements, the Company will also owe TSRI payments upon achievement of certain milestones. In three of the four TSRI agreements, the milestones are the initiation of a Phase 2 trial or its foreign equivalent, the filing of an NDA or its foreign equivalent and government marketing and distribution approval. In the remaining TSRI agreement, the milestones are the successful completion of a Phase 3 trial or its foreign equivalent, the filing of an NDA or its foreign equivalent and government marketing and distribution approval. The aggregate potential amount of milestone payments the Company may be required to pay TSRI under all four TSRI agreements is approximately $14.0 million. Each TSRI agreement terminates in part as follows: (i) with respect to each product which utilizes patent rights licensed under the agreement, on a country-by-country basis concurrently with the expiration of the last to expire of the applicable patent rights, (ii) with respect to each product which utilizes technology licensed under the agreement but which does not utilize patent rights also licensed thereunder, 15 years after the date of the first commercial sale of the product in each country and (iii) with respect to software licensed under the 1999 OPopS agreement, 75 years after the date the applicable copyright is filed in the United States.

8. Commitments

Leases

The Company leases office and research facilities under operating lease agreements that extend through November 2011. The Company has recorded deferred rent of $251,504 and $281,894 as of December 31, 2008 and 2007, respectively, in conjunction with one of the lease agreements.

At December 31, 2008, annual minimum rental payments due under the Company's operating leases are as follows:

Years ending December 31,	
2009	$ 855,722
2010	653,357
2011	589,961
Total minimum lease payments	$ 2,099,040

Rent expense was $831,137, $768,854 and $837,551, for the years ended December 31, 2008, 2007 and 2006, respectively.

Contract Research Organization Purchase Orders

The Company has contracted with a contract research organization ("CRO"), whereby the CRO agreed to provide clinical research services to the Company for the fidaxomicin Phase 3 clinical trials and prulifloxacin Phase 3 clinical trials. At December 31, 2008, the Company had issued purchase orders totaling $42.4 million for these services, $8.4 million, $9.8 million and $20.4 million of which were issued in 2008, 2007 and 2006, respectively. As of December 31, 2008, the Company had paid $28.6 million related to these purchase orders. The Company can terminate the service agreement at any time upon 60 days' prior written notice to the CRO.

9. Stockholders' Equity

Public Offering

In July 2008, the Company received approximately $14.8 million in gross proceeds from the sale of 1,743,396 million shares of its common stock at $8.48 per share in a registered direct offering to institutional investors. These shares were sold pursuant to a shelf registration statement relating to $100 million worth of common or preferred stock, debt securities, warrants or any combination of these securities.

Private Placement

On October 30, 2007, the Company completed a private placement in which it raised gross proceeds of approximately $35.9 million through the sale, at a price of $7.80 per share, of 4.6 million shares of its common stock. Pursuant to the terms of the private placement, the Company filed a registration statement with the SEC to register for resale the shares of common stock sold in the private placement. This registration statement became effective December 19, 2007.

Initial Public Offering

On February 14, 2007, the Company completed the initial public offering of 7.0 million shares of common stock at $7.00 per share in connection with the closing of our initial public offering resulting in aggregate proceeds of approximately $43.6 million, net of underwriting discounts and commissions and offering expenses.

Treasury Stock

The Company retired the 43,156 shares of common stock held in its treasury on September 3, 2008. The Company recorded the retirement of the treasury shares at cost and the retired treasury shares became part of the Company's authorized but unissued shares of common stock.

Warrants

In connection with the Company's building lease agreement signed in 2000, the Company issued a warrant to purchase 13,845 shares of common stock at a purchase price of $10.83. The estimated fair value of the warrant at the date of grant was not material using the Black-Scholes valuation model. As of December 31, 2007, no shares had been issued pursuant to this warrant. This warrant expired on February 9, 2008.

Equity Compensation Plans

Stock Options

In November 1998, the Company adopted the 1998 Stock Plan (the "1998 Plan"). The Company terminated and ceased granting options under the 1998 Plan upon the closing of the Company's initial public offering in February 2007.

In December 2006, the Company's board of directors approved the 2006 Equity Incentive Plan ("2006 Plan"). The 2006 Plan became effective upon the closing of the Company's initial public offering. A total of 2,000,000 shares of the Company's common stock were initially made available for sale under the plan. the 2006 Plan provides for annual increases in the number of shares available for issuance thereunder on the first day of each fiscal year, beginning with the Company's 2008 fiscal year, equal to the lesser of (i) 5% of the outstanding shares of the Company's common stock on the last day of the immediately preceding fiscal year; (ii) 750,000 shares; or (iii) such other amount as the board of directors may determine. Pursuant to this provision, 750,000 additional shares of the Company's common stock were reserved for issuance under the 2006 Plan on January 1, 2008 and 2009. Under the 2006 Plan, the exercise price of options granted must at least be equal to the fair market value of the Company's common stock on the date of grant.

Options granted under both the 1998 Plan and the 2006 Plan generally expire 10 years from the date of grant (five years for a 10% stockholder) and vest over a period of four years. The exercise price of options granted must at least be equal to the fair market value of the Company's common stock on the date of grant. The 2006 Plan is administered by the compensation committee of the Company's board of directors. In September 2008, the Company's board of directors established a New Hire Stock Option Committee consisting of the Chief Executive Officer and the Chief Financial Officer.

Following is a summary of stock option activity:

	Options	Weighted-Average Exercise Price
Balance as of December 31, 2005	1,455,022	$ 0.78
Granted	367,517	$ 2.08
Exercised	(279,163)	$ 0.52
Canceled	(46,431)	$ 0.71
Balance as of December 31, 2006	1,496,945	$ 1.17
Granted	310,353	$ 8.84
Exercised	(182,385)	$ 0.96
Canceled	(9,596)	$ 3.70
Balance as of December 31, 2007	1,615,317	$ 2.65
Granted	452,250	$ 6.95
Exercised	(68,078)	$ 1.02
Canceled	(19,829)	$ 7.66
Balance as of December 31, 2008	1,979,660	$ 3.64

The aggregate intrinsic value of options exercised during the year ended December 31, 2008 was approximately $522,059. The aggregate intrinsic value of options outstanding and options exercisable as of December 31, 2008 was approximately $16,774,766 and $12,390,043, respectively.

The following table summarizes information concerning outstanding and exercisable stock options as of December 31, 2008:

	December 31, 2008				
	Options Outstanding			Options Exercisable	
Exercise Price	Number of Shares Subject to Options Outstanding	Weighted Average Remaining Contractual Life (in years)	Weighted Average Exercise Price	Number of Shares Exercisable	Weighted Average Exercise Price
$0.22 - $0.65	403,063	2.8	$ 0.59	403,063	$ 0.59
$1.08	518,747	6.3	$ 1.08	477,060	$ 1.08
$2.17 - $6.90	726,121	8.4	$ 4.68	219,748	$ 2.50
$7.10 - $10.00	331,729	8.5	$ 9.05	126,744	$ 9.16
$0.22 - $10.00	1,979,660	6.7	$ 3.64	1,226,615	$ 2.01

Of the options outstanding, options to purchase 1,226,615 shares were vested as of December 31, 2008, with a weighted average remaining contractual life of 5.6 years and a weighted average exercise price of $2.01 per share, while options to purchase 753,045 shares were unvested.

Share-Based Compensation

The Black-Scholes option-pricing model was developed for use in estimating the fair value of traded options, which have no vesting restrictions and are fully transferable. In addition, the Black-Scholes option-pricing model requires the input of subjective assumptions, including the expected stock price volatility. The following table shows the assumptions used to compute stock-based compensation expense for the stock options granted during the years ended December 31, 2008, 2007 and 2006 using the Black-Scholes option pricing model:

Employee Stock Options	2008	2007	2006
Risk-free interest rate	2.41%-3.00%	3.88%-4.80%	4.75-4.80%
Dividend yield	0.00%	0.00%	0.00%
Expected life of options (years)	6.02-6.08	5.27-6.08	6.08
Volatility	64.95-67.00%	60.47-65.82%	65.82%

The risk-free interest rate assumption was based on the United States Treasury's rates for U.S. Treasury zero-coupon bonds with maturities similar to those of the expected term of the award being valued. The assumed dividend yield was based on the Company's expectation of not paying dividends in the foreseeable future. The weighted average expected life of options was calculated using the simplified method as prescribed SAB No. 107, *Share-Based Payment* ("SAB No. 107"). This decision was based on the lack of relevant historical data due to the Company's limited history. In addition, due to the Company's limited historical data, the estimated volatility also reflects the application of SAB No. 107, incorporating the historical volatility of comparable companies whose share prices are publicly available.

Based on these assumptions, the weighted average grant-date fair values of stock options granted during the year ended December 31, 2008 was $6.95 per share.

As of December 31, 2008, the total unrecognized compensation expense related to stock options was approximately $15,919,623 and the related weighted-average period over which it is expected to be recognized is approximately 6.6 years.

Total stock-based compensation expense, related to all of the Company's stock options, stock awards and employee stock purchases, recognized for the years ended December 31, 2008, 2007 and 2006 was comprised as follows:

	December 31,		
	2008	2007	2006
Research and development	$ 527,874	$ 307,481	$ 297,331
Marketing	309,635	257,218	—
General and administrative	926,567	679,323	414,700
Total stock-based compensation expense	$ 1,764,076	$ 1,244,022	$ 712,031

Stock Awards

On September 12, 2007, the Company issued stock awards for 17,500 fully-vested shares of the Company's common stock to its directors under the 2006 Plan. The grant date fair value of the stock awards was $8.47 per share.

Employee Stock Purchase Plan

Concurrent with the Company's initial public offering in February 2007, the Company's board of directors adopted the employee stock purchase plan ("ESPP") in December 2006, and the stockholders approved the plan in January 2007. A total of 200,000 shares of the Company's common stock were initially made available for sale under the plan. In addition, the employee stock purchase plan provides for annual increases in the number of shares available for issuance under the purchase plan on the first day of each fiscal year, beginning with the Company's 2008 fiscal year, equal to the lesser of (i) 3% of the outstanding shares of the Company's common stock on the last day of the immediately preceding fiscal year; (ii) 300,000 shares; or (iii) such other amount as may be determined by the Company's board of directors. Pursuant to this provision, 300,000 additional shares of the Company's common stock were reserved for issuance under the ESPP on January 1, 2008. The Company's board of directors determined to reserve zero additional shares under the ESPP as of January 1, 2009.

As of December 31, 2008, there were 70,409 shares of common stock issued and 429,591 shares remained available for issuance under the ESPP.

The following table shows the assumptions used to compute stock-based compensation expense for the stock purchased under the ESPP during the year ended December 31, 2008 and 2007 using the Black-Scholes option pricing model:

Employee Stock Options	2008	2007
Risk-free interest rate	1.30%-2.19%	3.58%-4.64%
Dividend yield	0.00%	0.00%
Expected life (years)	6 months	6 months
Volatility	45.05%-143.12%	45.33-50.66%

For the years ended December 31, 2008 and 2007, the Company recorded stock-based compensation expense related to the ESPP of $147,712 and $63,681, respectively.

10. Income Taxes

On January 1, 2007, the Company adopted FASB Financial Interpretation ("FIN") No. 48, Accounting for Uncertainty in Income Taxes — An Interpretation of FASB Statement No. 109. FIN No. 48 clarifies the accounting for uncertainty in income taxes recognized in an entity's financial statements in accordance with SFAS No. 109, Accounting for Income Taxes, and prescribes a recognition threshold and measurement attributes for financial statement disclosure of tax positions taken or expected to be taken on a tax return. Under FIN No. 48, the impact of an uncertain income tax position on the income tax return must be recognized at the largest amount that is more-likely-than-not to be sustained upon audit by the relevant taxing authority. An uncertain income tax position will not be recognized if it has less than a 50% likelihood of being sustained. Additionally, FIN No. 48 provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure and transition.

There were no unrecognized tax benefits as of the date of adoption and there were no unrecognized tax benefits included in the balance sheet at December 31, 2008 that would, if recognized, affect the effective tax rate. The adoption of FIN 48 did not impact the Company's financial condition, results of operations or cash flows.

The Company's practice is to recognize interest and/or penalties related to income tax matters in income tax expense. The Company had no accrual for interest or penalties on the Company's balance sheets at December 31, 2008 and 2007 and has not recognized interest and/or penalties in the statement of operations for the year ended December 31, 2008.

The Company is subject to taxation in the United States, California and various foreign jurisdictions. The Company's tax years for 1999 and forward are subject to examination by the Federal and California tax authorities due to the carryforward of unutilized net operating losses and research and development credits.

The Company has completed a Section 382/383 analysis regarding the limitation of net operating loss and research and development credit carryforwards and had determined that the maximum amount federal and state net operating loss ("NOL") and credit carryovers are available for utilization, subject to the annual limitation. Based on the analysis, the related deferred tax assets were reinstated in 2008 and the corresponding valuation allowance increased. Any carryforwards that will expire prior to utilization as a result of future limitations will be removed from deferred tax assets with a corresponding reduction of the valuation allowance. Due to the existence of the valuation allowance, future changes in the unrecognized tax benefits will not impact the effective tax rate.

At December 31, 2008, the Company had Federal, California and foreign income tax net operating loss carryforwards of approximately $120.5 million, $123.9 million and $2.6 million, respectively. The Federal and California tax loss carryforwards will begin expiring in 2020 and 2012 respectively, unless previously utilized. The foreign losses originate from the Company's Taiwan subsidiary and expire five years after origination. In addition, the Company has Federal and California research tax credit carryforwards of approximately $2.2 million and $1.5 million, respectively. The Federal research and development credit carryforwards will begin to expire in 2020 unless previously utilized. The California research and development credit carryforwards will carry forward indefinitely until utilized. The Company also has California state manufacturer's investment tax credit carryforwards of $103,000 which will begin to expire in 2011 unless previously utilized.

Significant components of the Company's deferred tax assets as of December 31, 2008 and 2007 are listed below. A valuation allowance of $52.6 million and $680,000 at December 31, 2008 and 2007, respectively, has been recognized to offset the net deferred tax assets as realization of such assets is uncertain. Amounts are shown as of December 31, of the respective years:

	2008	2007
Deferred tax assets:		
Net operating loss carryforwards	$ 48,196,000	$ —
Tax credits	3,282,000	—
Other, net	1,155,000	680,000
Total deferred tax assets	52,633,000	680,000
Valuation allowance for deferred tax assets	(52,633,000)	(680,000)
	$ —	$ —

11. Employee Benefit Plans

Effective January 1, 2000, the Company established a 401(k) plan covering substantially all employees. Employees may contribute up to 100% of their compensation per year (subject to a maximum limit prescribed by federal tax law). The Company may elect to make a discretionary contribution or match a discretionary percentage of employee contributions. As of December 31, 2008, 2007 and 2006, the Company had not elected to make any contributions to the 401(k) plan.

In October 2008, the Company's Compensation Committee adopted a Severance Benefit Plan covering certain eligible employees, including executive officers. Pursuant to the plan, upon an involuntary termination other than for cause, an eligible employee may be entitled to receive specified severance benefits. The benefits may include cash severance payments and acceleration of stock award vesting. The level of benefits provided under the plan depends upon an eligible employee's position and years of service, and whether the termination is related to a change in control.

12. Subsequent Event

In March 2009, the Company received approximately $32.9 million in gross proceeds from the sale of its securities in a registered direct offering to institutional investors. The Company sold 2,794,700 shares of its common stock to certain investors at a purchase price of $10.00 per share pursuant to common stock purchase agreements and sold 457,666 units to other investors at a purchase price of $10.925 per unit, pursuant to unit purchase agreements. Each unit sold in the offering consisted of one share of common stock and one warrant to purchase 0.20 of a share of common stock at an exercise price of $10.93 per share. The warrants are exercisable six months after the date of issuance and will expire five years from the date of issuance. These securities were sold pursuant to a shelf registration statement relating to $100 million worth of common or preferred stock, debt securities, warrants or any combination of these securities. Following the March 2009 offering, approximately $52.4 million of the securities remain available for future issuance under this registration statement.

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Michael N. Chang, certify that:

1. I have reviewed this annual report on Form 10-K of Optimer Pharmaceuticals, Inc.;

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

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

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

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

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

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

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

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

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

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

Date: March 12, 2009

/s/ Michael N. Chang
Michael N. Chang
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John D. Prunty, certify that:

1. I have reviewed this annual report on Form 10-K of Optimer Pharmaceuticals, Inc.;

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

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

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

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

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

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

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

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

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

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

Date: March 12, 2009

/s/ John D. Prunty
John D. Prunty
Vice-President and Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32

CERTIFICATION

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. § 1350, as adopted), Michael N. Chang, the Chief Executive Officer of Optimer Pharmaceuticals, Inc. (the "Company"), and John D. Prunty, the Chief Financial Officer of the Company, each hereby certifies that, to the best of his knowledge:

1. The Company's Annual Report on Form 10-K for the year ended December 31, 2008, to which this Certification is attached as Exhibit 32 (the "Annual Report"), fully complies with the requirements of Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended; and

2. The information contained in the Annual Report fairly presents, in all material respects, the financial condition of the Company at the end of the period covered by the Annual Report and results of operations of the Company for the period covered by the Annual Report.

Dated: March 12, 2009

/s/ Michael N. Chang
Michael N. Chang
Chief Executive Officer
(Principal Executive Officer)

/s/ John D. Prunty
John D. Prunty
Chief Financial Officer
(Principal Financial and Accounting Officer)

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filling of the Company under the Securities Act of 1933, as amended, or Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.

Management Team

Michael N. Chang, Ph.D.
President and Chief Executive Officer

Tessie M. Che, Ph.D.
Senior Vice President, Corporate Affairs and Chief Operating Officer

Francois-Xavier Frapaise, M.D.
Senior Vice President and Chief Scientific Officer

Sherwood L. Gorbach, M.D.
Senior Vice President, Medical Affairs and Chief Medical Officer

Kevin P. Poulos
Vice President, Marketing and Sales and Chief Commercial Officer

John D. Prunty, C.P.A.
Vice President, Chief Financial Officer and Corporate Secretary

Youe-Kong Shue, Ph.D.
Vice President, Clinical Development

Mitchell Che, M.S.
Executive Director, Operations and Information Technology

Yoshi Ichikawa, Ph.D.
Senior Director, Chemistry

Pam Sears, Ph.D.
Senior Director, Product Development

Emmanuelle A. Hugentobler, M.D., Ph.D.
Senior Director, Medical Affairs

Diane McCarty
Director, Human Resources

Howard J. Dreskin, M.S.
Director, Clinical Operations

Board of Directors

Michael N. Chang, Ph.D.
President and Chief Executive Officer, Optimer Pharmaceuticals, Inc.

Anthony E. Altig
Chief Financial Officer, Pelican Life Sciences

Mark Auerbach, C.P.A.
Chairman, Neuro-Hitech, Inc.; Director, Collexis Inc.; Director, RxElite

Joseph Y. Chang, Ph.D.
Chief Scientific Officer and Executive Vice President of Product Development, Nu Skin Enterprises

Peter E. Grebow, Ph.D.
Executive Vice President of Worldwide Technical Operations, Cephalon, Inc.

Alain B. Schreiber, M.D.
Managing Partner, ProQuest Investments

Headquarters

Optimer Pharmaceuticals, Inc.
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Suite C
San Diego, CA 92121
858-909-0736
www.optimerpharma.com

2008 Annual Meeting

The annual meeting of shareholders will be held at 10:30am on Wednesday, May 6, 2009 at 5355 Mira Sorrento Place, Suite 250, San Diego, CA 92121.

Stock Listing

Exchange:
Nasdaq Global Market
Symbol: OPTR

Transfer Agent

American Stock Transfer & Trust Company
59 Maiden Lane
New York, NY 10038
800-937-5449
www.amstock.com

Legal Counsel

Cooley Godward Kronish, LLP
4401 Eastgate Mall
San Diego, CA 92121-1909

Independent Auditors

Ernst & Young, LLP
4370 La Jolla Village Drive, Suite 500
San Diego, CA 92122

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This report contains statements that discuss our future expectations, contain projections of our results of operations and financial condition and include other forward-looking information within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Our actual results may differ significantly and materially from those expressed in these forward-looking statements as a result of risks and uncertainties, including those detailed in our Annual Report on Form 10-K. We disclaim any intent or obligation to update these forward-looking statements, and you should not unduly rely on them.

This Is a Greener Corporate Folder

Optimer Pharmaceuticals, Inc. is committed to reducing its impact on the environment. By producing our report this way, we lessened the impact on the environment in the following ways:

1 tree	3 lbs.	398 gal.
PRESERVED FOR THE FUTURE	WATER-BORNE WASTE NOT CREATED	WASTEWATER FLOW SAVED
44 lbs.	**87 lbs.**	**664,020**
SOLID WASTE NOT GENERATED	NET GREENHOUSE GASES PREVENTED	BTUS OF ENERGY NOT CONSUMED

Environmental impact estimates for savings pertaining to the use of post consumer recycled fiber share the same common reference data as the Environmental Defense Fund paper calculator, which is based on research done by the Paper Task Force, a peer-reviewed study of the lifecycle environmental impacts of paper production and disposal.

FSC
Mixed Sources
Product group from well-managed forests, controlled sources and recycled wood or fibre
www.fsc.org Cert no. SGS-COC-004136
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